

LEON FORREST DOUGLASS

HIS

STORY

PREFACE

In reading over the following story, I examined the typewriter on which it was written and found the letter "I" was not entirely worn out. It was with some embarrassment that I read so much of myself. My only excuse is that I have been asked many times to write the story and, without intending at any time to boast, I fear the story is too much "Douglass", but here it is -- such as it is -- with the hope that it is sometimes interesting. The book will be bound in calf with the tale inside.

CHAPTER I

PIONEER ANCESTORS



My great grandfather, a descendant of "Black Douglass" the outlaw, who stole from the rich and gave to the poor, (in romance known as Robin Hood) came to America with his children from Scotland in 1800. He settled in Elmira, New York, and it was here that my grandfather, James Douglass, was born in 1801.

James Douglass had three sons, one daughter, and also an adopted daughter. In 1829, my father, Seymour J. Douglass, the third son, was born.

Grandfather was a millwright by trade and in 1845 became a Colonel in the American army in the war with Mexico. Father spent his childhood in Elmira and when he was old enough, Grandfather taught him the millwright trade. A millwright in the early days built grist mills from logs which were hewed flat on two sides with an adz. This is a chopping tool shaped like a hoe. While using one of these my Grandfather cut into his foot very badly. One of the men said: "Why, Mr. Douglass, did you do that with one blow?" Though a very religious man, grandfather replied: "You damn fool, do you think I hit it twice!" Grandfather was a strong, sturdy man, a devout Methodist, and a strict father. He developed his children by rough-and-tumble

wrestling, as at that time they knew little or nothing of our present day sports for the development of our boys. Almost every evening after supper Father and his two brothers spent hours wrestling. Later, during the Civil War, this wrestling experience was of great help to my Father as wrestling was a favorite sport among the soldiers. In hundreds of matches he was thrown but once, and then by an Indian. Much to his regret he could never get the Indian to wrestle him again.

My Father told me of the first railroad. The track was wooden rails with strap iron nailed on top for the wheels to run on. People said it was all right for freight but was too fast for humans -- the speed was about twenty miles per hour.



Father enjoyed his work as a millwright but he loved horses. Much of his life was spent working with them. It was perhaps for this reason that he became a driver on the Erie Canal and made several trips to New York City. About 1850 he secured work in McGlaughlin's Stables, the largest and finest of that day, where New

York's elite kept fine horses and carriages. Father soon became foreman for McGlaughlin. Among the horses was Maud S. that held the world's trotting record for more than forty years. Father often drove her but never in a race. Bud Doble, her driver, and my Father became good friends. P.T. Barnum, the great showman,

kept his driving horses with many fine carriages at the stables so Father was very friendly with him. It was Barnum who gave him tickets to hear Jenny Lind, the Swedish Nightingale, sing.

Father was in New York when the Great Eastern, the longest boat ever built, came to New York on her maiden trip. She was a side-wheeler, one thousand feet long.



My mother, Mate Fuller, was born in Albany, New York, in 1840, and was eleven years younger than my Father. Her father was a jeweler in Albany and a descendant of one of the Pilgrim Fathers who came over on the Mayflower in 1620. Father met Mother while he was working on an Erie Canal boat and they were married in 1856 when

Mother was sixteen years old. They lived in New York for two years and then moved West to Racine, Wisconsin, in 1858. Grandfather and Father had a contract to build a gristmill there.

While living in Wisconsin, Father joined Rarac, a celebrated breaker of vicious horses. I have seen Father break wild horses by the Rarier method. With a rope around the horse's neck two men would hold the horse, one on each side, at a distance of about ten feet. Father would then tie up one front foot, causing the horse to stand on three legs, with another rope tied around the ankle of the other front foot and over the horse's back. He pushed the horse and made it step. Then he would pull the rope,

bringing the horse to its knees, where it would furiously plunge about until exhausted and finally come to rest on its knees. Next he would take hold of the horse's nose and twist its head. The horse, after plunging, would be obliged to lie down. Then Father would sit on its head until the horse gave up and lay still. Father would then untie the rope and let the horse rise to its feet and after a half hour's rest the process would be repeated again. After about the third time the horse would find that man was its master and rarely would the treatment have to be repeated, even with the most vicious horse. I have seen a stallion brought out of the stable with two men holding it with ropes from both sides and Father so tame the animal that he could lead it back into the stable with just a straw around the horse's nose.

When the Civil War broke out in 1861 Father volunteered in the first cavalry and became forage master of the regiment. His knowledge of horses sent him to Missouri and Kansas where he bought and passed on more than one hundred thousand horses and mules for the government. He told me that most of the horses that the soldiers rode had saddle sores from lack of care. In the four years he served he never had a horse with a saddle sore. He said he never stopped even for a few minutes without loosening the cinch and moving the saddle and blanket to cool the horse's back, and night and morning he always washed the horse's back and before saddling. Only a man who loved horses would take such care of them. Father could tell the age of a horse within a few months, by the cups in its teeth, until

it was ten or twelve years old. After that age the cups in the horse's teeth were worn smooth. I have seen him do this many times and then have it confirmed by the owner, if the owner knew the age.

Father was really a wonderful story teller. Many of his tales of the Civil War, although true, were not pleasant to hear. His story of the first time he went into battle was amusing, though serious enough at the time. He roomed with the Captain in a small town. When at daylight they were called and told that the rebels were coming about four miles away, my Father leapt from his bed in great excitement. After trying to put both legs into one trouser leg he was finally dressed, and while the Captain was dressing slowly as it was an old story to him, Father, filled with excitement, rushed to the stable to saddle the horses. He was so rattled that he had great difficulty in getting the horses saddled properly. He rushed into the small hotel and found the Captain calmly eating breakfast. The Captain invited him to sit down and eat but Father was so excited he could eat nothing. Reports came in frequently regarding the enemy's approach. Finally, the Captain came out and mounted. Father, who could mount without touching the saddle as a rule, grabbed the saddle horn, but even with the greatest effort could not pull himself up. The Captain laughed at him, and Father, making a final effort, was able to mount. As he reached his seat in the saddle he said nervousness just rolled off of him and he was as calm as ever. They met the enemy about a mile out of the little town and quickly dispersed

them. Although he was in many battles after that, never again was he so upset.

One of Father's stories was about a temperance lecturer who was not well. The Doctor told him that he was run down and advised some hot toddies. He told the Doctor that as a temperance lecturer he could not take liquor because if anyone learned of it he would be ruined. His Doctor said that was all right, just to get a cup of hot water and go into the bathroom and make the toddy and no one would know anything about it, and to tell the family he was shaving. Some weeks later the Doctor met the lecturer's son and asked him about his father. The boy told the Doctor that his father seemed fine but that they were worried about his mind. He said his father shaved four or five times a day.

Another story was about a man named Jones, bragging about his eyesight to his friend Smith, who replied that his eyesight was only fair, but he had the best hearing of anyone. Jones, pointing at a flagpole half a mile away, said: "Do you see that fly walking up that pole?" Smith said he could not see it but knew it was there. Jones asked: "How do you know it is there if you can't see it?" Smith said he could hear it walking. I heard this story in a London Music Hall more than fifty years later.

One night Father was out with the Captain and about ten men on a scouting party. They learned that two rebel boys had slipped through the Union lines and were visiting their father and mother a few miles from the Union Camp. The Captain and men surrounded the house and demanded that the boys come out

and surrender. The parents came out and said the boys were not there. The Captain said he knew they were and unless they came out he would set fire to the house. After much discussion the parents told the Captain that the boys would surrender if the Captain would promise to treat the boys as prisoners of war and give them a fair trial. The Captain agreed to this and the boys surrendered. After the party had ridden a few miles with the prisoners, the Captain called a halt and said: "We might as well string the boys up right here." My Father protested and told the Captain he had given his word that the boys would be treated as prisoners of war. The Captain said they were only damn rebels. Father told the Captain that he would report him to his superiors and have him court-marshalled. Father claimed that as the party was on a forage trip, as forage master, he was really in charge and demanded the Captain keep his word. After many hot exchanges of words the Captain took the boys in as prisoners.

After the war in 1865 my brother Justus was born. The family then moved to Red Cloud, Minnesota, to build another mill. Here my brother Charlie was born in 1867. Soon after this Grandfather's and Father's families went by covered-wagon to Nebraska to take up land to raise corn. This land later became the town-site of Syracuse.

Many of the early settlers lived in dugouts or sod houses. The dugout was a room dug out of a bank or hill with a doorway left to enter. These dugouts were damp and cold but a shelter from storms. The sodhouses, while not as good as log cabins,



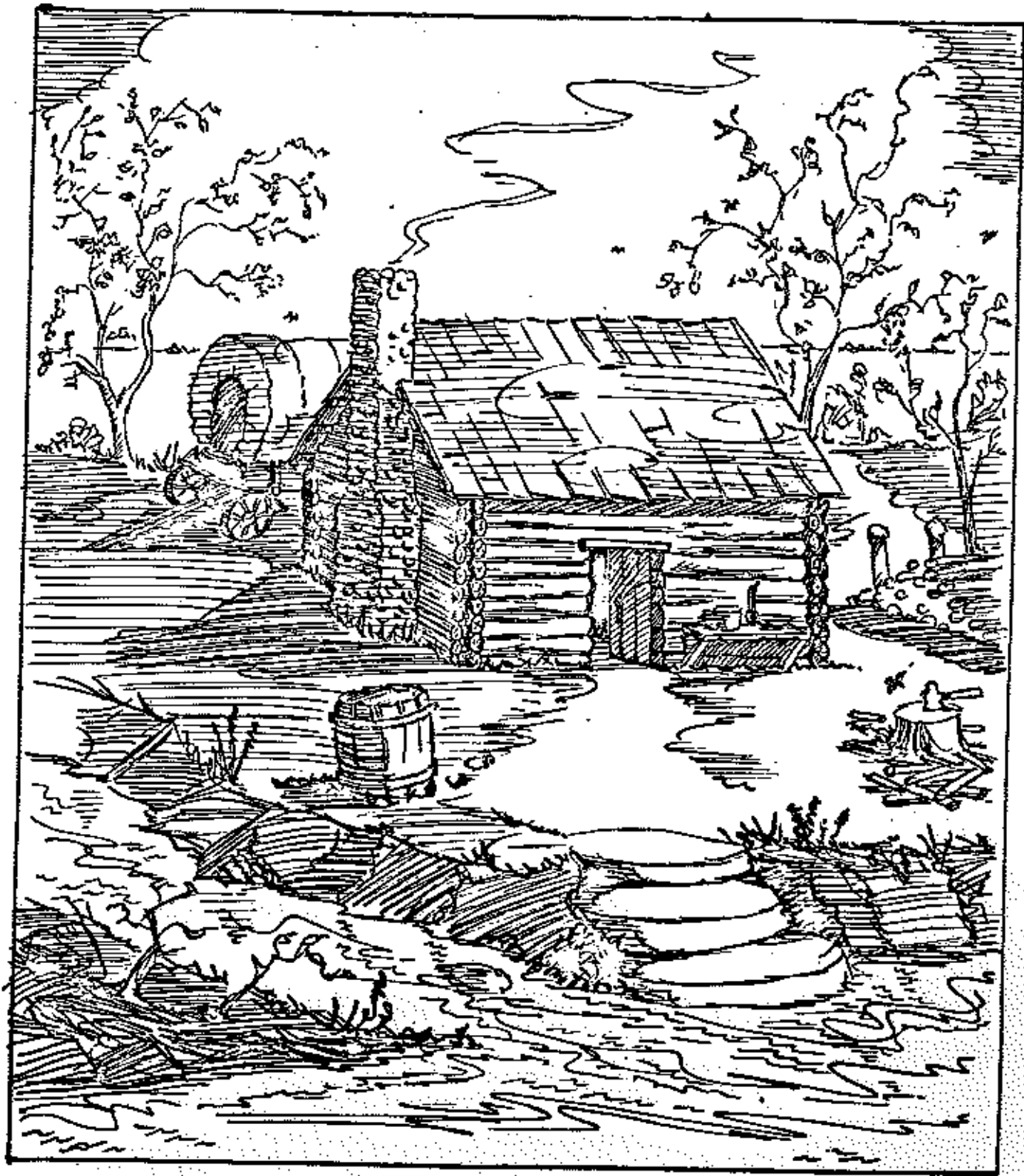
were better than the dugout. This is the way they were made. A breaking plow turned a furrow about twelve inches wide and five inches thick. The roots of the grass held the dirt together. The turned sod was cut into lengths two

or three feet long and laid one on top of another as we lay bricks. It lasted several years, but was not as good as the adobe house of California, which has lasted in many cases more than one hundred years. The principle is the same in both cases, except that the sodhouse disintegrated as the grass roots failed to hold together, while the adobe blocks made of clay and sun-dried, held together indefinitely. A sodhouse could be built in two or three days with a roof made of a few poles covered with bunches of grass tied together. This thatched roof kept out the rain surprisingly well.



Father built a log cabin on the bank of the Nemaha, a small stream, and here I was born on March 12, 1869. This was the year that the golden spike was driven completing the first transcontinental railroad. I remember this

cabin very well though we lived in it only four years. On the



ground floor was one large room with a fireplace in one end. Here much of our food was cooked in a kettle held by a crane which swung out into the room. We traded our corn with Indians for buffalo robes and for dried buffalo meat called "charqui". There was an attic in the cabin and it was here we slept. The attic was reached by climbing a ladder nailed to the wall and then crawling through a trapdoor in the ceiling. We had corn husk mattresses laid on the floor and over these were spread buffalo robes, and then we used more robes for covers, as everyone did in the pioneer days in the West.



One Mormon train that passed near our cabin was attacked by the Indians. One of the Mormons was so badly wounded that they brought him to our cabin. My Father rode to Nebraska City for a doctor, but he arrived home too late.



Buffalo roamed the plains in countless thousands. The favorite story of an old scout I knew was that while scouting along the Platte river he saw a herd of buffalo on a stampede. To keep from being trampled he took shelter behind a sandhill. Buffalo passed continually

for three days and nights. Finally he decided to creep up to the sandhill to see if he could sight the end of the buffalo, but to his great discouragement what he saw was the main herd just coming on. Antelope, elk and deer were also plentiful, furnishing food for all the plains people.



Wild horses roamed the plains in large herds, mustang and calico ponies. They were caught by both the Pioneers and Indians and made splendid riding horses due to their wild life which gave them great

endurance. An unbroken pony could be bought for three to five dollars. My Father broke many and sold them for fifteen dollars -- twenty-five dollars if broken to drive.



Most of the Indians were friendly but we had one Indian raid while living in the log cabin. Neighbors came to our place which was turned into a fort. The women and children stayed in the attic, and the men

with muzzel loading guns held the ground floor. All waited with baited breath, expecting the warriors any moment. Three days and nights passed and no "redskins" came. The settlers decided to go

home. To some of them a very sad homecoming as the Indians had stolen everything of value to them, including all their live-



stock, and in some instances burned their cabins to the ground. The poor settlers had to start all over again. No wonder the pioneers had little love for the redmen. Indian arrowheads and

buffalo horns were to be found on the prairie in great numbers. The horns took a beautiful jet black polish and were used for hatracks and inkwells.

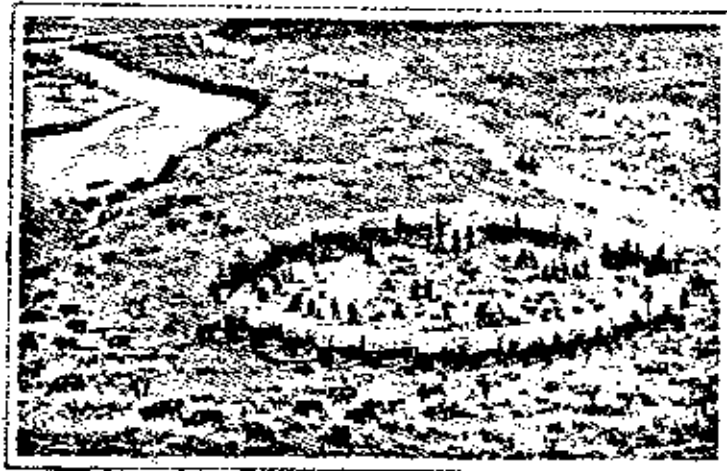
My Mother was a wonderful planner. She made dust brushes from turkey wings, made all our clothes, and from flour sacks made our underclothes. We had no matches but used flint and steel to make a fire. We moulded our own candles, and from wood ashes obtained lye and made soft soap. We had no sugar but used thick sorghum molasses for sweetening. It came from New Orleans by boat up the Mississippi and Missouri rivers to Nebraska City. We had no ice in summer to make icecream so we made it in winter-time of snow with a little cream and sugar. We made a cereal from sweet corn which had been roasted and ground, and on this we used cream. No cereal today could improve on it. Watermelons and muskmelons were grown in the cornfield. We knew nothing then of cantaloupe, persian or honeydew melons. Our washtub was half a barrel which also served as a bathtub. Our running water was "to-run-and-get-it" from the stream below the cabin. We smoked our own ham and bacon. Fresh meat was preserved in winter by

freezing it and then when wanted it was sliced with a saw.
Such was the romance of pioneer days.



Buffalo Bill (William Cody) lived on the plains of Nebraska and was the State's most celebrated citizen. He numbered among his friends, Kings, Queens, and Princes. He won his spurs as a real scout and great hunter, both feared and loved by the Indians of the hills and plains.

In later years I met him and saw him many times before he became the world's greatest Wildwest showman -- a picturesque figure with his long curly hair. Buffalo Bill was a symbol of the romance of the plains, with their many Indian tribes; of the



Pioneer days and the covered wagon trains on the Overland Trail, with all the hardships, hunger, thirst, and duststorms, endured under a blistering sun or in the freezing snows of winter.

But the most dreaded of all were the Indian attacks that wiped out many of the peaceful pioneers that were seeking a home in the west. It was hard enough for the men, but terrible for the women, all brave souls indeed.

Father was a good swordsman which served him well during

the war. He was ambi-dextrous and could wield a sword, drive a nail, and use a saw equally well with right or left hand. One time when coming out of a barbershop "Quantrill", the noted rebel bushwhacker (sniper we call them now) was across the street and opened fire on Father with a pistol. Father fired back but both missed. "Quantrill" later became one of the Jesse James gang.

Jesse James, though a bandit and outlaw, was a romantic figure of the West. His brother Frank, the five Younger brothers, Quantrill the Guerilla, and others were included in his band. His bank holdups and train robberies were real and appealed to many as do the fictitious mystery stories of later days. Jesse was popular with the settlers because he never molested them, in fact, he often helped those in trouble. The settlers refused information to those who would track him down, often helping him to escape, so for many years he evaded the law. The Younger brothers were shot or captured and sent to prison in a bank hold-up in Minnesota. Jesse and his brother Frank escaped. When Ford, one of the gang, treacherously shot Jesse for a reward, everyone despised him for his cowardly act. Jesse was no saint but he had the friendship of the people.

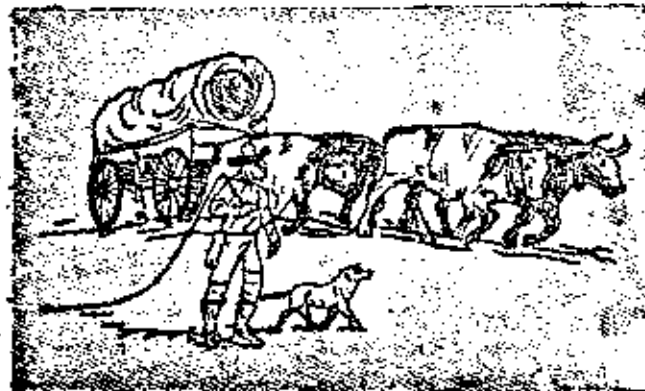
Frank James managed to escape capture for many years. Finally, the Governor offered him a pardon if he would surrender. Frank walked into the Governor's office, threw back his overcoat, unbuckled his gunbelt and holding the Remington 44 sixshooter by the barrel, extended its handle foremost to the Governor and said:

"Governor Crittenden of Missouri, no living man has touched this gun but myself in more than twenty years. I am your prisoner." After some formality, the Governor pardoned Frank James. During the 1893 Chicago World's Fair, Frank had a restaurant just outside the Fair grounds next to Buffalo Bill's Wildwest show.



Here, side by side, in peaceful pursuits, were Frank James, one of the world's greatest train and bank robbers, and Buffalo Bill, mighty hunter and greatest scout of all times. So the curtain falls

on two of the most celebrated romantic figures of the western plains.



CHAPTER II

BOYHOOD



My earliest playmates were Indian boys who taught me to use the bow and arrow. Strolling friendly Indians used to camp near the cabin. They were wonderful shots with bow and arrow, being able to hit a penny at fifty yards with ease. Wolves howled around the cabin at night. Father shot a number of bears. They were a nuisance in the cornfield, breaking down the stalks and destroying the corn. Father shot a bear one winter. It froze stiff and was stood up as a pony for me.

On the homestead we had little use for money. Our nearest neighbor was some miles away and the nearest trading post, Nebraska City, fifty-five miles distant. We traded what we produced for something others produced. We had no large storage cribs so when the corn was ready to be harvested neighbors came and carted away what they needed and instead of paying for it they noted in our trade book the number of wagons full each one took and later they gave us pigs and cows in exchange and we noted in their books what each delivered to us. We traded with the Indians for moccasins made from hides for which they hunted -- so it was really trade.

For fear I would fall into the stream I was taught to

swim at about the age of three. There was a nice swimming hole about five hundred feet downstream from the cabin. One day, while swimming, a drove of pigs tore my clothes to ribbons. I was obliged to go home without even a barrel.

We made a trip in a covered wagon to Grinnell, Iowa to visit my grandparents, the Fullers. We crossed the Missouri river at Nebraska City on an old-fashioned ferry. A long rope was attached to the boat by a pulley, the rope made fast to each bank, and then the boat was pushed across by the current. How this was done was a great mystery to me for many years.

Grandfather had built a cabin across the Nemaha and to get to his place we were obliged to ford the stream. Sometimes we spent Sunday with him and my step-grandmother. I did not enjoy these visits because of grandfather's religious belief that no work should be done from sundown Saturday until sunrise Monday. No cooking even was allowed so we ate cold food. I was not permitted to play and so the visits to me were not something to which to look forward.

In the early seventies the first railroad was built through our place. I remember the strange locomotives with huge smokestacks. As the engines were wood burners, if fuel ran out, the crew replenished the supply from nearby trees.

When I was four we moved to Unadilla, about ten miles from Syracuse, where my Father built a log gristmill⁷ with its large over-shot water wheel. We now see them only in pictures, where they add so much to the beauty of the landscape. It was the custom for those that raised grain to take it to the mill



to be ground. A man would arrive at the mill with sacks of shelled corn. These he gave to the miller who would receive ten percent of the ground corn meal, and this type of payment was called a toll or "tolling the grist". Here in Unadilla we raised all of our own vegetables, and could pick wild spinach anywhere in the field. Tomatoes

were raised as flowers. They were called love apples and considered poisonous.

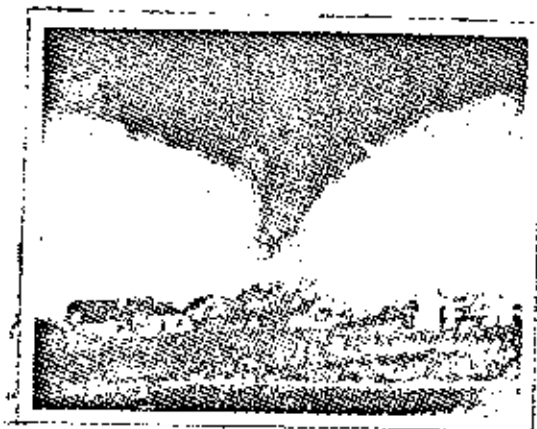
We were blessed with some fruits and nuts that grew wild on the plains. Along the stream we found hazel nuts, black walnuts and hickory nuts. I used to gather flour sacks full of small wild plums from which Mother made plum butter that lasted us through the winter. We burned corn for cooking and for warmth. Along the banks of the stream where the trees and shrubs were well watered choke cherries were found. They were about half the size of real cherries but had quite a different flavor. Also on the prairie were wild strawberries, small but very delicious. Ground cherries grew on low vines. It is strange but few people in the United States know of or have ever heard of ground cherries. In Peru, South America they are well known under the name of "Capuli" and there they are put up like a French bouquet and sold at flower stands as an ornament and to be eaten. Nature certainly volunteered help for the actual needs of the Pioneers, who had to use all their ingenuity to secure enough food on which to live.

The prairie chicken was a great blessing to the early settlers as food. It was about the size of a small hen and was found on the plains by millions. You could almost step on them in the tall grass before they would flush. At about seven years of age I drove a team and spring wagon for hunters. With one of the hunters sitting on each side of me, I drove over the prairie and, as the birds were flushed by the horses, the hunters shot from the wagon seat. In a few hours they filled the wagon with a hundred or more. Prairie chickens were still plentiful in the late eighties.



Prairie dogs were found on the plains by the billions. They stood beside their holes and even after being shot they were able to drop out of sight into their holes. It is said that rattlesnakes, which were also numerous on the prairie, lived in the holes with them. I have killed many rattlesnakes, perhaps a hundred in all. One day when Father came into lunch, after pitching hay in the field all morning, I saw a rattler coiled around the brim of his hat, just like a hatband. I have no fear of snakes and often carried a garter snake around in my pocket; but I don't care for rattlers anymore than I do for cyclones that visit the plains at intervals.

I (never) saw but one cyclone. It was a fearsome sight with



its whirling spiral cone that reached from earth to sky. It spun and twisted and snapped at the ground like a giant whip, controlled by an unseen hand. Rushing on with a dreadful roar, with lightning and booming thunder, it destroyed almost everything in

its path. It was late afternoon but the clouds were so dense that they blotted out the sun as though it were night. Next morning I saw strange things that had been caused by the cyclone: sixteen foot fence rails that had been driven into the ground twelve feet; straws driven into trees; a cook-stove a mile away from its home; a man who claimed he was lifted into the air and carried half a mile and set down without harm; but the strangest of all was the floor of a house with the side walls and roof entirely carried away, but the floor with all its furniture undisturbed -- tables and chairs all in their place, and on the center table was a glass lamp, just as if the storm had never been. Many say that they would not like to live in a flood, earthquake or volcanic district. There are many kinds of disasters: fire, famine, pestilence, and war with all its horrors, so who can choose or select.

Fast as the wind, dangerous, destructive, dreaded by pioneers was the prairie fire. Beautiful by night, though feared, as it circled the horizon and swept everything before it. Fire-brands were carried by the wind and fired hay stacks, barns and cabins. Buffalo herds, mad with fright, stampeded before the fire

and destroyed everything in their path; and the livestock, crazed by the sight of it, rushed frantically in all directions. Deer, antelope, and wolves, though mortal foes, ran side by side to escape the fire. In the fall settlers plowed several furrows around their places and burned the grass inside of the plowed ground as protection against the dreaded prairie fire.

I shall never forget when the grasshoppers came by the billions. They blotted out the sun and it became as dark as a total eclipse. In a few hours every vestige of vegetables, grass, weeds, and every leaf on the trees were destroyed. One day it was summer, the next was barren as winter. For this reason we moved to Lincoln, the capitol of Nebraska.

Lincoln was a small town but it looked like a great city to me. Father found a place as superintendent of the State Fair grounds. We lived on the grounds which were about three miles from town. I was five years old at this time and started to school. As I had to walk six miles every day I got in the habit of running. For years after I always ran instead of walking, which was probably the reason I later won the half-mile running race for boys under sixteen at the State Fair. There were sixty-three boys in the race and I won with the greatest of ease. I was about nine years old at the time.

After two years at the Fair grounds we moved into town where Father took up carpentry work. His pay was \$1.50 a day for twelve hours work. Food was cheap compared to present day prices. Bacon and ham only six cents a pound, beef about the same price, and liver was given away. Eggs were five to ten cents a dozen,

summer and winter prices. Women raised the chickens, sold the eggs and kept the pin money as it was called. We had homemade bread, cakes and pies. My Mother won first prize for bread and cake at the State Fair.

Father taught me how to make kites and fly them and as a small boy, when I dreamed, it was almost always of flying, raising my arms as wings. I had many happy flights, but sometimes the dream turned to a nightmare and I escaped from enemies, by the narrowest of margins, as I took off into the air.

The great events in my boyhood were Fourth of July and when the Circus came to town. Christmas was almost unknown because we had no money to buy toys. The Fourth was a great day. I usually had a package of firecrackers, seventy-two in the bunch, that cost five cents. I counted each one as I shot them. One Fourth I saw my first tragedy. I was watching the old soldiers firing a cannon, and after watching them for a while, I started home and passed in front of the cannon. I was just a few feet away when a premature explosion of the cannon killed the two men who were ramming down the powder. The back of my neck was burned by the powder. I ran all the way home and was afraid even to shoot a firecracker for the rest of that Fourth.

I was filled with excitement for days before a Circus arrived. The Circus drove from place to place. At that time they had no trains to transport them. Up at daylight, I walked out to meet the Circus and back with it. I watched the tents go up and usually found some work that earned a pass to the show. Sometimes it was water for the animals, but one time it was water

for a bath for the fat man and woman. They weighed about five hundred pounds each and bathed in a wash-tub. Several boys from Lincoln were with circuses. One, a fire king, taught me to eat fire, another tight-rope walking, and I could do many stunts on a high wire. Another was an acrobat and tried to teach me tumbling. I must admit I was not a successful tumbler, though as fire-eater and rope-walker I appeared in many home circuses with success.

As a boy I was very fond of fishing and trapping and never lost an opportunity to do these things. I caught a coyote and two baby badgers. I tamed the badgers and they were like kittens. Later I sold them to the Barnum Circus for \$2.00 and passes to the show.

Twice I appeared on the stage. Once with famous Joseph Jefferson in "Rip Van Winkle" and another time in the opera, "The Bohemian Girl". I learned to be quite a good ice skater and often did stunts for the crowds.

Father's eyesight became so poor, on account of eye trouble he had contracted during the war, that he was obliged to give up his carpentry work. He started a stable because of his love for horses. One time he cured a horse of a broken leg. With a wide belly band he lifted the horse's hind feet off the ground. In about two months the horse was able to walk and became a very good buggy horse. The livery business did not pay enough to keep the family. Sometimes I went to bed hungry because we had no food in the house, so by the age of nine I had to find odd jobs as a newsboy and many other things in order to help support the

family. In the winter I did odd jobs of any kind, such as shoveling snow from the sidewalk for ten cents. The coal in those days was dumped on the sidewalk when delivered. I carried it in and put it in the cellar and for this was paid fifteen cents per ton. In summer I mowed lawns and found other kinds of work such as brushing off flies from horses while the blacksmith shod them. I stepped on a hot horseshoe the first day with my bare foot and could not walk for sometime -- I have never since believed a horseshoe was lucky.

At four every morning I delivered a bundle of newspapers to freight trains that carried them to small towns near Lincoln. Then I sold papers on the streets until school time. After school I delivered evening papers on a regular route, and in the evening I rang a bell for an auction shoe sale. Saturdays I delivered handbills to homes and in summertime I had a lemonade stand on the street, besides my paper work.

One summer a Republican Convention met in the Opera House to nominate a Governor. The vote was a tie and it was a hot night. No one dared to leave even for a drink of water. A man called to me and told me if I would get him a drink of water he would give me twenty-five cents. I rushed home, which was only a block away, got a bucket and a dipper. As I entered upon my return, everyone shouted to me for water, so as fast as the bucket was empty I rushed for more. Each one paid what they pleased. After everyone was supplied I found I had \$21.10. Was I happy! The next morning the Lincoln Daily Journal made a note of the boy who made a small fortune selling water and wondered if he could

have sold water to a Democratic Convention. With some of the



money I bought my first real suit of clothes at a cost of five dollars. I was about eight years old at this time. Only once in my school days did I have a fight. The bully of the school was Bill Bohanan, the butcher's son. Just why he told me he was going to beat me up I don't recall, but he never required much reason on the playgrounds. He

started for me and the children gathered in a ring around us. In sheer desperation I kicked, scratched, and threw him to the ground, sat on him and pounded his face until he yelled for mercy, when I let him up. I never had to fight again because I had whipped the bully.

My two older brothers left home when I was about eight years old. They went West to become miners and I did not see them again for about fifteen years.

When I was eleven I became a printer's devil and ran a job press and did other odd jobs in a printer's office. Before I was twelve I worked as messenger boy in the B. & M. Railroad telegraph office. A. C. Zimmerman, manager of the office, was kind enough to say that I was the best messenger he ever had. He gave me a pass and a day off to go to Omaha and I took the early morning train. This was a great event in my life. The Missouri was the first river with stern-wheel boats that I ever saw. The hills of Council Bluffs were the first hills I ever saw and I dreamed of

real mountains and exploring. I returned on the evening train very tired but happy and was greatly disappointed that people I met as I walked home did not seem to notice I had been out of town.

When I was twelve, I became one of the first of two operators in the newly started Telephone Exchange. The salary was fifteen dollars a month which was five dollars more than I had received as messenger. We had 125 subscribers and as each subscriber asked by name, and not by number, for his connection, I was obliged to know all the numbers. I can remember some of those numbers today, more than fifty years later. The switchboard was about forty feet long and to connect #1 with #125 we had to travel about forty feet. As I could not reach the top of the switchboard, A. F. Blundell, the manager, had a platform built for me about six inches high and three feet wide. In a short time that platform was polished like glass by my sliding back and forth in order to make a quick connection. When the subscriber called Central a metal plate dropped with the subscriber's number on it. In those days phones were not shielded from lightning as they are today. Every flash of lightning as it played across the board, would knock down the 125 drops with a terrible clatter. All the drops had to be set up again before we answered a call, as the only way we could tell when a call came in was by the falling of the drop. With all the 125 drops down there was no way of telling who wanted Central and I was kept busy as long as the storm lasted trying to keep the drops up.

My school work suffered because of my telephone work, although being night operator I had plenty of time for study

because I went on duty at ten P.M. and was off at seven A.M. and sometimes for hours I did not have a call. After breakfast I went to a private school and then slept after lunch. Only once was I punished by a teacher. The only subject which I had trouble with was spelling. My mark was so low that the teacher thought a few whacks on the hand with a ruler would arouse me to further effort. I fear if she gave me an examination in spelling today she would still use the ruler. However, the teacher did everything possible to help me and so I graduated from grammar school.

Charlie Stewart, a graduate of Annapolis, became a Lieutenant in the Navy, but his whole class was discharged with a year's pay. He took up electrical work and was sent to Lincoln to improve the telephone service. He was there several months and spent his evenings with me in the telephone office, and I owe much to him for further training in school and electrical work. Mr. Blundell, the manager, an Englishman, also knew much about electrical equipment for those days, as it was little known then. He taught me about electric bells, batteries, and wiring. After a year I worked from seven A.M. until twelve noon and from six until ten P.M. With afternoons free I began putting in electric door bells and burglar alarms. I made more on this than I did from my salary as operator.

I secured a contract from the State Prison for several hundred dollars worth of electrical equipment, which was a fortune to me. At the prison I met a life convict named Harry Hall. He was a brilliant, handsome man and almost ran the prison. He slept

in the warden's office that overlooked the cell house. Together we planned out the bell alarm system for the prison and we became good friends. He often called me at the telephone office and I told him of what was going on outside. After the bell system had been installed, he called me one night and said that the bells were out of order and asked me if I would come out to the prison if he sent a trusty for me. I said I would and just before the trusty arrived he called me again and asked if I would stop at the drug-store and ^{pick up a package} ~~bring out some drugs~~ for him. I did as he asked and on my arrival at the prison the turnkey passed me with the package and my bag of tools and supplies, without making any search, as he was accustomed to my going and coming with packages. When I arrived at the warden's office Hall asked me for the package which he put in the safe and then locked it. I soon repaired the trouble which I thought afterwards Hall had caused. The trusty drove me back to the office and the operator on duty told me that Hall had asked for me to call him, which I did. He was the drunkest man I ever talked to. The next morning the warden phoned me and gave me Hell for bringing Hall whiskey. I told him what had occurred but I was never sure that he believed me because from then on I was always searched before being admitted to the prison. About a year later Hall called me one night and said that he was leaving and had just called to say goodbye. I laughed at him, thinking of course that he was joking. The next morning the first thing I heard was that Harry Hall, a life convict, had escaped from prison. Think of the nerve of the man in saying goodbye to me. Four years later he was caught working in a mine in Utah.

While doing some electrical work in the State Asylum they gave me an inmate to assist me with the work. He seemed bright and a good helper. He told me a story that won my sympathy. He said he had money and that relations had put him in the Asylum in order to get his money and asked my help. The Superintendent was a kindly grey-haired man and I went to him with the story. He listened to me patiently and then told me that the man was crazy on religion, and said to ask the man, who is God. I did so and he drew himself up and said: "I am God".

Mr. Blundell, the telephone manager, was a kindly but stern man. I had a bad habit of often being ten or fifteen minutes late and this made the other operator or operators work overtime. Mr. Blundell gave me a \$5.00 Waterbury watch and told me if I was ever late again he would fire me. I was never late again. The watch had a long spring and it took three minutes to wind it. Soon after this Mr. Blundell went back to England and a man by the name of Fair became manager.

My electrical work had developed considerably by this time and I made a trip in 1884 to put in electric annunciators in the railroad hotels for the Union Pacific at Laramie, Rawlins, Green River, and Evanston, Wyoming. At Laramie the famous Bill Nye was running a small newspaper called the "Boomerang". In it he made mention of my electrical work.

While at Rawlins I found petrified fish in layers of slate rock. The specimens were very perfect and some two feet long. This was at seven thousand feet above the ocean level, showing that the water must have been over these mountains at some

time, or perhaps millions of years ago a wrinkling of the earth had pushed the Rockies above the sea.

During my stay at Green River I saw thousands of antelopes. I tried to get one with a shotgun which I borrowed, but I could not get close enough. However, hunters kept the hotels supplied with elk and antelope meat at all times. The Rock Springs Coal Mines were a few miles away and while I was at Green River white miners drove the Chinamen out of the mines and killed seven in the outbreak.

When I returned from doing this work for Union Pacific, the new manager, Mr. Fair, insisted that I give up my electrical work, as it interfered with my telephone duties. He then took up the work himself and I thought him very UnFair. I complained to the general manager at Omaha and, thinking that I had not been treated fairly, he offered me the place of manager of the Telephone Exchange at Seward, Nebraska, which is located twenty-five miles from Lincoln. The salary was \$45.00 per month.

I have not mentioned that by now three sisters had been born, Florence, Mabel and Berenice, all younger than myself. I sent half of my salary home. I was very homesick at first in Seward. It cost \$1.50 for a railroad ticket to Lincoln so that I could afford to go home only once in six weeks.

I made some very good friends in Seward, some who have lasted throughout the years. One of the closest was Will Langworthy, at that time Cashier of the First National Bank, later President and owner. I was sixteen years old at the time I went to Seward and until that time I had never been to a party or had time to go

to one if I had been invited. In Seward there were a dozen or more boys and girls about my own age and I was invited to many parties. It all seemed quite wonderful to me. We often took rides in bobsleds and had skating parties in winter, and picnics in summer.



I secured a second-hand nickel plated bicycle, the type with the high wheel in front. When it was not in use I stood it in front of the office against the main telephone pole. Bob Klinck, my operator, spent much time polishing the nickel work on it. We were greatly annoyed by the people grabbing hold of the bicycle and spoiling the nickel polish. I ran a charged wire down the pole and attached it to the handle bars so the bicycle was insulated from the ground by its rubber tires, and if anyone standing on the ground touched the bicycle they received a strong electric shock. Crowds stood around watching to laugh at the next victim. Some of them were fighting mad, but the laughter caused them to sneak off without doing anything about it, and soon everyone learned to leave the bicycle alone.

A 110 foot flagpole was erected in the square around which the stores of the town were located. The pole had four joints in it. The rope of the flagpole broke and they wanted me to put up a new one. I was used to climbing about sixty feet with spurs, but did not relish a 110 foot jointed pole. When I

finally did consent to make the climb, almost everyone in town turned out to see me. Had it not been for that I would have backed out at the third joint because I found the joints were loose and the pole swung twenty feet out of line. I did succeed in putting up the rope and was very glad to be on the ground again. The city voted me ten dollars for my efforts.

In 1887 I was promoted to the Exchange at Grand Island, Nebraska, at a salary of \$60.00 per month. Bob Klink went with me as operator. The next year, 1888, I was made District Manager, which also included in the circuit Kearney, Nebraska. I was to have a vacation of ten days, which was my first vacation in many years.

Grand Island was a shipping point to the Chicago stock-yards. The railroad gave transportation for one man to each car-load of stock. Will King, one of my best friends, and I secured passes to Chicago on the stock train. This was indeed a great event in my life -- to visit the great city of Chicago on the shore of one of the Great Lakes. The tall buildings, street cars, wonderful stores, theatres and crowds were awing to a young country boy. Here I met for the first time Oscar and Cora Grandall. Cora was my Father's adopted sister and later when I moved to Chicago I lived with them.

Buffalo Bill often visited Grand Island as he shipped stock to Chicago from that point. On one of his visits I had the opportunity of meeting him. He and a number of his friends were having a few drinks in one of the saloons. In order to see him I visited the saloon under the pretext of fixing the telephone. As

I entered he slapped me on the shoulder and said: "Come and have a drink, my boy." He never insisted on what you should drink and, as I had never had a drink of strong liquor up to that time, I took ginger ale.



The young folks in Grand Island were like those in Seward and I soon met them all and attended their parties. I played the guitar fairly well and was often called upon to play. One of the churches gave a Fair that lasted several days. Kitty Clark, a girl several years younger than I, sang very well

and the church asked us to sing and play. We were dressed as strolling minstrels and passed the tambourine for donations.

One evening, just after supper, I met Kitty on the street and she said she was going to the library for a book so I walked along with her. When we went inside she moved over to the catalogue and I placed a seat for her. Just then the librarian said: "Come over here to the new catalogue." I thought Kitty heard her and I moved the chair, but she had not heard and, in sitting down where she thought the chair was, struck her head against a table. I helped her up and asked if she was hurt and she just laughed and said no. The next evening her married sister with whom she lived called me and asked what had happened and said Kitty was out of her head. I was very much worried, feeling that I was responsible, but in a few days she was all right again. About three weeks later, while sitting in the office with Will King and two other boys, we heard footsteps come to the door and

stop a few seconds. Later we heard something fall against the door. I got up and opened it and there Kitty lay on the hall floor. Badly frightened, we picked her up and brought her in and I phoned her sister. By the time her sister had arrived Kitty had come to, but was entirely out of her mind. In a few days, however, she was all right again.

It was about two months later, one evening, when Kitty called and said she was coming to see me. I knew she was out of her mind and started on a run for her house. About eight blocks away and three blocks from her home I met her. She had on only a nightgown and no shoes. It was very cold with snow on the ground so I put my coat on her. She didn't seem to know who I was and objected to going home. I carried her as far as I could and then coaxed her the rest of the way. Her sister had gone out calling so I put Kitty to bed and piled all the bedclothes I could find on the bed. Then I rushed next door and called for help. Just as we reached the door her sister and husband arrived and I told them what had happened. They called the doctor and in a few days she was all right again. These spells kept returning at times for about a year and then her sister took Kitty to visit another sister in Spokane, Washington. Soon after their arrival there Kitty had brain fever, which cleared the trouble. Thirty years later she told me that after the brain fever she never had another spell.

It was while I was working here in Grand Island that the Nebraska blizzard of January 1888 occurred. Due to its appalling loss of more than two hundred people it became known around the

world as the Great Blizzard. It began snowing about noon and in less than two hours the white snow blotted out everything so densely that you could hardly see your hand before your face. With a temperature thirty-three degrees below zero, and a wild gale of wind almost impossible to face, it was necessary to walk backwards because your eyelashes froze and it was only with difficulty you could breathe. Man can and has stood much lower temperatures but without the terrible wind and driving snow.

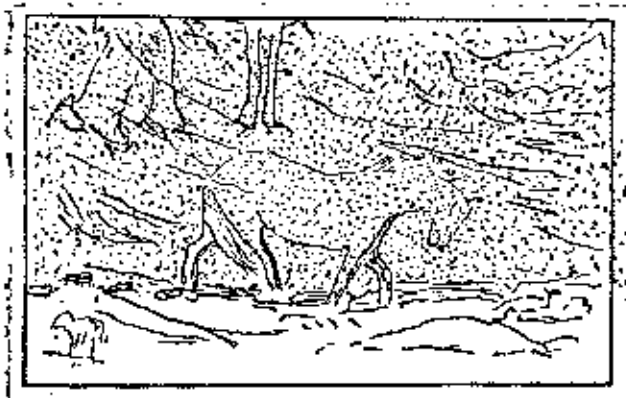
Teachers tied children to themselves to get them home. Some did reach home but many were lost. Many parents perished trying to reach the schools. Some wise teachers kept the children in the school. They were without food but were able to keep warm by using desks and seats for fuel until they were rescued three days later.

One man started for his barn to feed the horses; it was only fifty feet, but he was lost and not found until several days later, frozen in the snow. There were many similar cases where people perished almost within the reach of safety. Most of the settlers who had experienced blizzards before, tied a rope to their door and the other end of it around their waist, when they went outside, so they could be sure to find their way back.

It was only two blocks from the telephone office to the hotel on the main street where I ate my meals. I found my way by feeling the building along the street -- the snow was up to my waist. At the street crossing I lost my way until I ran into the building on the other side of the crossing. In just this short trip for food one ear was frozen.

The blizzard lasted three days and at the end of it our work began putting up broken telephone wires. The poles were entirely encased in ice so thick that in climbing the pole my spurs did not reach into the pole itself. I actually had to climb an icicle, a really dangerous job. I fell many times but the snow was so deep that it broke my fall and except for bruises I suffered no serious injury. I nearly met disaster while I was putting up a wire across the railroad track. I had the wire tied around me so I could use both hands to climb the icy pole; a switch engine came down the track just as I reached the top and with a heavy pull on the wire I was able to barely clear the smoke-stack of the engine, a close call indeed.

After the experience of this blizzard we all said:
"Damn the poet who wrote 'Beautiful Snow'."



CHAPTER III

PHONOGRAPH BUSINESS

In 1888 I saw my first phonograph and was fascinated with it. I made one and took it to Seward to show my old friends. The



picture shown here of me with the phonograph was taken, at that time, by my old friend Will Langworthy. It is now more than fifty years old. I went to Omaha to see E. A. Benson, President of Nebraska Phonograph Co., and he gave me the agency for the western part of the State. Phono-

graphs were rented in those days. Men, called exhibitors, travelled around with phonographs that had attached to them ten listening tubes made of rubber. This enabled a number of people to listen at one time through the rubber tubes that they held to their ears. The exhibitors charged each person five cents to hear a record. They made from ten to twenty-five dollars per day, half of which they paid as rental to the phonograph company.

This gave me the idea of making a nickel-in-the-slot attachment for the instrument. When it was completed I took it to Mr. Benson. He paid for my patent and gave me \$500.00 for it, besides offering me a place with the Chicago Central Phonograph Co. which he also owned. He was a friend of Thomas A. Edison.

In 1890 I moved to Chicago at a salary of \$100.00 per month. Phonograph companies in the early days expected to rent the instruments for dictation, but the amusement feature was the

the money-making part of the business. I put out one hundred nickel-in-the-slot phonographs around the city. They earned about \$2,000.00 per month.

In the early days records cost \$2.00 each, as we could only make five records at one time. It occurred to me that I could make a mechanical duplicate of the master records as they were called. I invented and patented a duplicating machine which reduced the cost to eleven cents a record. Everyone laughed at me at first and called me "Duplicate Doug".

The American Graphophone Company heard of my work and Mr. Easton, Director of the Company and President of the Columbia Phonograph Co., came to Chicago to see me. He offered me \$2,000.00, also a royalty of two cents per record, and a salary of \$125.00 per month if I would go to Washington, D. C. I accepted his offer and made a contract with the two companies.

In Washington I met a number of famous people, among them Alexander Graham Bell who had backed the Graphophone Co., and Mr. Hubbard, his father-in-law, President of American Bell Telephone Co. and also American Graphophone Co. Langley, who was working on his flying machine, was also there. Congressmen and Senators, although noted people at home, are not so well-known in Washington. At the boarding house where I stayed I sat next to a Congressman at the table, but it was several months before I knew that he was a Congressman. I stayed in Washington six months but was rather homesick to go back to Chicago. I learned that the Chicago Central Phonograph Co. was doing poorly and they offered me \$150.00 a month to come back as Manager. I

talked the matter over with Mr. Easton as we had become very good friends. He had taken me many places with him and Mr. Cromlin, Vice President of the company. We visited Old Point Comfort and Asbury Park, New Jersey, where I first saw and swam in the ocean, also New York City and West Palm Beach, Florida. After discussing my going, Easton said he would more than match the salary, but if I wanted to be with my family he could say nothing.

Upon my arrival back in Chicago I found the company was losing money. However, I soon had it back on a paying basis. About this time, 1891, popular music really became popular music. "After the Ball" was one of the first and most popular pieces. The Columbian Exposition was to be opened in 1892 so everything was booming in Chicago. I was elected Vice President and Treasurer of the company and I believed that a concession at the Fair for one hundred slot phonographs would be a paying investment. I succeeded in arranging a contract with the Fair directors, paying them one-third of the income. This did not include the Midway, as they wanted a separate contract for that, but the Directors of the Central Company thought it best not to build more than one hundred instruments, so I asked permission to build ten myself and make a contract for the Midway. This was granted but the Fair was delayed until 1893.

Mr. Edison had completed his kinetoscope for showing moving pictures about this time and his business manager, A.O. Tate, wanted me to have charge of its exhibition at the Fair. He sent me to see Mr. Edison at the laboratory in Orange, New Jersey. The kinetoscope was a cabinet about three feet high, eighteen inches



wide, and twenty-four inches deep, arranged to be operated as a slot machine and to show fifty feet of moving picture film for a nickel (not to be confused with the projector for film that came out a few years later). Mr. Edison told me to go ahead and arrange for a contract with the Fair, which I did. The Fair directors were very pleased that the moving pictures would be shown

for the first time at the Fair. The contracts were a printed form to be filled in. All contracts printed called for a bond of \$2,500.00 guaranteeing that the exhibition would be set up before the Fair opened (but few were there on time). When Mr. Edison read that part of the contract he was furious and told me to tell the directors to go to Hell, he would put up no bond. I told him that I was sure it was just a matter of form and that they would eliminate the bond, which they did, but nothing would appease him. He said he would not exhibit and therefore this first moving picture machine was not shown at the Fair.

Our phonograph concession made a profit of \$33,000.00 for the company, which I paid out in dividends. Mr. Edison said it was the first dividend he had received on the phonograph. I made over \$3,000.00 on the Midway, with which I started the Chicago Talking Machine Co.

Henry Babson, a boy I had known in Seward, Nebraska and brought to Chicago as cashier of the phonograph company at a

salary of \$15.00 per week, I took into the Chicago Talking Machine Company as one of the directors. Mr. Charles Dickinson, the Chicago seed merchant, became the third director. Our business was the sale of phonographs and records.

I invented a spring motor to run the phonograph instead of the electric motor made by Mr. Edison. I took the spring motor to show him as we had become very good friends. He said he was not interested because he did not believe it would be satisfactory in production. I asked him if he would sell me phonographs without electric motors. He said he would, so I started manufacturing phonograph motors. Phonograph dealers laughed at my spring motor and called me the hand-organ man, but in about two years Mr. Edison said "the tail was wagging the dog" and took up the spring motor. Since I introduced the spring motor more than 30,000,000 spring motor talking machines have been sold.

In our store on Madison Street we had a moving mechanical magician in our window. There was always a crowd watching the action. Among the crowd were several pickpockets, boys ten to fourteen years of age. From inside the store we could see these pickpockets working. Usually three boys worked together, one boy on each side and the other back of the victim. The boy behind pushed up the man's hat and as he raised his hands to catch it the boys on each side went through the man's pockets, took his watch and pocketbook with a quick smooth movement and immediately moved into another part of the crowd and then slipped away. We notified the police but this went on for years, so

they evidently did not pay much attention to the boys.

Another plan the boys worked was to push the victim into the boy on the other side, who pushed the man back, saying "Stop your shoving". Then during the shoving back and forth they relieved the victim of his valuables. Another way was for the boy in the back to jab the victim with a pin and as he turned the boys on the side did their work. Sometimes the boys would pretend to have a fight, crowding the victims, while maybe three or sometimes four pickpockets would relieve several victims who would usually try to stop the supposed fight. There was always a terrible expression on the boys faces while they were in the act of robbing. From the inside we could do nothing. If we made motions to the victim he did not know what we meant, and before he did know his money and the boys were gone.

Peter Bacigalupi of Lima, Peru visited the Chicago Fair and I sold him several phonographs and shipped them to Peru. Don, as I always called him, was to play a great part in my life.

I purchased all the slot machines used at the Fair from the Chicago Central Phonograph Co., which company was bought in by the North American Phonograph Co., the parent company. Mr. Edison owned half of the stock of the state companies and bought the rest. He then sold the phonographs to dealers all over the United States. The slot machines I bought that had been used at the Chicago Fair I sent to the Midwinter Fair in San Francisco, where I had received a concession from M.H. de Young, its president. Henry Babson took charge of this concession. The opening of the Fair was late as all of them are. (The Chicago Fair delayed

opening for a year and they were still building three months after the Fair opened.)

I decided to go to San Francisco as Babson had rented a store on Market Street and opened a slot machine parlor which was doing a good business. Soon after my arrival in San Francisco I met Don Bacigalupi on Market Street one day. He had been visiting his Mother and Father who lived there. He asked me to go to lunch with him and told me that he was sailing the next day for Peru and that he was sorry to leave. As Babson was homesick for Chicago I suggested to Don that he buy the Phonograph Concession at the Midwinter Fair. He was pleased with the idea and we closed a deal for \$6,000.00. He gave me a draft for \$2,500.00 and I accepted a note for the balance. Don sent for his family and Henry and I went home. The Chicago business was doing very well at this time.

In 1896 some patent litigation called me to Seward and Grand Island to act as a witness. On my way I stopped at Lincoln, Nebraska. As I had been away for ten years, I was looking forward to seeing the boys that I knew. Many of them had forgotten me and those who remembered me had new interests and were glad to see me for a moment but then were on their way. The buildings that were so tall as I remembered them now seemed very low after Chicago. I recognized dozens of people who passed but there was no sign of recognition on their part, so I did not stop them. Street corner gossips were still there, now older, some grey, but still settling the troubles of the world. I spoke to one or two

but they did not remember me. I had intended to stay a few days, but I was homesick to get away so caught the next train. Some years later when I passed through in a private car, reporters interviewed me and devoted a whole page to my work -- old-timers said they always knew I would be a great success. Such is success or failure with the world.

In prosperity we have friends galore,
In adversity we have friends no more.

CHAPTER IV

FIRST EUROPEAN TRIP

We were selling some goods in Europe and, as I thought this business could be increased, in 1895 I made my first trip to Europe. What a wonderful trip it was!

I left New York on the Cunard boat, the Majestic (many years later a new and much larger Majestic was built). On board was Henry Irving, the great English actor, and his leading lady Ellen Terry, the revered actress. Also among the passengers was Charles Mitchel, the heavy-weight fighter, who had just been whipped by Corbett in a World Championship Match. The Captain said it was the roughest crossing he had ever made (they always say that) but it was my first and worst. For three days passengers were not allowed on deck. We stopped at Queens-^{re}town, Island and I never saw grass so green or heard blarney so keen. On board I met a Mr. Blythe, president of the Bank of Scotland, and we became very good friends and corresponded afterwards for more than thirty years. We landed in Liverpool and five hours later were in London.

While there I stayed at the Savoy Hotel on the bank of the Thames. I was up and away at six in the morning and covered most of London on top of busses. Sitting next to the drivers on these busses was much more informative than the printed guide books of today. The drivers wore silk hats, as did most everyone else in London. For ten full days I visited everything from the Tower of London to the British Museum. I was on the move from

daylight to dark, and although most exhausted by night, after resting I would be ready to be off again the next day. I saw Henry Irwin play "The Bells". The Music Hall (similar to our Vaudeville) had some great acts.

Thomas Cook & Sons helped me to arrange a schedule from London back to London, which included the best hotels on the continent at \$1.50 per day. Travellers were a novelty in those days and people were more friendly than they are now. I took a Channel boat to Antwerp, Belgium, an overnight trip. Antwerp was all so different that I enjoyed everything. Many people wore wooden shoes, milk was delivered in dog drawn carts, men's clothes with the wide pants looked strange, and women wore very full skirts and gay colors. A wedding, which I had the opportunity of watching, was held in the open square of the hotel, and the breakfast lasted all day -- eating, dancing, singing, and more eating going on and on. The costumes of both the men and women were of bright colors, and it was a brilliant and jolly party that lasted far into the night. From a seat in the window of my bedroom on the second floor I had a perfect view of the festivities. Rubens' painting, "The Descent from the Cross", which is in the Cathedral at Antwerp, I shall never forget.

At home I had always been very fussy about my food, but this trip entirely cured me. Almost no one spoke English so I had to eat what they gave me and like it.

From Antwerp I went on to Brussels with its ginger-bread buildings and statues, including the "Boy of Brussels". The King's Palace and the strange customs were all very fascinating.

Next was Cologne, Germany. Hotels of Europe had lifts (we call them elevators). The car was pushed up with a long plunger. I think it would be better to call them elevators and ours lifts, as theirs were pushed up and ours are drawn up. Theirs were very slow, you could reach the fourth floor by the stairs while the lift travelled half way. I liked the Park and Zoo in Cologne. There were many soldiers there and I saw them build a pontoon bridge across the Rhine River and cross it in just a few minutes. They were holding a World's Fair in Cologne but as usual it was far from complete.

The trip up the Rhine River to Strassburg was a sight long to be remembered with all its old castles on either side of the river. At Strassburg I saw the famous clock in the Cathedral. Many figures came out of it on the hour, and at twelve noon, Jesus and the twelve Apostles appeared. I was very much interested in this mechanical marvel.

From Strassburg I went by train to Lucerne, Switzerland. A German who could speak English was in the same compartment with me and he began talking about Alsace-Lorraine, which I later learned Germany had taken from France in the War of 1871. He said that what God gave to Germany no man could take away. I did not know then what he was talking about so furiously, but I could see that even then the Germans had a chip on their shoulders for France.

I was to change cars at Basel, the border of Switzerland. I asked the porter where my train was and got on board. Soon the guard came along and, on examining my ticket, motioned me to get off with my baggage. I went back to the porter and he told me the

guard was wrong to go back and get on the train. Soon the guard came along again, looked at my ticket and motioned me to get off again. I went back to the porter the second time and told him what had happened. He said the guard was crazy to go back on the train and stay there. Soon the guard came again and when he saw me I thought he was going to have apoplexy this time. He grabbed my bag and threw it on to the platform. Again I visited the porter and asked him to see the guard because I feared that next time he would throw me on the platform. After a violent eruption between the porter and the guard I learned I was on the wrong train. A much subdued porter put me on the right one.

Lucerne Lake is a dream of beauty, with its beautiful blue water and tree-lined mountain shores. A small schooner stopped at the Rigi and here a cog-wheeled railroad carried one up the mountain which is a mile high. The view was gorgeous, the beautiful lake at its foot, and the snow-covered mountains in the distance. The boat then went on to Tells Chapel, a shrine for the famous William Tell of bow-and-arrow fame, who shot an apple off his son's head. The city of Lucerne is quaint and its bridge, hundreds of years old, has old paintings under its roof. The Lion of Lucerne, carved out of solid rock, is a picturesque spot with its little waterfall and pool in the foreground. The hotel here served the largest strawberries I have ever seen, almost as large as an apple, and the cream for the berries was perfect. Also they had a small wild strawberry that was most delicious, and splendid fresh Swiss cheese.

From here I had a beautiful and lovely journey up over a

winding mountain pass to Interlaken. Interlaken is situated at the foot of the Jungfrau, a perpetually snow-covered mountain, the delight of Alpine climbers. The stage journey to Grindelwald was fine. From the small hotel to the Glacier, the guide tied me to himself with a rope about twenty feet long. He gave me a pair of Alpine sticks, all of which was done just for effect, as no place along the trail could you fall more than ten feet if you did fall off. Inside the Glacier all was a gorgeous shade of blue, as the light filtered through the ice, the color effect being much the same as in the Blue Grotto on the Isle of Capri. There is no more beautiful sight than the Alpine glow that spreads its shades of rose and pink over the snow-covered Jungfrau at sunset. In later years I saw a most unusual sunset, so much so that all the people, including waiters and other employees, left their dinners and ran out to see it.

The trip over the mountain to Lake Geneva was grand, as was the boat trip to the city of Geneva, the home of the Swiss watch. I looked at watches in a number of shops and at last found one that fitted my pocketbook. I paid for it and carried it away. No sooner had I arrived back at my hotel than watches began to arrive C.O.D. The messengers all claimed that I had ordered them and had I been shamed into taking them I would perhaps be in Switzerland today, because I did not have nearly enough money to pay for them.

The journey from here to Paris gives one a glimpse of the country life of the French people. Their vine-covered, thatched-roof cottages were a picture, but most pleasing of all

to me was Paris, one of the most beautiful cities in the world. When I visited it in 1895, the city was not over-run with tourists and people were more friendly than they are today. So many have visited Paris up to date that any description of it on my part would fall far short of real writers. I spent five days there on my first visit and then returned to London, which seemed more like home because I was again with people with whom I could talk.

The much loved Queen Victoria was on the throne of England and I saw Edward, Prince of Wales, later King Edward VII. He was a fine looking man and received great applause as he bowed himself along High Hobern, riding with a Cardinal dressed all in red.

I had done a good business with the few dealers I met in Europe and it was time to go home, much to my regret. I had seen more places and things in four weeks than most people did in those days in as many months. The great pleasure in seeing things for the first time is only equalled by showing others for their first time, which I did in later years.

CHAPTER V

ROMANCE

Back in Chicago I plunged into work again, many days working fifteen or more hours. In the Fall of 1896 Don Bacigalupi came East on a business trip. He wanted me to go to California with him. Others also urged me to go as I was thin, pale and had a bad cough. Finally, they persuaded me to do so.



Once there I met his wife, the mother of nine children. Her first four children were by her first husband, Daniel Elias Adams, an American descended from our President Adams. After he passed away she married Don. Her eldest daughter, Victoria Adams, I fell in love with at first sight. In that far away land of Peru lived

this maid, sweet and fair. Her language was that of Spain.

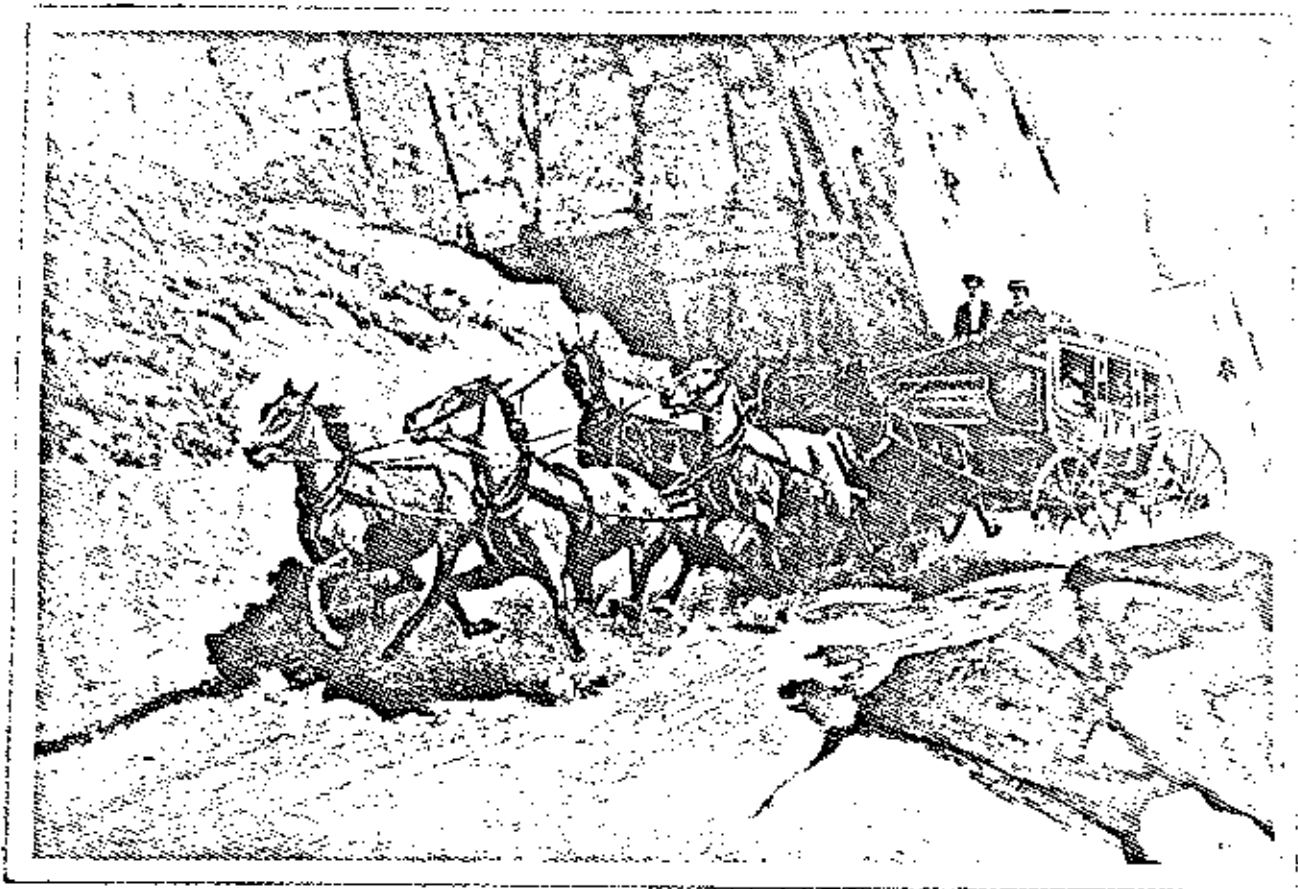
Fate spun its web around a Nebraska country boy and this maiden. They were destined to meet as sure as the needle is drawn to the magnetic pole, guided by that invisible hand that decides the destiny of all. So fate spins its romance to the far corners of the world.

A few weeks after I arrived in California Don arranged for a trip to the Big Trees in Calaveras



County. With us were his wife and Victoria. Robert Klenck, the boy operator at Seward and Grand Island, Nebraska, was also in the party. He was now in California working for Don. We left San Francisco on the night boat for Stockton, from there took a train to Milton, and then a six-horse stage of the '49 type to the Big Trees Hotel the next day. Victoria, Robert and I went fishing and a dog from the hotel followed along. We found the stream but I knew nothing of trout fishing in those days and we caught none. After a few hours we started back to the hotel. Soon we discovered we were lost but thought surely the dog would know the way, so we followed him up and down the mountain until we were tired out. As it grew dark I found that I had just one match and we made careful plans to start a fire. How relieved we were when we had a good blaze going for it was growing cold. We were a very happy trio when about midnight we heard someone firing a gun. There were about a dozen natives in the searching party but they had only one horse. Victoria had never been on a horse before, but she found it a great help in reaching the hotel, which was only about two miles away. There a nice dinner was waiting for us and the searching party.

Next day we started down the grade with the old-fashioned stage-coach. We hadn't gone far when the driver asked me if I could drive six horses. He said he had been away sometime and his hands were giving out, so I took his place, with Victoria beside me, and gave the party a fast but by good fortune a safe ride down the mountain. To be frank, the horses knew more about



handling the coach than I did. We met a band of sheep, a thousand strong, and it was no easy task getting the coach and horses thru the sheep without injuring them. I thought nothing of it then, but now I am rather proud of the fact that I drove a real old-time stage and six horses, with Victoria beside me.

After a very happy six weeks in California I returned to Chicago, much improved in health, even though I left my heart in California. Strange, how one can live without a heart! The business of the telegraph company and the United States mail was greatly increased for the next few months. The phonograph business was good but not through my efforts, as my mind was not on the work.



As a boy, when I read love stories, I thought if ever I wrote a romance I would use a picture of the sweetheart instead of pages of description -- so here is the picture of my sweetheart which I am sure tells the story better than words. The power of description is a great art, but a picture is much more effective.

Father was my most loyal supporter. If I were the wonder he thought me, no higher plane could be reached. He spent his last few years in caring for a beautiful Arabian horse that Mr. Dickinson gave me. I rode Billy, the horse, in the early morning through Lincoln Park. I say rode, and I did, until the horse going at a fast pace decided to stop suddenly while I kept on going over his head. I believe I became the champion diver of Chicago from a horse (this was acquired from much practice). Father gave Billy such care as few horses ever receive. It was remarkable how Billy knew Father's step among a hundred thousand. Billy was kept in a stall twenty feet back from North State Street, where a hundred thousand or more people passed every day. Billy knew my Father's step from all the others and would whinny when Father was still fifty feet away.

I was now twenty-six years old, and often worked late at night at the office and then walked home. Father often came to the office just to walk home with me. In this and many, many other ways he showed his loving attention. Father passed away in December and early in 1897 I returned to California. My one greatest regret was that he never saw Victoria.



Victoria and I were married February 10, 1897. She always said I married her for money as she had forty-five dollars in the bank. "Vic", as I called her, was a wonderful housekeeper. I had never lived so well before. With ten dollars per week she bought all the food and paid a maid four dollars per week. On March 21, 1898, Leon Jr. was born and this was the second great event, our marriage the first. Equally happy events were the arrivals of our other five children. More than forty-two years later, I now call Victoria "Mother", and what a Mother her life has been, devoted to the children beyond all other interests in the world. While Mother was nursing Leon, Mrs. Evelyn Peatie, who lived in the same flat building where we lived, gave birth to a baby boy but unfortunately was not able to nurse him. Mother heard about him when he was three weeks old and offered to nurse him along with Leon Jr. By that time the baby was just skin and bones. She took him home with his nurse and kept him for ten days when a wet nurse was

found for him. By then he was in splendid condition.

Soon after we were married I bought my first automobile in 1897. It was one of the first two to appear on the streets of Chicago and attracted much attention -- so much so, that if I stopped anywhere on the downtown street such a crowd gathered that it was necessary for the police to clear the people away before I could get started again. The car was a friction drive with no means for backing up. It had no carbureter and was a vapor engine of two cylinders. The spark was a make and brake. Spark plugs were unknown then. I earned the cost of the car by showing it at County Fairs. They paid me a hundred dollars for the use of the car to be shown on the grounds for a day and to be run around the track once in the afternoon. I finally sold the car for half ^{WHAT} it cost me, and the man I sold it to shipped it to China.

In 1898 I bought one of the first of the Stanley steamers, later in Philadelphia I bought a White Steamer. Though I drove cars for more than twenty-five years I was never arrested but once and that for speeding in Fairmont Park, Philadelphia. I was travelling thirteen miles per hour. There was a law that you could not ride a bicycle more than twelve miles per hour in the park. The officer who arrested me claimed that the auto was a bicycle, but I was discharged because there was no law on autos. After that they made some laws regulating auto traffic. I fear that if you drove through the park now (1940) at twelve miles per hour you would be arrested for blocking traffic.

The business was doing well now and we had assets of nearly \$50,000.00. Columbia Phonograph Co. sold the product of the American Graphophone Company. They had stores in several cities and intended to start one in Chicago and offered to buy us out. They made an offer of \$50,000.00 for our business and I was to have the position of Manager at a salary of \$5,000 per year. We did not want to sell but thought that it was better to do so rather than face the competition of the Columbia Phonograph Co. As manager of the Columbia Co. I was not happy, because in order to handle the business of their many stores they made set rules for every move made. This meant I could no longer put out advertising, as I had been doing, and it was necessary to submit everything to New York for approval. After a year I resigned and took up the sale of the Edison goods.

I was just nicely started (Babson and Dickinson were with me again) when I received a letter from Mr. Parvin, President of the Berliner Gram-o-phone Co. of Philadelphia, asking me to come and see him regarding the position of General Manager for the Berliner Co. I went and he offered me \$5,000.00 per year and five per cent of the profits, which I accepted. I sold my interest in the Chicago Co. to Babson and Dickinson and we moved to Philadelphia the latter part of June 1900.

Dorothy had been born June 9th and we started as soon as Mother was able to travel. Mother was a great sport and said she was ready in ten days, much too soon of course, but I knew no better then. There were no bad effects fortunately, but I shall never forgive myself for the ordeal she went through due to my

lack of knowledge. Mother and Leon both had the whooping cough at the time, and even now I can not write about it without regret. However, we were both young and strong and our good angel was with us.



CHAPTER VI

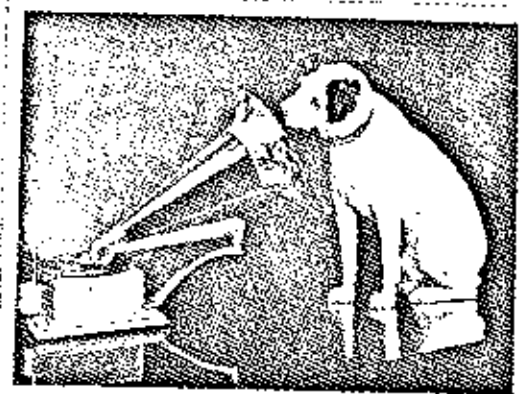
THE START OF THE VICTOR COMPANY

The Berliner Gram-o-phone Co. owned the patents of Berliner; the instruments were made by Eldridge R. Johnson of Camden, New Jersey who owned a small machine shop; and they were sold through Frank Seman of New York, with whom the Berliner Co. had made an exclusive contract for their sale. The Berliner Co. claimed that Seman had broken his contract, and decided to sell the Gram-o-phone direct to dealers. That was the reason I was there, to make the sales. I had just laid out plans for starting when Seman secured a temporary injunction against Berliner Co., preventing them from selling gramophones except through him.

Mr. Johnson was in no way connected with the Berliner Co. and was free to sell the gramophone and new type of record he had patented. I knew that it would be months before the Seman case could be settled and I had no desire to sit around for months, drawing pay without work. I accepted an invitation to lunch with Mr. Johnson, at the Walton Hotel, and to talk things over. At this luncheon, the business that became the Victor Company was born. Mr. Johnson told me he had the shop and record plant worth about \$60,000.00, but only \$5,000.00 in cash. He said he knew nothing about the sale of goods and asked if I would take up the sales management. I told him I would, and he then asked me what salary I was receiving and said he would pay me the same as long as his money lasted. He asked me if I thought I could do anything with \$5,000.00 and I told him we had to do something.

The next day I placed the first ad for the disc talking

machine. This was the first time "His Master's Voice" was used,



The conception of "His Master's Voice" was by an English artist. He first made a sepia drawing with a phonograph and the dog. When he tried to sell it to the English Phonograph Co. they refused to buy it. He then made

another with the Gram-o-phone, as the Victor was known in Europe. He was paid \$2,500.00 for the picture. "His Master's Voice" is considered the greatest trade-mark ever known. I wanted the picture in color so I had a fine artist paint it. We ordered a million copies the first printing. These were bound in magazines. The lithograph company that made the prints gave me the original. At Mr. Johnson's suggestion the English artist was given a pension of \$5,000.00 per year for as long as he lived.

I spent \$2,500.00 on the advertisements in McClure's, Cosmopolitan, and Munsey's magazines. Mr. Johnson said: "My God, Douglass, what will you do next month, there goes half our money!" I told him we would have to earn something. The new record of Mr. Johnson's was far superior to anything that had ever been heard from a talking machine before, but we were sometime in proving it to all the dealers. However, there were enough dealers that did believe in it to immediately take up the sale of the first disc machine, and from the start we sold machines and records as fast as we could make them.

The Edison and Columbia Phonographs were wax cylinder

machines. The record was cut up and down, in hills and valleys, and as the cut down into the wax became deeper, resistance increased, so the sound was limited. If you used too much volume in making the record it blasted and was very bad. With Mr. Johnson's disc the cutting needle moved from side to side, or a zigzag cut, so the resistance was the same throughout the entire cut of the record. This gave a louder, clearer and more musical tone.

Many are slow to take up improvements, and many are from Missouri, you have to show them. If a man made a machine to make \$20.00 gold pieces for \$10.00, there are many who would not be interested. The Columbia made fun of the disc to dealers and called me "the pie-plate man". I ate many meals off those plates. The Edison Co. was our strongest competitor, though always very fair.

The Columbia sued us for infringement of patents, and did everything possible to put us out of business, even to helping Seman to try to prove that we were the Berliner Co. and just trying to evade the injunction of Seman. Their ads and circulars were directed at us in a very scurrilous manner, by giving half-truths. Easton saw Mr. Johnson and warned him against me, saying that I had worked for them and if he did not look out I would put him out of business. Mr. Johnson's reply was that he (Easton) was doing all he could to sink him, so he was unable to see why Easton wanted to save him from my efforts. Mr. Johnson is the finest and most honorable man I have ever known, and our friendship and close companionship has never wavered in now more than

thirty-nine years.

Though competitors, Mr. Edison and I were always friendly. I visited him many times. In the early days I once suggested to him that the Edison Co. do more advertising. We were doing many times more advertising than his company. I said: "We will both do more business with more advertising." In reply Mr. Edison told me it was none of my damn business how much advertising he did. I noticed the next month that he doubled his ads. The next time I saw him I told him I was going to send him a bill as advertising expert. We both had a good laugh and he admitted I was right.

The public took kindly to the disc instrument over the cylinder and soon the dealers that were slow to start were forced to the disc, as the cylinder was fast dropping behind in popularity. Lyon & Healy, the largest music dealers, took up Mr. Johnson's talking machine, because it gave real music.

In the record pressing plant we used huge mechanical presses. I suggested and made a plan for a hydraulic press that required only one-fourth the floor space and was faster. I turned it over to my good friend Denison, chief engineer, and while he was not very much impressed with it at the time, seven years later he made it and it took the place of the old presses at an expense of almost a half million dollars. Such is the fate of many new things.

In the beginning Mr. Johnson left everything pertaining to sales, advertising, and recording to me. The factory was in Camden and our offices in Philadelphia. Mr. Johnson came over to Philadelphia every day and for many years we lunched together. At that time he was a shy man but had the most brilliant mind I have ever

known. He is six feet, two inches tall, with very long arms. He bought ready-made clothes and the sleeves and pants were always several inches too short. While he was a fine looking man he dressed like a farmer in the early days. One day, while we were at lunch, I asked him to go to the tailor's with me. I went to Hughes & Muller, Philadelphia's best tailor, and paid forty-five dollars for a suit. He wondered why I paid so much when he could get one for fifteen dollars ready made. While I was being fitted he found some cloth that he liked and decided he would order a suit. The transformation was really marvelous, and from one of the poorest dressed men he became one of the best, as he had splendid judgment. Mr. Johnson has the quaint philosophy of Abraham Lincoln. Had he a political turn of mind he would have been a President that would have done much to improve our country.

When we first started the business I had only one helper, Oliver Jones. For fifteen dollars a week he kept the books and wrote my letters. He was always dressed in the height of fashion, but he was not afraid of work. When we received an order we rushed into the shed that we used as a packing room, packed the goods, rushed back to the office, billed and did other office work. The next month we rented a small office in Philadelphia in the Stephen Girard Building, Room #1313 on the 13th floor. We employed a stenographer, Miss Alice Hargraves, who stayed with us twenty-five



years. We also hired a man as shipping clerk for the shed in Camden.

Mr. Johnson's cashier for the factory was Albert Middleton, and Albert Atkinson was foreman, with Charles K. Haddon as assistant. A twenty-horse power gas engine was the power plant (later twenty thousand horse power). Mr. Johnson looked after the factory and was busy making new models. Our first and only instrument sold for fifteen dollars. I had charge of sales, advertising, and recordings. Mr. Calvin Childs was chief recorder and a wonderful man. For a number of years he and I passed on all records that were released. At our luncheons I urged Mr. Johnson to get out more expensive models. Soon we had a thirty dollar and fifty dollar model. The first year we made a net profit of \$180,000.00 and my share of this was about \$14,000.00 including my salary. Mr. Johnson gave a commission of ten per cent divided among five others. None of them knew what it was based on, they just received a check, which was a great encouragement to them.

The second year our profits were over a half million dollars and Mr. Johnson decided to form a company. Up to this time the business had been run under the name of Eldridge R. Johnson. He asked me to suggest a name. I suggested "The Victor Talking Machine Company". The word "Victor" was taken from Mother's name as I often called her "Vic", the "Victor". There were five organizers of the company, Mr. Johnson was president, and I was vice president and general manager. Mr. Johnson sold me \$25,000.00 worth of preferred stock at par, which carried with it \$75,000.00 worth of common stock. He allowed me to pay for it out of dividends,

which I did in three years.

When in the third year our profits mounted to a million and a half dollars, I suggested that my salary and commission be cut so as not to run over \$50,000.00 per year. Mr. Johnson kindly said that I had earned the money, but I am sure he was pleased that I was willing to be fair. He had set his own salary at \$10,000.00 per year and I thought it only right that I offer a resolution to the directors that his salary be \$5,000.00 more than I received. It was promptly voted. Later when our profits ran to almost eight million dollars per year, my commissions would have amounted to more than four hundred thousand dollars yearly, had I not volunteered to reduce it.

One of my plans that had much to do with all lines of retail business through the United States was the control of prices. Our greatest trouble was the cutting of prices by dealers. In a town two music houses would be selling Victors; to get trade one would offer a customer a Victor at less than retail price, and the other dealer would cut under the first dealer, so a price war would be on and they would cut the prices so near cost that there would be no profit left. In disgust, they would both throw out the Victor, as the instruments were all alike and one dealer could not claim his were any better than the others.

Department stores cut the price to cost as a sales leader, and the large dealers would set up a howl, as they had a lot of money invested while the department stores had almost no investment. This really became serious to the progress of the business.

So I went to our patent attorney, Horace Pettit, and suggested that when the government gave you a patent they gave you a monopoly on the instrument and the patent law says you can sell or license for use only. I suggested that we place a notice on each Victor, "licensed for use only" when sold for thirty dollars or whatever the price of the instrument happened to be.

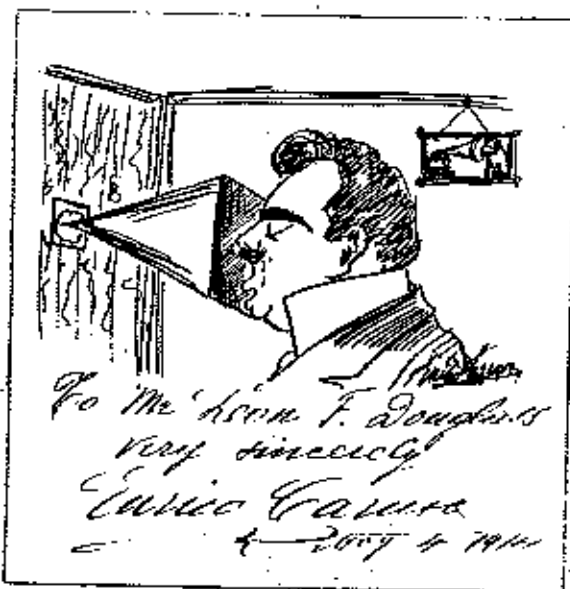
Sued The Fair Department store in Chicago was a serious price cutter. We used them in the United States ^{District} Court and lost the case. We then appealed to the United States ^{Circuit} Court of Appeals and won. The Fair appealed to the United States Supreme Court. By this time both sides had the best attorneys in the United States. Ours were Charles Evans Hughes, now Chief Justice, Justice Brandeis, Eli ^{hu} Root, and other famous attorneys. We won in the United States Supreme Court. Then many other manufacturers took up price control. After ten years the question again reached the Supreme Court and we lost four to five, but the dealers had been maintaining prices for years now, so we had no further trouble. My plan has now (1940) been adopted by thirty-six states under a law ^{entitled} Fair Trade Practice. I am pleased with this regulation because it confirms my claim of thirty-five years ago. X X X

In 1903 Enrico Caruso, the greatest of all tenors, came to America. I told Childs to see him and ask what he would charge to sing ten arias. Caruso's reply was four thousand dollars. I agreed to the price if Caruso would give us an exclusive contract for five years. Caruso agreed to that and I sketched out a contract for our lawyer, Horace Pettit, to put in shape. The

Caruso records were a great success, both in the volume of sales and the standard to which they raised the talking machine. Caruso was clever, the next year when he came back I told him we would like ten more songs, and he replied that for ten more songs he wanted ten thousand dollars. But I said: "Your contract calls for four thousand dollars for ten songs." He said: "Yes, but the contract only calls for ten and it doesn't say that I have to sing any more at that price." Well, he was right. Until he made his first record for us we had never paid more than one hundred dollars for a record, and for most of them only five or ten dollars. I told Caruso that he could not sing for anyone else for five years, and he admitted that it was true and he would not do so, but also that he did not have to sing any more for us. I saw we were stuck and paid him ten thousand dollars for the second ten records, with the understanding the records must be subject to our approval or he was to make them over. This he agreed to do, but we only had to ask him to make one over. Mr. Johnson was in California and I wrote him in full about the arrangement with Caruso. He replied: "My God, Douglass, you will break us paying that price". The next year I was away and Mr. Johnson had Caruso to deal with. This time he wanted a royalty of fifty cents a record and ten thousand dollars advanced on the royalties. Mr. Johnson agreed and paid him that.

Some years later, the last time that Caruso ever sang to make a record, the Treasurer came to me and said: "Caruso is singing in the Laboratory and his six months' royalty check is just

ready, would you like to hand him his check?" When I arrived at the recording laboratory, Caruso was stripped to his under-shirt, humming and running scales. I handed him the check and he put it in his pocket without looking at it. I then asked him if he had ever received as large a check before. He looked at it -- \$202,000.00. He said it was the largest he had ever received, the second largest being one for \$200,000.00 for a six months' tour in South America. He asked me if I would like to hear him sing and proceeded to sing with-out forty piece orchestra. His bellows expanded to the size of a watermelon, and rose and fell smooth as the tide as he sang.



CHAPTER, VII

FLORIDA TRIP AND THE "KLONDIKE"

In January of 1903 Mr. Johnson and I were badly in need of rest so I suggested to him that we take a short trip to Florida and he reluctantly agreed. I chartered for ten days the "Klondike", a forty foot sail boat with auxiliary power. It was to be all provisioned at Miami before we arrived. Mr. Johnson was very nervous and even after we were on the train he protested that he should not have come. He would feel in one pocket after another, but as I talked to him about the fishing he gradually relaxed and after an hour or so his hands lay still, and he said perhaps it was best to have come, as we both needed a rest.

At Miami, Mr. Johnson's trunk had arrived, but not mine, although I had taken the precaution to send it on twenty-four hours before we left. By afternoon we decided to start anyway and arranged for a boat to follow with the trunk. The first night we anchored in Caesar's Creek, named after Caesar the pirate. Nestled in among the mangroves, between two Florida Keys, Caesar would lay in hiding and watch for passing ships and then run out and capture them. We dropped a line over the side to catch fish for dinner and filled a pail with grunts, a splendid food fish that grunted like a pig when taken from the water. I have often wondered if they make any sound under water and why. The Klondike, being small, was rather crowded with the two of us, the Captain and the mate. The bunks were under the deck with only about two foot headroom and it was difficult to get in or out without bumping one's head.

The next morning we hoisted anchor and went south about sixty miles to Indian Key, a small island only a hundred yards in diameter. It looked like a gem in a sapphire sea and was one of the most beautiful isles I have ever seen with the gorgeous palms and tropical flowers. Lignumvita Channel, where we anchored, was just a step from the island. The waters abounded in hundreds of varieties of fish, many with all the colors of the rainbow and with shadings as delicate as the most lovely flower. The one that interested me most, the idol of all anglers, was the tarpon.



Towards sundown we were out trolling and saw the tarpon rolling. Suddenly, a fish gave a tug on my line ^{such a} like I had never felt before. My rod bent to the limit and a fish seven feet long with a head of gold and irridescent silver sides shot into the air. Truly a thing of beauty! I finally brought this tarpon, fighting like a tiger, to the small boat and then on board the Klondike. With the light on the fish, its shimmer could only be likened to mammoth pearls. I understand that the tarpon's scale is used for making artificial pearls.

The launch had arrived by now with my trunk and the charges were forty dollars. The next day we fished on the edge of the Gulf Stream, which runs through the ocean waters as sharply defined as though it were land. The Atlantic looked drab by comparison. Over the reefs huge fish swam lazily about -- you could see them almost as clearly as if they were in the air instead

of in water. Big sharks floated among the other fish as though they were on good terms with them. I dropped a bait over-board and many fish dived for it, but a barracuda reached it first. I should judge it weighed about twelve pounds. Now handicapped by the pull of the line, a large shark cut it in two with a single snap, and I pulled in only about half the fish. A few seconds later my line ran out almost to the end of the six hundred feet when it stopped. I worked the fish in and landed it. The fish was an amberjack and weighed eighty-four pounds. My name was on the record board at Miami for many years, and then someone had to go and catch one weighing ninety-six pounds and my record vanished.

Mr. Johnson was as busy as I and in about two hours we landed three hundred and eighty pounds of barracuda. We thought it unfair to make such a haul just for sport so we ran over to one of the larger keys where lived a number of conks, natives of the Keys, and asked them if they wanted the fish. They said "no" that barracuda is a poison fish. Millions of people do eat the barracuda and it is a fine food fish. At that time a railroad was putting through to Key West a railroad line which was constructed chiefly of bridges. We went to one of the camps about ten miles away and asked if they wanted the fish. They also said "no", and just as we were about to leave it dawned upon us that maybe the workers thought we were trying to sell the fish. When I told them we wanted to give the fish to them they nearly swamped our boat getting them. One man wrapped his arms around a fish weighing about fifteen pounds and said he

was going to eat it all. We were relieved to know that the fish were going to be used.

Another night I was fishing for sharks when I hooked one about fourteen feet long. I could not handle him and so Mr. Johnson came out in the other boat, the Captain rowing for him. We hooked the boats together and between the shark, wind, and tide we were carried several miles away from the Klondike. Then with two men rowing and Mr. Johnson holding with all his strength we managed to turn the shark toward the large boat. As long as the shark swam in the right direction we let him go, easy, but if he tried to go the wrong way, we fought him into our way. We actually drove that shark right back to the Klondike in about four hours. It would have been a long pull if we had had to row back against the wind and tide.

One bright moonlight night I was trolling in about fifteen feet of water over a white sandy bottom. The water was so clear that I could not see it, and I felt as though I were floating in air fifteen feet above the earth -- it was a very eery feeling. I have been out hundreds of times at night but never have had the same experience again.

Mr. Johnson was busy every minute of the day and very happy as well as very rested after our short cruise. Many years later, as his guest on the Caroline II, the finest private yacht in the world, I asked him if he ever had as good a time on the Caroline as he had on the little Klondike. He laughed at the idea that anything could ever compare to the little boat we fished in off the Florida Coast among the Keys and over the reef

into the Gulf Stream.

When I returned to Philadelphia I was still angry about the trunk and the forty dollars that I had paid to get it. I wrote to the Chief Baggage Agent of the Pennsylvania Railroad and told him what had happened and that I thought the forty dollars should be paid back to me. I really expected him to reply that he would investigate the matter and that the claim would drag on for years. Imagine my surprise when the next day I received a nice letter from him with a check enclosed for forty dollars. Then I felt a little ashamed that I had been so cross and thinking that some poor baggage man would have to pay it, I sent it back with a nice letter, saying that in such a large system mistakes were bound to occur. In a few days I received a letter from the President of the Pennsylvania Railroad stating that never before had they had a record of anyone returning money that had been paid on a claim and he wanted to thank me personally. The letter was worth more to me than the forty dollars.

CHAPTER VIII

YEARS WITH THE VICTOR COMPANY

When we had first started business our phonograph records were only seven inches in diameter and this did not give a very long record, so I suggested that we make a ten inch record. Mr. Johnson thought a twelve inch record would be better so we compromised by making both. For the first few years I was almost a Tsar of the business. Though Mr. Johnson listened to my plans he always said "you know best". As time went on he learned much about all branches of the work and we had many hot arguments about policy, but never did it cause the least resentment. There was always perfect harmony and cooperation.

In 1902 I patented a semi-cabinet instrument to cover the machine. I told Mr. Johnson that it was my opinion that ladies did not like mechanical looking things in their parlors. Mr. Johnson improved on my cabinet and the result was the Victrola, an instrument fully enclosed in a cabinet which was an attractive piece of furniture. I ordered two hundred. Mr. Johnson was afraid we would not be able to sell so many and I was a little timid myself, as they cost so much that we would have to sell them at two hundred dollars each. We not only sold those but many millions more. We were obliged to use seven thousand men to make the cabinets alone. In the finest cabinet factory known we placed orders for seven million dollars worth of African mahogany. Many ships were needed to bring it

from Africa. In later years we spent four million dollars per year advertising and were at that time the world's largest advertisers.

We won the Grand Prize at the World's Fair at Buffalo in 1902 over both the Edison and Columbia. The judges were leading musicians well known to the music trade and it gave us a great advance in sales. We also won the Grand Prize at the St. Louis World's Fair later, but by that time the Victor was so far in the lead that competitors gave us but small concern.

In September 1902 Earl was born in Philadelphia and in June of 1906 Eldridge was born. In the Fall of 1906 I had a nervous breakdown and we left for California. This was soon after the San Francisco earthquake and fire. I was not able to work for

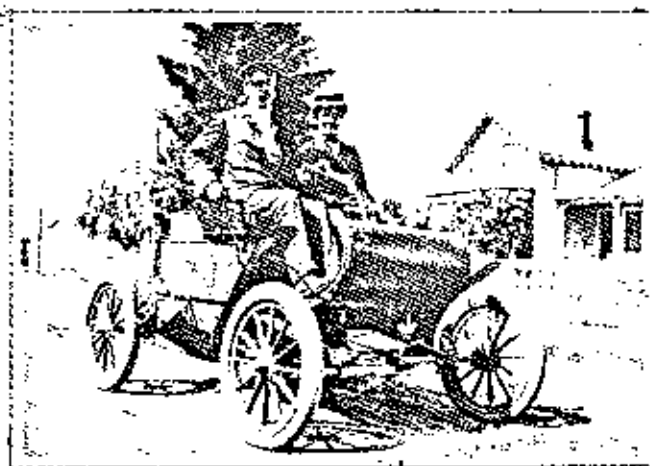


nearly two years so we bought a home in San Rafael, California. In 1906 when we came to California to live we went to Soquel, near Santa Cruz, to spend a few months of outdoor life. Most of the time was devoted to fishing and both Mother and I became quite expert with the fly rod. Mother landed a six and a half pound trout and hundreds of smaller ones. This is a picture of her

taken at that time.

I have owned many cars in my life but the one I enjoyed

best of all was the little Oldsmobile I bought in San Francisco in 1903 while I was there for a short time. The car could make



only about fifteen miles per hour. It had no headlights. Going down Market Street it caused many run-ways, as horses did not take kindly to automobiles for several years. It was necessary to take an exami-

nation to drive in Golden Gate Park. The test was for the examiner to throw a dummy baby in front of the car and you had to be able to dodge it. If you missed two out of three of the babies you got a license.

Mother and I would start early in the morning to reach Hayward by lunchtime -- in those days it was far in the country. After having lunch at some wayside inn we would return to the city. It required about five hours to make the drive on a none too good road. Once during blossom time we drove to San Jose. The blossoms were marvelous and it was a glorious day, though it took us about twelve hours to make the trip over deep muddy roads. Some places the mud was almost up to the hubs and it was necessary to wind ropes around the tires in order to drive through the mud. We had a grand time, regardless, and I have never seen the blossoms so beautiful or so fragrant as they were on that day in May.

During the next few years I went back to the factory as often as I was able and, in the meantime, helped with suggestions by letter to Mr. Johnson. Finally, being convinced that I would not be able to take up regular work, I urged Mr. Johnson to accept my resignation. He refused and I was then elected to the office of the Chairman of the Board of Directors. I also urged Mr. Johnson to stop my salary of \$25,000.00 per year, which they had kept up all during my illness, but Mr. Johnson replied that if the Victor Co. paid me that amount as long as I lived they could not pay for what I had done for them. Twice, in the early days, by my action alone, I had saved the Victor Co. from going out of business.

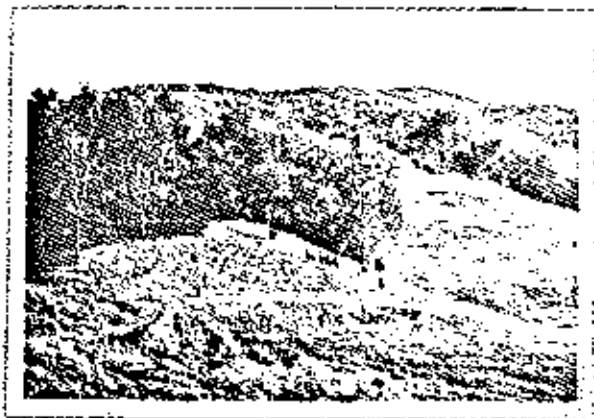
In San Rafael in April of 1913 Ena was born and in January of 1915 Florence was born. When Florence was born, our sixth and last child, is the appropriate place for a word about the most wonderful Mother in the world. From the time Leon Jr. was born, Mother was never away from the children but one night for more than twenty-five years. Mother took her Mother from Philadelphia to New York and stayed over-night, spending most of the night crying, even though I was home with the children. Mother nursed all her babies. Our lives were devoted to the children. We have been well repaid for it as our greatest pleasures and happiness have come from them. In this modern world where all parents over fifty are old-fashioned, many children wish that their parents knew as much as they think they know. We have nothing to complain of with our children, we

try to see things from their standpoint so there has never been any real disagreement. We never found it necessary to whip them, believing love is a greater ruler than a wooden one. The children are usually freely guided by our wishes, and they are most thoughtful of our comfort and happiness.

In 1914 I met Judge Lennon, Justice of the Appellate Court, ^{District} Judge Melvin, Justice of the Supreme Court, and Judge Kerrigan, Justice of the Appellate Court, ^{3rd District of appeal} and we became close friends. In 1912 I had bought the Pocket Ranch, covering 1800 acres in Sonoma County, and on it I built a fine bungalow. The



three Judges spent two weeks there with me every year until Judge Lennon and Judge Melvin passed away.



There were many deer in the hills and a stream with good trout fishing bordered the land for more than three miles. Here at the Ranch my boys learned to hunt and fish.

Next to Mr. Johnson, Judge Frank H. Kerrigan became my closest and best friend for almost twenty years. He was just like one of the family. He loved the Ranch and had the use of

it a month every year. At first with him it was "your" Ranch, soon it was "our" Ranch, and then he referred to it as "my" Ranch. From the Court of Appeals he was elected to the Supreme Court of California, and then President Hoover appointed him Judge of the United States District Court. He was the wittiest



man I ever knew. The children loved him and as he was one of the trustees of their trust funds they went to him with all their troubles which he made his own. As our guest he spent two months with us in

Honolulu. He had been very ill but came home a new man. A United States Judge has the right to call in an expert to sit with him on the bench in patent cases, and I was quite honored to sit with Judge Kerrigan three times.

As I said, Judge Kerrigan was a great joker, and when we moved to Menlo Park he was asked by his friends and ours if Mother was the Mother of all our six children, as there was a number of years between the first four and the last two. The Judge told them that the first four were by my first wife and the last two by my present wife, but as she is also my first wife it makes all well. In many marriages today, both parties often have their fingers crossed in the modern way, but in ye olden days it was for life and no one thought differently. Mother and I have never had a quarrel.

One of the things that has given me the most pleasure in life was in 1918 to give Mother one-half of my worldly goods. I sincerely felt that she had earned it, and that it rightly belonged to her.

Up until 1921 I visited the factory of the Victor Co. once a year and did what I could. Mr. Johnson kept my office next to his just as it always had been. One of the directors told me that they were crowded for room and one of them suggested that they might use my office when I was not there. He said Mr. Johnson nearly snapped the director's head off, and as a result my office always remained as it was. When the company built a fine new office building Mr. Johnson had a beautiful office arranged for me next to his own and showed it with pride to the jobbers when they came to the factory. A wonderful bit of sentiment that few men in this world ever show.

When I retired as Chairman of the Board of Directors of the Victor Company in 1920, Mr. Johnson was elected as Chairman and he asked me to be the Honorary Chairman. The directors gave a banquet in my honor and presented me with a gold loving cup. It cost three thousand dollars. I am very proud of the inscription and verse engraved on the cup, a picture of which follows:

TO
LEON FORREST DOUGLASS
Chairman of the Board
of
VICTOR TALKING MACHINE COMPANY
in token of the esteem and admiration in which we hold him
and appreciation of his invaluable services
in behalf of the industry of which he was an organizer
January 29, 1920

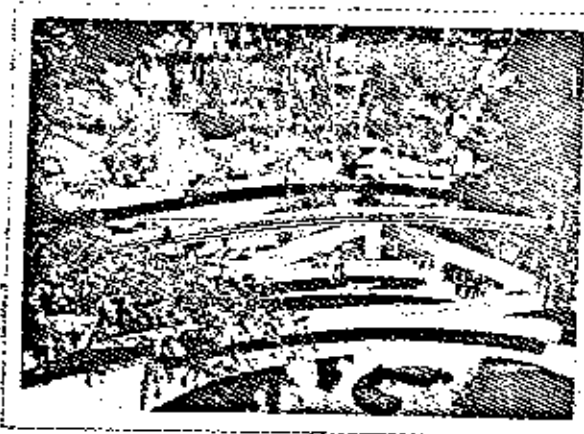
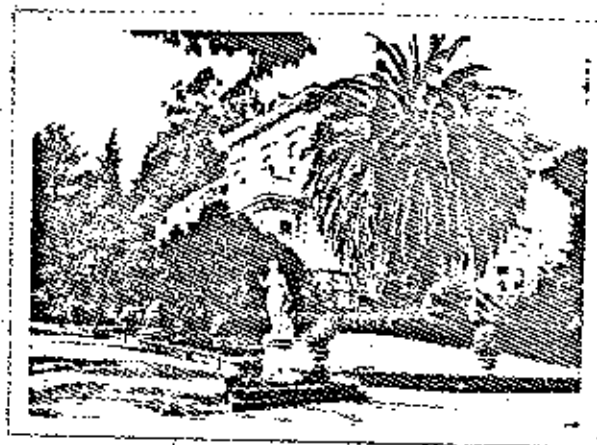
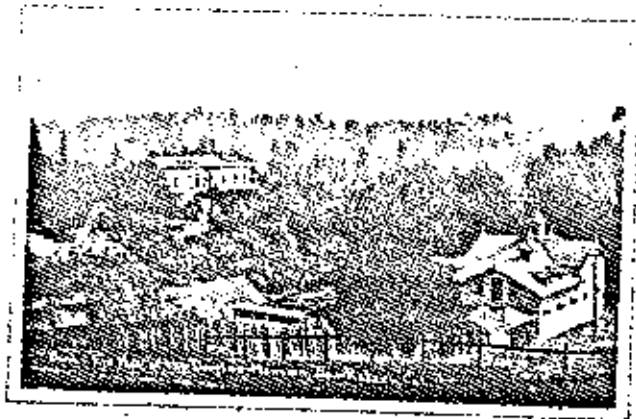


"There is an honor in business that is the fine gold of it; that reckons with every man justly; that loves light; that regards kindness and fairness more highly than goods or prices or profits. It becomes a man more than his furnishings or his house. It speaks for him in the heart of everyone. His friends are serene and secure. His strength is like a young tree by a river."

Mr. Johnson and I both sold our Victor Co. stock in 1926. At that time, the Victor Co. had spent \$29,000,000.00 for advertising, paid dividends of \$31,000,000.00, and had assets of nearly \$50,000,000.00. We employed more than ten thousand people and we never had but one strike and that only lasted a few hours.

The Victor Co. was often referred to as a romance in business. Many times I have been asked what the reason was for our success. My reply was: "The confidence of our dealers." We never let them down -- their success was our success. On occasions we took back all their unsaleable stock and gave them full credit. Sometimes this cost us as much as a million dollars.

For about forty-five years I was never out of employment for a single day. Many said I was lucky. It is my belief that between good luck and bad luck there is a straight line. But the more you do to help yourself, the farther you get over on the good luck side.

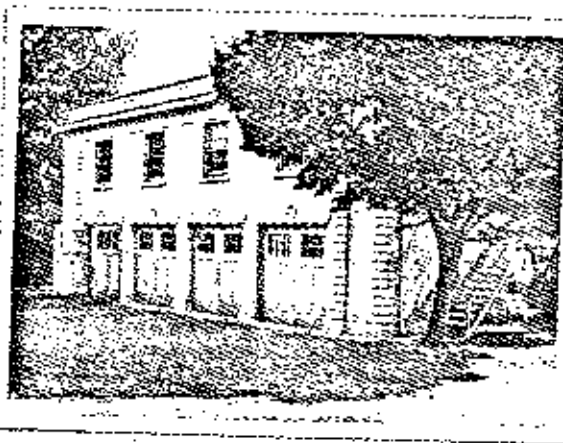


CHAPTER IX

SAN RAFAEL AND MENLO PARK HOMES

We bought a home and about five acres of land in San Rafael and were very happy to own this, our first home. We spent a great deal of time in planning and planting a beautiful garden. Mother grew some of the finest strawberries I ever tasted. She planted, cultivated and watered them herself. We both enjoyed the garden work and spent much of our time outdoors with the children.

In 1912, when I built my laboratory, besides the work I was doing for the Victor Company, I began my experimental work on moving pictures in natural colors. I had given much thought to colored pictures ever since I bought an Ives Komoscope from London in 1898. The still pictures one saw through the Komoscope lenses were in full colors and very beautiful. I had never had time until now to develop my plans for natural color movies.



My first moving picture camera made twin negatives, one of red value and the other of green. These two negatives were printed on a double coated positive, on one side of which the tone image was green and on the other side red. When the film was projected it gave the natural colors on the screen. (For full detailed drawings of this camera and description of the invention see the original patent in the back of the book.)

The first showing of any pictures taken with this camera was on May 15, 1917, shortly after America had entered the World War. I was greatly impressed with the tremendous work which the Red Cross had before it and with its needs for funds and wished one of my contributions to this great cause to be the natural color film described above. Various benefit performances were held and considerable money raised from the showing of the film.

Some of the scenes of these first natural colored films are shown here. The scene of the goldfish was made in 1916 and was the first natural colored moving picture. The scene of Mary Pickford with her makeup man was made in 1917. The sunset scene was taken at Santa Monica, California, and the parrot scene was filmed from a Mexican setting in one of the studios. The poppy field was taken near San Jose.

This later proved to be my most important invention as it has now been in use in all the large moving picture companies for more than twenty years, under the name of Technicolor. When I first showed Cecil B. deMille the natural color movie he said he was not interested because the beauty of the colors would detract from the action. He said people would be so intent on watching the beautiful color effects that their attention would be detracted from the story. I told him that according to that theory actors on the stage should dress only in black and white, as beautiful dresses and scenery would detract. It was several years later that I received a telegram from him asking me to come to Hollywood to discuss the color pictures. Right after my visit he gave an interview to the papers saying that the color movies were on their way.

and that he had just seen some that would be satisfactory for use. As a matter of fact the scene that interested him most was one that I had shown to deMille and Lasky several years before. Again this proves that people do not take kindly to new things, but that it takes a lot of time to convince them. Even the automobile, radio, telephone, and airplane have required years to come into great use.

In 1921, when we bought a home in Menlo Park, I moved my laboratory from San Rafael and continued my experimental work with two regular expert mechanics and others, including chemists from time to time. I patented about twenty other inventions for special effects or camera trick work for the movies.

Several of these are illustrated here. The scene of the tiny girl seated on the table with three men was made with my apparatus by Alvin Wycoff, Chief Cameraman of the Paramount Co. and for Cecil B. deMille. Many scenes like this are made by double exposure but never before was such a scene made by SINGLE exposure. In this scene four grown people, three normal size men and a young lady as a tiny midget acted with each other in the same scene at the same time. Mr. Wycoff said it would have required many hours and tests to make the scene by double exposure and even then the action could not be timed perfectly as it was in this scene. From the time they started to put the lights on the set and the scene was rehearsed and taken it was less than thirty minutes.

The scene of the burning of the witch was made with a single exposure by a combination of lenses. The witch, of course, was not in the fire though she appears to be.

The scene of the castle with Lois Wilson walking on the parapet was a single exposure. The castle was a picture about 8 x 10 inches. By a lens combination I enlarged the castle to appear as a great building, perhaps a thousand times larger, and reduced Lois' size by a thousand times to procure the desired effect.

The triple figures dancing are of course a single couple, multiplied three times, and taken by a single exposure.

I rented these inventions for special effects to the Paramount Company for \$5,000.00 a year. A like arrangement was made with the Fox Co., and I also arranged with the Universal Co. for the use of some of the apparatus for certain pictures. Mr. Mayer of the Metro-Goldwyn-Mayer Co. asked me to become a director of that company, but I could not accept as I was still in the employ of the Victor Company.

Our home in Menlo Park, known as "Victoria Manor", has fifty-six rooms. It cost \$348,000 to build and is surrounded by fifty-five acres of land, about twenty acres of which is in gardens, with many fine old oak trees, one a hundred feet in diameter, which is perhaps a thousand years old. There are many other beautiful rare trees and plants and several spacious flower gardens.

As you approach the house through the gates the road is lined with oleanders, edged strips of lawn, all backed by acacia, olive and many other fine trees. Scattered through the grounds are several life-size marble statues that we purchased in Florence, Italy. The chief outdoor attraction is the swimming pool and here

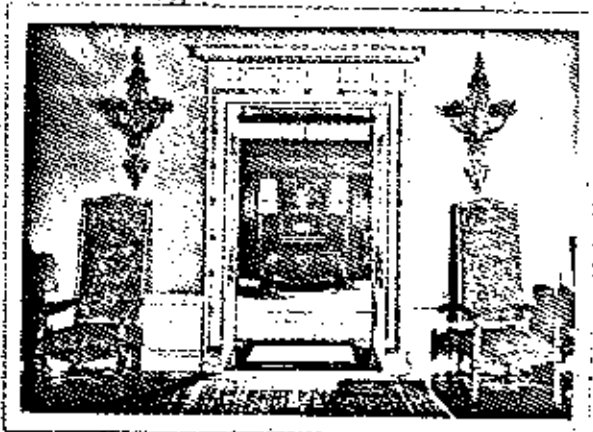
in the summer months the children and grandchildren all love to gather.

The house itself has several unusual features and some rare objects of art that have come from all parts of the world.



The ceiling of the dining-room was painted by Keith and he was paid \$10,000.00 for his work. In the living-room is a life-size bronze statue of Augustus Caesar that cost \$10,000.00 and is one of two made from molds direct from the original statue in the Vatican at Rome. The old spinet, the sedan chair, and other objects of art are of great value.

We put in a Wurliitzer pipe organ in the library where once a week, when the children were all home, we showed regular moving pictures. These gatherings were always very happy occasions as we and the children invited our friends, sometimes having as many as a hundred guests.



CHAPTER X

TRIP TO SPAIN

After 1920 we made several trips to Honolulu and we asked Judge Kerrigan to go as our guest. On our return from one of these trips in 1927, we came back on the President Grant. At that time George Yardley, the brother of my secretary, was Captain of the ship. Knowing that Mrs. Douglass spoke Spanish fluently, he told her that there was a Major Carrion, his wife and two daughters on board, who had embarked at Manila and could speak only Spanish. There had been no one on board for them to talk to for two weeks, so Mother said she would be pleased to meet them. They were very charming people and we came to know them better than usual ship acquaintances that are so soon forgotten. As we parted in San Francisco the Major handed me his card and said: "If you come to Spain, be sure to call on us." When I looked at his card I noticed that he was aide-de-camp to the King of Spain. (Later I learned that he was the richest man in Spain.)

Next year we decided to visit Spain. We planned our trip and ordered hotel accommodations several months ahead. We sailed on the Duello, stopping at the Madeira Islands, where they use sleds drawn by cows over the rough cobblestones. Madeira is a beautiful island filled with lovely tropical flowers and fruit. The Duello stayed for a day at Gibraltar and another at Algiers, Africa. Much could be told of both places. We disembarked at Naples and the ship went into dry dock to put in 17,000 rivets on account of the terrific storm we had weathered at sea.

At Naples we changed ships and sailed to Monte Carlo on the Belgenland that was making a World Cruise. When we came off the ship at Monte Carlo we noticed there were many cars in a roped off enclosure waiting to take passengers to Nice. It is a beautiful drive but only about fifteen miles away. We asked the fare and they said Twenty-five dollars. We just laughed at them and went outside and rented a fine car for six dollars for the day.

We returned to Gibraltar on the Belgenland, arriving there at five A.M. We were on our way to Granada where we had arranged for rooms for that night at the Palace Hotel. I knew that it was only 200 miles to Granada and thought we could, of course, make the 200 miles that day, but found that the train stayed overnight at Rounda and we did not arrive in Granada until four P.M. the next day. I wired the Palace Hotel from Gibraltar that we would be twenty-four hours late and to hold the rooms for us. When we arrived the manager of the hotel was very hostile and said: "Mr. Douglass, you ordered rooms for last night. I kept them for you and you will have to pay for them as the hotel is full". (This was true as the next day was Easter.) I replied: "That is all right, I am glad you kept them and I will pay for them." His face was red, his voice high and excited, and it was evident that he expected an argument, but when I said I would pay for the rooms from the day before, he looked surprised and said: "You will pay for them?" I said: "Of course." He said: "Oh, well, I will not let you, I am as much a gentleman as you are." We had ordered two double rooms with baths. In a few minutes the manager came up himself and opened a door into a sitting room and

said: "Use this, there will be no charge." I suppose had I made a protest he would not have been so friendly.

The Alhambra, only a real writer can describe. I will not attempt it. As we came out of the hotel next morning a guide met us and said he would like to serve us during our stay. He was a refined gentleman and we liked him very much, but remembering that in Amsterdam, Holland, a guide once charged me six dollars for a half hour's visit to the art gallery, I always made a bargain about the charge. Deias was the Spanish guide's name and he said his charge would be two dollars a day. We never had as good a guide and we gave him a big tip for the six days he was with us.

The train from here to Madrid was crowded. We passed through districts where there were many old-fashioned sail windmills and where it is said Cervantes lived, who wrote Don Quixote, who supposedly charged the windmills near Puerto Lapiche. Through the window Mother spoke to a man on the platform and asked him if that was where Don Quixote had fought the windmill. The man said "yes" and twenty men and boys gathered on the platform, confirmed this statement and pointed out the windmill he had fought. Mother had quite a long talk with the crowd. They all laughed and jabbered at once. As a matter of fact, I don't think they even knew anything about Don Quixote or had ever heard of him. We spent ten days in Madrid and saw every-



thing, which the guide books can tell you more in detail and better than I can.

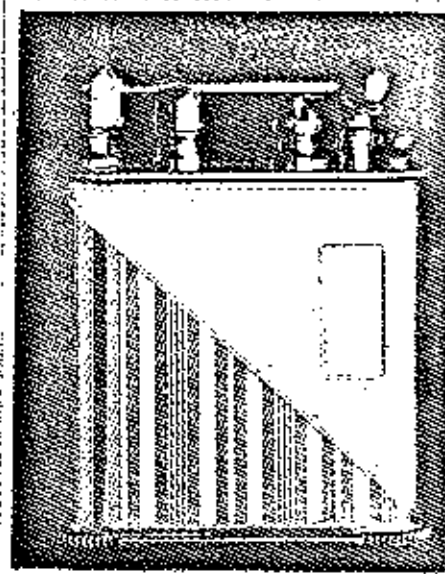
The Spanish turn night into day with dinner at ten or eleven P.M. We went to a charity circus in a round building where we were told the King and Queen would be present. Just before it started at eleven P.M., the band played the National Anthem and everyone rose and faced the royal box. First the Queen glided in and indeed she looked every inch a Queen. The many jewels she wore made a marvelous display. She bowed to the applause as she was seated. Next came the King's mother, then the Queen's mother, and last King Alfonso XIII. He smiled and bowed to every side, and as he looked down on Florence he smiled and gave her a special bow. The indoor circus was splendid. Seated back of us were two Spanish boys and girls about twenty years old. They were enjoying themselves by making fun of us and our American clothes which were odd to them. One of the boys put his feet up on the back of Mother's chair and kept time to the music which was very annoying. Mother turned around and looked at him several times, but the kicking of her chair continued. Finally she rose and turned to the boy and in perfect Spanish said: "Your kicking of my chair is very annoying, I wish you would put your feet on the floor where they belong." You never saw more astonished or embarrassed people. Needless to say, Mother was not annoyed again. They had been jabbering and laughing but after that they did not say another word during the entire show.

Since we had been in Madrid we had not called Major Carrion, not wishing to presume on a ship acquaintance. I suggested to

Mother that she call them on the phone and greet them. Almost like magic the Major was at the hotel with his secretary, an Englishman. The Major scolded when he learned that we had been there eight days and had not called him. He wanted to take us everywhere, but inasmuch as we had seen the places, he insisted that we go with him to lunch the next day. He called for us and we drove out of the city about fifteen miles through a tree-covered road. Soldiers stopped us, but when they saw the Major they passed us on. We arrived at a hunting lodge, and imagine our surprise when the King rushed out, embraced the Major, and kissed him on both cheeks, as is the Spanish custom. There were about twenty present for the luncheon and it was served on the porch of the lodge. The King and his friends were shooting live pigeons. He was a wonderful shot, bringing down forty-nine out of fifty birds. The method of live pigeon shooting was novel to me. There were three traps with a man under-ground to load the traps and on the surface it was level lawn. So no one would know which trap would be sprung, there was a roulet wheel, and when the ball was spun it dropped in a slot which electrically connected the traps.

The pure white hunting dog retrieved only for the King. When the King was not shooting he would bet with the others. I placed a number of bets with him, 100 pesetas or fifteen dollars each bet. At the end I was 85 pesetas ahead and still have some of the coins today which the King gave me. The King was the banker and charged fifteen per cent commission. When the King rose from the table to go and shoot we all rose, but the King motioned us to be seated and said: "No formality here, we are all just

friends." The King was seated when the Major introduced me; he rose and gave a hearty handclasp and said, in perfect English without the slightest accent, that he was happy to meet a friend of the Major's. I said: "It is a pleasure to meet your Majesty." It was no effort to talk to the King. His pleasant smile made me so at ease that I talked perfectly freely. I lit a cigarette with my new lighter and the King noticed it and asked if he could see it. He tried it several times and the Major told him I was the inventor. I told him I would send him a nice gold one. He said he would like to have one very much, but just a plain one. With only his close friends around him, he was as happy as a boy, dancing and singing just like any other human being, his cares of State forgotten for awhile.



The King asked if there was anything he could do for us. The Major said that he would like to take us through the Palace, so the King told him to have the General who was Chief of the Army go through with us, so we really saw the Palace.

Later when I arrived in Paris I had a gold lighter made. On the face of it set in diamonds was an "A", the cross bar of the "A" being the Roman figures XIII. When the lighter reached the King he sent a very nice letter of thanks, and also I received a letter from the Queen saying that she would like a lighter and hoped it would be as nice as her husband's. Those were just her

words in referring to him, not the King or His Majesty, but just husband. She received a special letter and sent a letter of thanks.

The Major told me he was aide-de-camp when the King was just a boy. After we were there the King made the Major a Marquis. Later on the Major's way to the Phillipines he stopped at our home in Menlo. He admired it very much and said the Palace was no finer. He presented me with some cigars from the King.

A few weeks after we visited Madrid we were in Paris when King Alfonso came for a visit. Thousands stood on the street for hours just to see him pass which showed how popular he was.

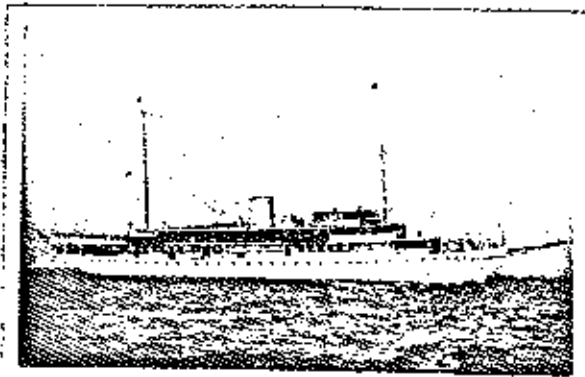
When we first arrived in Paris the franc was about 15 for the dollar, but it kept dropping -- 25, 30, 40 and finally 50 for the dollar. The fare for a taxi from our hotel, the Majestic, just beyond the Arc de Triomphe, to the Place de Opera was four francs. It was about four miles. At first it cost 24 cents and tip, but when the franc went down to two cents each it cost only eight cents and a one franc tip, or ten cents in all.

Because of the low prices we bought many things. At the Gallerie Lafayette we bought some real black lace, but they would sell only two yards to one customer. Mother wanted ten yards, but the clerk said "no sale". I saw the floor-walker and told him I could send in four people and get the ten yards in that way so why not sell it to Mother and save the trouble. He said: "That sounds reasonable, you may have the ten yards." In one small store they had some beautiful tapestries in petit point work. The old lady said that three girls worked more than a year to make them. She wanted 5000 francs for them at six cents per

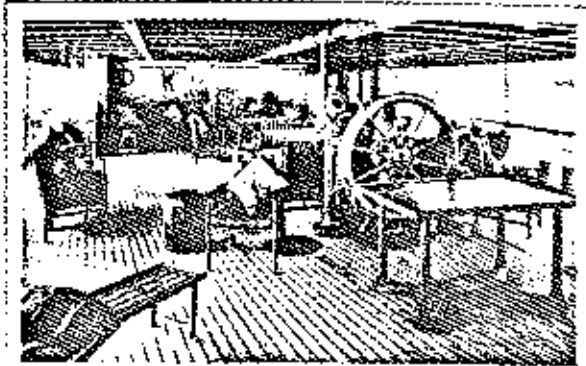
franc. This would have been \$300.00 but at two cents per franc only \$100.00. This seemed so little for the pay of three girls that I said to her: "Too bad for you that the franc is so low." She made a reply that I shall never forget: "The franc is always the franc to us."

Applying the same thing to ourselves the dollar is always the dollar to us. We never think of the dollar as changing but prices of goods change, either go up or down. The prices of some goods go up, others remain the same, so we think that the cost of the goods goes up, not that there is any change in the value of the dollar.

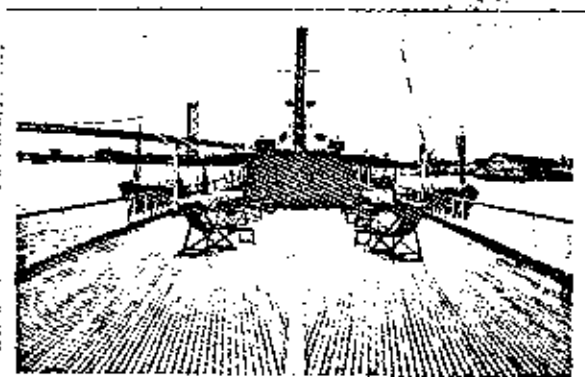
We decided to come home on the City of Paris after a three month's stay and so I bought tickets and paid for them in francs which were still low. Two days before we were to sail the Paris ran aground and stove a hole in her side, so she had to go into dry dock for repairs, and as it would be a month before she could sail, the French Line returned our passage fare in francs. In the meantime, the price of the franc went up to four cents each, while we had only paid two cents each. Turned into dollars we received \$4000.00 for which we had paid only \$2000.00. The profit paid for our passage home on the Mauretania, an English liner, so I became a money speculator with a very handsome profit, without ever intending to be one. It was a pleasant surprise to find Earl on the dock in New York to meet us.



PARSONS AT DUNZING ISLAND



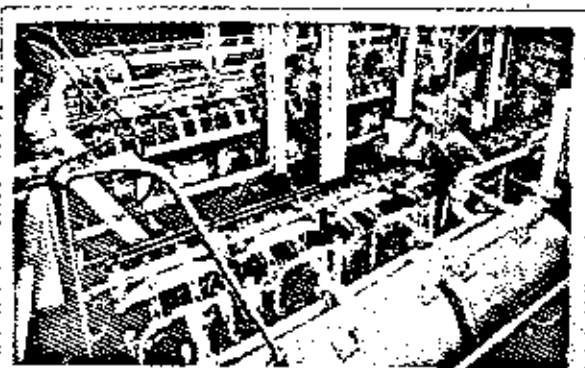
AFTER MAIN DECK



FORWARD DECK VIEW



FORWARD MAIN DECK



FORWARD DECK



HYDROSTATIC STABILIZER

CHAPTER XI

CRUISE ON CAROLINE II IN CARIBBEAN SEA

We made several trips to Europe with the children and on our last trip in 1928 when we were in London, I noticed in the head-lines on the front page of the papers that some American had bought the original manuscript of Alice in Wonderland for



\$ 150,000.00. The English did not like the idea at all, but said the American had been very fair, offering the manuscript to any Englishman at the price he paid for it. I told Mother that it must be Mr. Johnson be-

cause I thought he was the only American I knew of who would be so fair. Just before we sailed for home Mr. Johnson cabled that he had bought the Caroline I and asked if we would go on a short cruise with him on our arrival in New York. He met us there and, the first night out after dinner, I recalled the Alice in Wonderland sale and asked him if he knew who bought it and his reply was "I did".



In 1933 Mr. Johnson built a new yacht, the Caroline II. Mother and I went on board in New York with Mr. Johnson on his



first visit. The Yacht Caroline II is 279 feet long, and a 38 foot beam is in constant readiness to transport the owner to any part of the world through the employment of the newest developments of scientific and engineering character. These have been applied to the Caroline in every essential respect, enabling her to navigate the stormiest seas in perfect

safety and absolute comfort. Steel construction permits the embodiment of safety features such as watertight bulkheads and double bottoms. These are arranged in the Caroline so that in the event of an accident at sea, followed by the flooding of a major compartment such as the engine room, the vessel will remain afloat in stable condition.

Mr. Johnson was considering an exploring trip to Easter Island, 2000 miles east of Chile, South America. The newspapers ran long articles regarding this cruise and Mr. Johnson had thousands of letters from people who wanted to make the trip. When he invited the four of us to go with him we were honored and very happy to accept. He wrote me that he would send the yacht to Miami where he would like us to meet him. We went to Miami by the southern route through New Orleans. I wired Mr. Johnson the time of our arrival in Miami, which was seven A.M. He wired back that he would arrive in the afternoon of that day, but that he had wired the Captain to send an officer from the

yacht to meet us. As no one was at the train when we arrived, we took a taxi and started looking for the Yacht Harbor. We found the Harbor Master and he told us that the Caroline was at one of the docks as she drew so much water she could not get into the yacht basin.

When we arrived at the Caroline I asked the sailor on duty at the gangway if I might see Captain Peterson. He told me that the Captain was not up and that I would have to come back later. I then asked him if we could put our bags on board while we went to breakfast. The sailor wanted to know why we wanted to put our bags on board and I told him we were friends of Mr. Johnson and were going on the cruise. At that he rushed on board and, in about three minutes, the Captain came out on the upper deck, still buttoning his shirt and very upset, as Mr. Johnson's message had said that we would arrive at eleven o'clock. We were immediately made at home and Mr. and Mrs. Johnson, their son Fenimore, Dr. Darby (Fenimore's father-in-law) and George McEwin ^{Mrs. Ewin} (a nephew of Mrs. Johnson) arrived in a private car about four o'clock.

Many, no doubt, including myself, wonder what one does on a private floating palace when allowed to come and go as one pleases without having to rush to be on time for fear the boat will leave without you. I can assure you that it is the most wonderful feeling of ease and comfort. It is surprising how quickly one falls into yachting life, especially with such a marvelous host as Mr. Johnson. "Now just do as you please, and please do" was his welcome to us on the Caroline.

All were busy the next day with last minute shopping. At five P.M. the lines were cast off and we headed for Nassau, on the British Island of Bahama, to put in a small stock that the 18th Amendment said we could not buy in the United States. In a very rough sea we took on a pilot, but the high waves gave no qualms to those aboard because Mr. Johnson, at a cost of \$100,000.00 had equipped the Caroline with a stabilizer or gyroscope, weighing more than one hundred thousand pounds. This is a giant top, placed amidships below the water line, and it cuts the roll of the ship, reducing it down from thirty degrees to three degrees. Its complete wheel is eight feet in diameter, weighs forty-five thousand pounds, and spins at a rate of 1300 revolutions per minute. The gyroscope not only prevents seasickness but makes for comfort in your activities aboard.

In the afternoon, Dr. Darby, Florence and I went fishing, in one of the launches, to the Sea Gardens. They were beautiful and the water was so clear that my undersea camera made splendid moving pictures.

The next day we were invited by the Governor to dinner, but we were to sail at eight P.M., so instead we had tea at the Palace. The Governor's secretary had the most remarkable memory. There were fourteen in our party and each of us gave our name to him. A few minutes later he introduced us to the Governor without a single mistake.

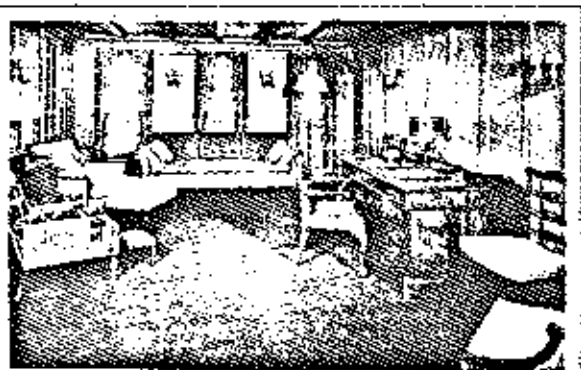
On the three days at sea from Nassau to Havana, we became acquainted with the yacht, the four officers, and its crew



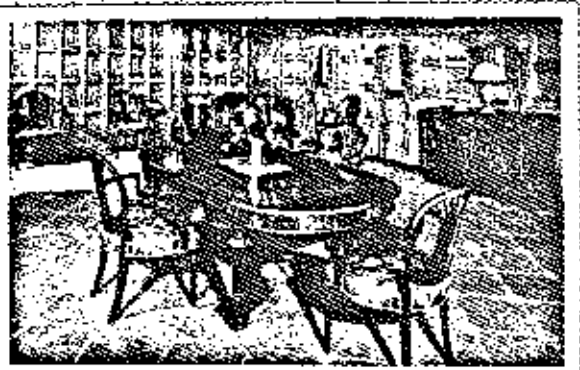
DINING ROOM



DINING ROOM



DINING ROOM



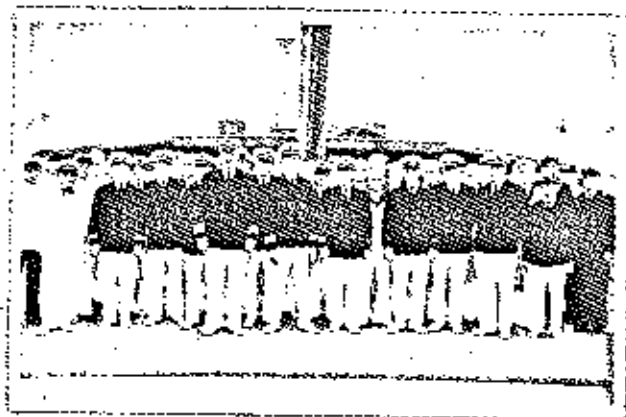
DINING ROOM



BED ROOM

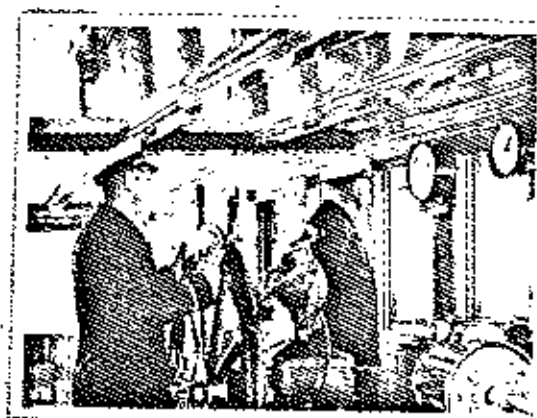


BED ROOM



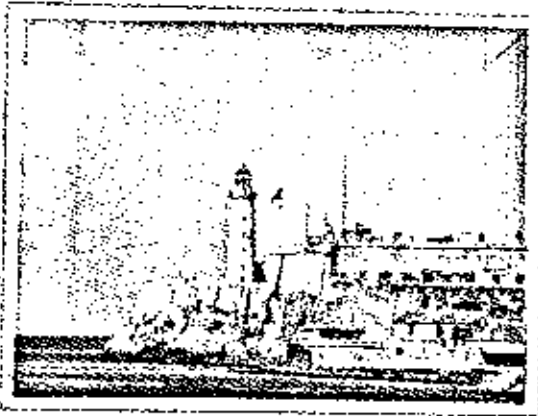
of forty-six sailors, the chef, four stewards, and laundryman. Mr. Johnson told me the expense of the yacht was a thousand dollars a day, whether in use or not, and more when on a cruise.

Captain Peterson, a most efficient officer, had been with Mr. Vanderbilt fifteen years, and had then been with Mr. Johnson three years on the Caroline I before the Caroline II was finished. The other officers were also very experienced men. "Sparks" (as all wireless men are known) and his assistant gave us a daily paper for breakfast. The Chief Engineer and I became good friends and he took great pleasure in showing me the six thousand horse-power twin Diesel engines and the stabilizer. "Chips" (as ship carpenters are called) was a wonder in woodwork. The yacht carried food, oil and water for a ten thousand mile cruise. A most elaborate refrigerator system kept the food in perfect condition. We even had fresh milk and cream all the time.



Nothing that marine architects could devise for safety, speed, beauty and comfort was omitted, plus many features added by Mr. Johnson. Our bedrooms were 18' by 19' and sliding doors opened the two into one room 38' wide. The bathrooms had both

fresh and salt water. The skilled chef supplied us with food "fit for a King" and the chief steward and his three assistants knew how to serve it. From the laundry everything came as perfectly done as it would have from a French laundry. The yacht was cleaned and polished as only sailors know how to do. At



Havana, Cuba we took aboard a pilot just before we passed the beautiful old Castillo del Morro at the entrance of the harbor. We dropped anchor a half mile from the wharves and Government inspectors came aboard, checked

out papers, and departed, after giving each of us passes to go ashore whenever we pleased. A man came out and spoke to Mr. Johnson, who said "Yes", and as a result Tony was at the dock with a fine automobile for the five days we stayed in Havana, which is a most interesting city. We visited all the many interesting places, including the Capitol, the Cathedral and the Park, most of which have been described so often that it is better I tell of other things. Mother had a wonderful time shopping with the girls, as she speaks perfect Spanish. Something that impressed me was the great number of beggar children, little boys and girls entirely nude. Tony, our driver, knew many places not often seen by tourists. One was a convent for homeless or abandoned children. In the narrow street in the back of the convent was a turntable through the wall. If a mother wished to dispose of her baby, she placed it on the table from the outside;



the table then turned half a-
round, carrying the baby to the
inside of the wall, and as it
turned it rang a bell. A nun
came and took the baby away and
the mother never saw it again.
No record was kept of the ar-

rival. The baby was named and cared for, but nothing was ever
known as to where it came from, and no mother could reclaim her
baby. Sad, but perhaps the best way.

From Havana we sailed for Progreso, Yucatan, Mexico, about
500 miles distant. It is in Yucatan that most of the chicle is
grown that is used in making chewing gum. We anchored about four
miles out in what they called the roadstead; I called it the open
sea. Huge sharks surrounded the yacht. I got out the shark line,
baited it with about two pounds of beef, and as it struck the
water a shark grabbed it and carried out the line and snapped it
like a thread. I then tried a rope the size of a clothes-line.
Again it ran out about a hundred feet of line and I snubbed it on
the rail, and this time it held. After a half-hour fight I
brought it up alongside and Mr. Johnson shot it full of lead. When
hoisted aboard, it was twelve feet long and weighed almost 450
pounds, a real man-eating shark. In the meantime, port officials
came aboard. We had passports but Mr. Johnson said he had none
so we did not mention ours. There was a harbor charge of \$450.00--
think of that, just for anchoring out in the open sea. Dr. Darby,
Fenimore, George, Mother, the girls and I went ashore in the star-

board launch with our hand-bags.

At Progreso we were met by two men from the traveling bureau. They had cars ready and we were whisked away through henniquin plantations to Merida, the Capitol, twenty-five miles away, where we found a hotel with good food but very hard beds. We were called at five A.M. and after having breakfast at a station lunch counter, a narrow gauge train carried us to Zita, seventy-five miles north, at the terrible speed of fifteen miles per hour.

From Zita we drove to Chichen Itza, the Maya ruins, built two thousand years before Christ came on earth. They were being uncovered by an expedition from the Carnegie Foundation under the direction of Dr. Morley. This road was the worst I ever traveled. The driver told me a set of tires lasted only three or four trips.

We stayed at a four-room hotel, built of crude lumber with a thatched roof filled with scorpions. The Mexicans who ran the hotel were kindly people. When we arrived the man of the family was trying to fix the gasoline engine that pumped the water. Fenimore and George, who offered their assistance, had the engine working a few minutes later. Though the cooking methods were crude we were supplied with a fair lunch.

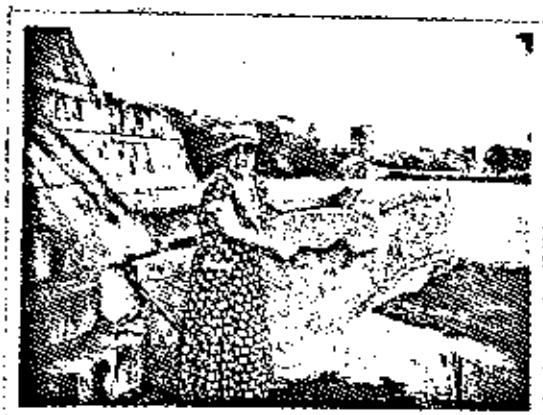
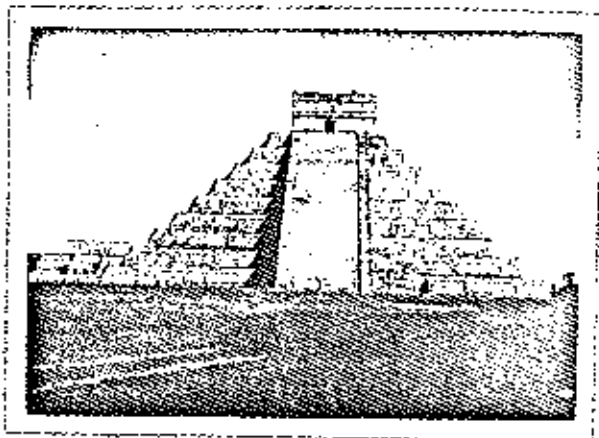
We watched a rather nice looking girl, who told George she was very affectionate, making tortillas at a small fire under a flat rock. She shaped corn dough into the form



of a biscuit, placed it on a hot rock where it swelled up like a balloon, and then it exploded with

a bang, as she slapped it down flat with the palm of her hand.

After lunch we visited the partly uncovered castillo, really a temple, which is the most outstanding of the ruins. It is pure white and almost one hundred feet high, and raised like a pyramid with steps on its four sides to the top. At the foot of the steps were dragon-like figures, beautifully carved out of large blocks of stone. Soon after we were there, Dr. Morley

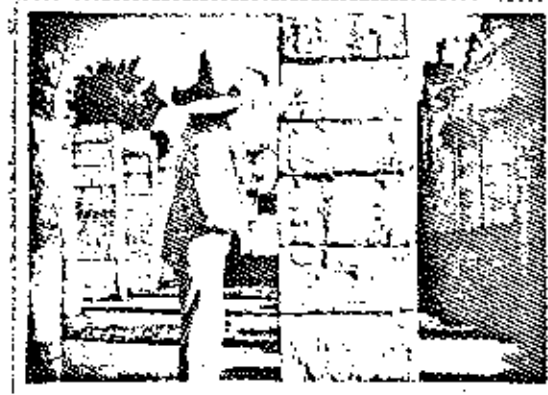
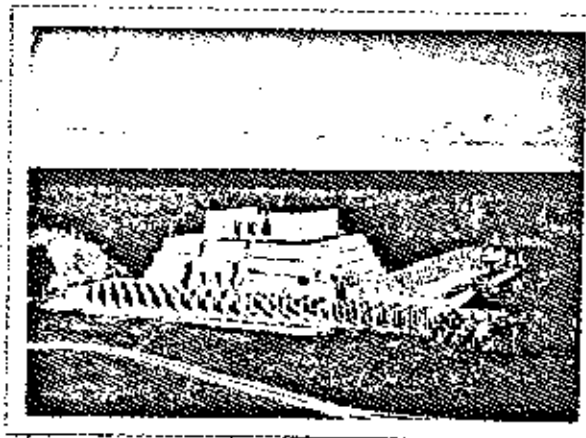


made a rich find of many gems under the steps, where Mother is shown in the picture. So deep was the accumulation of the soil of centuries that an uncovered mound had many large trees growing out of it.

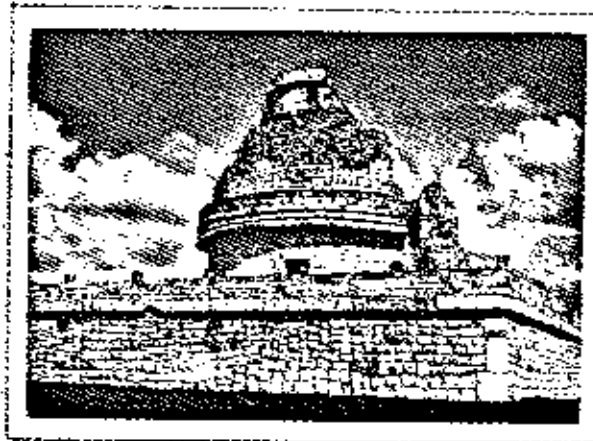
Dr. Morley had recommended Dr. Mason to head Mr. Johnson's expedition to search the Maya ruins in Guatemala, so when Fenimore sent his card the next morning Dr. Morley came over immediately and invited us all to lunch at his home, which had been fixed up in comfortable modern shape to house the dozen or more scientists, artists, and assistants, who were helping Dr. Morely in his restoration of Chechen Itza. Mother told him how we had spent the night in fighting scorpions at our hotel. He

laughed and said that as Mrs. Morley had opened the screen door that morning, a coral snake, the most deadly snake known, fell at her feet from the top of the door.

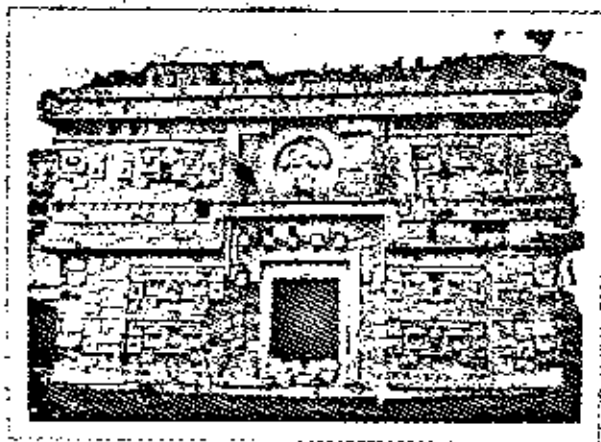
The Doctor then went with us to the Temple of the Warriors,



or thousand columns. His description of the carving on the columns, and the painting of the feather serpent was fascinating. We also visited the astronomical observatory, a rounded dome, probably the first in the western world. The sacrifice well was



eighty feet down to the water, and here every year the most beautiful maiden was thrown in as a sacrifice. A book could be, and has been written about these ruins, and still not all has been told of this ancient city. Few people have seen the wonders



of Chichen Itza because of the expense and great trouble in reaching it.

After a splendid lunch, with twenty-four of us at the table, we again bumped over the awful road to Zita which although only twelve miles long required two hours to travel. From here we went by train to Merida. We found that the next day was the Governor's birthday and no one was being allowed to leave the city as they wanted everyone to march in the parade. If they did not march they were fined and so to avoid this many left town. In order to stop them the Governor had given orders to the soldiers to let no one depart. It was one o'clock at night when we finally secured a pass to leave.

At Progreso the manana officers kept us three hours before they would pass us through. It needed only five minutes to sign our papers. We had arrived at eight A.M., knowing that by eleven o'clock the wind kicked up a high sea. The water was calm when we arrived, but by the time we boarded our launch it was uncomfortably rough and by the time we reached the yacht the waves were running twelve feet high. The Captain was pouring barrels of oil on the water, but we could not get near the landing stairs. The Captain dropped a line to us about one hundred yards astern and with this attached we were drawn up to the steps. Fenimore took charge on the launch and two good sailors on the landing platform. Fenimore yelled when to jump as we rose high above and far below the platform. As one of us jumped the sailors caught us and steadied us on the way up the steps. Mr. and Mrs. Johnson stood by the

rail on deck next to the Captain who was giving orders. As the last one of us safely reached the deck, Mrs. Johnson fainted and Mr. Johnson called for grog for all of us.

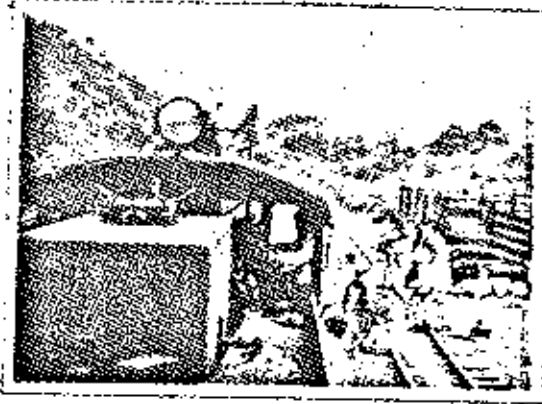
Now we were on our way to Guatemala. It was rough all that day and while the stabilizer helped only a little on the pitching of the yacht, it did stop the rolling. We were all good sailors so suffered but little discomfort. The Atlantic harbor of Guatemala is perfect, though I cannot say as much for the Pacific Harbor. Now

anchored on a beautiful bay we enjoyed launch rides. Along the shore there were birds and orchids in the trees. We were told there are many monkeys in the

woods, but we did not see any. However, we saw many children who had them as pets in the harbor town of Puerto Barrios.



every station native women vendors did a lively business in fried chicken and delicious tropical fruit. To travel in Guatemala is to sit at a continuous feast."



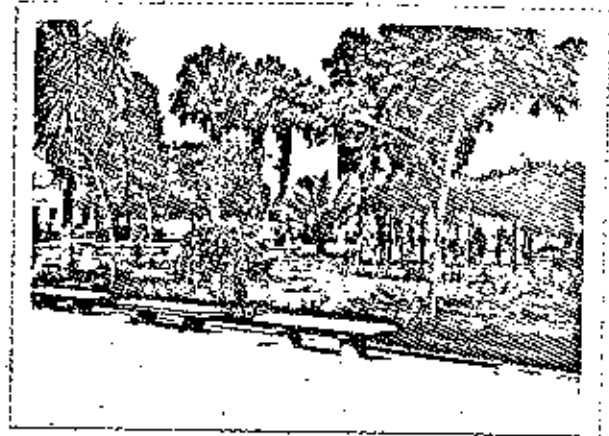
Mrs. Johnson wanted to go up to Guatemala City. The regular narrow gauge train left at six A.M. and arrived at six P.M., taking twelve hours to make a two hundred mile journey. True, there

was a rise of 5,000 feet in elevation, but seventeen miles per hour is not a great speed at that. Mr. Johnson arranged for a special train to leave at ten A.M. Mother and Florence stayed on the yacht. We started through swamp lands, a tangled mass of trees and tropical vines. Millions of bananas grow on the cleared land. They are the second item of export. As we rose higher the undergrowth became less dense and the high mountain peaks stood out in much grandeur, some of the highest snowcapped. We were met by the manager of the Palace Hotel

where rooms had been engaged for the party. Later we came to know the owners of the hotel, Dr. and Mrs. Aschkel, who also owned much of the city. They visited us in Menlo Park and later we visi-



ted them in Guatemala City. It is a beautiful city with a fine climate, due to its elevation of 5,000 feet. Pictures of it could be used for almost any other Central or South American City, as they are all much alike. Most of the



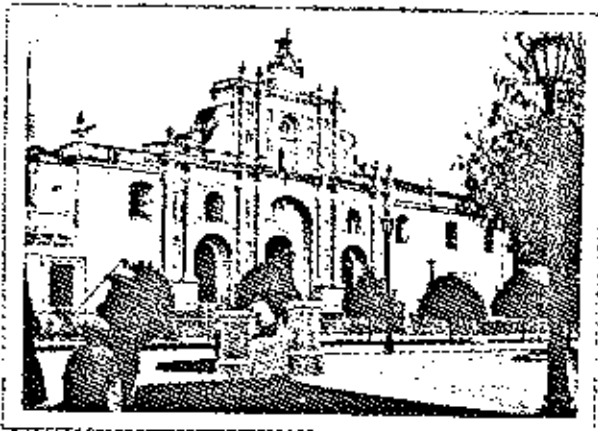
buildings are one-story high because of earthquakes. All Central American cities have a Plaza on this order.



Next day we visited the market where everything to eat, drink, or wear is sold. Spanish markets are always interesting. A few years later we visited this same market with the Aschkels on a shopping tour. First, they

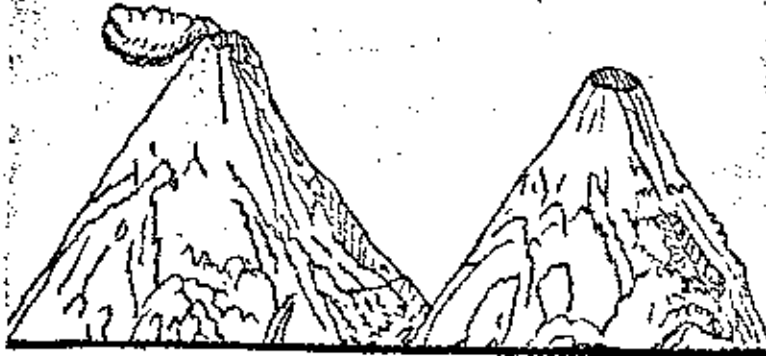
bought a basket for a few pennies and gave it to a boy who followed to the meat stall. Next, came the vegetables, then sugar, canned goods, fruit, etc., all of which was paid for separately. The boy put everything in the basket and carried it to the car. He was paid three cents, which is a regular charge. Many Spanish speaking people think it is a disgrace to carry a package.

Antigua, the old capital of Guatemala, founded in 1457, was destroyed first in 1541 by water from the crater of Agua. It was rebuilt and became the most populous place in Central

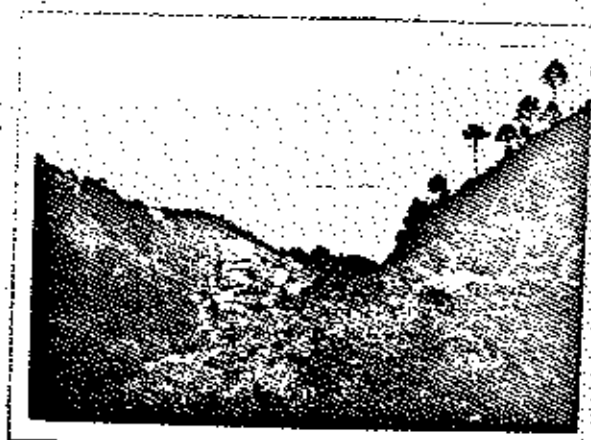


America, with more than one hundred churches and convents. Interesting ruins still stand. When it was again destroyed in 1733, Guatemalans built the city of Guatemala and moved the capitol there.

We motored up to Antigua the second day and passed the



mountains Agua (water) and Fuego (fire) standing side by side and rising 13,000 feet above the sea like two giant cones, the peaks usually covered by a cloud of smoke rising from the craters. Ten thousand of the pyramids of Egypt could be hidden away in the craters of these volcanoes. How great is God's creation, how puny man's!



Early one morning, while anchored at San Jose on the Pacific side of Guatemala, I had a never-to-be-forgotten view of these twin volcanic mountains. The smoke, rising straight up both mountains, stood clear against the sky. Thinking it a little early to take a picture, I went into breakfast. When I returned to the deck the two cones had vanished in the pall of smoke from the crater of Fuego which was in eruption.

At Antigua I saw, for the first time, growing coffee, the chief export of the country. I took this picture of a number of



girls sorting the coffee beans. Experts say that coffee grown at an elevation of 7,000 feet is the finest. I had no idea that the coffee blossom is so fragrant -- its odor is much more delicate than the orange blossom or any other flower, except the orchid.

I was taking a moving picture of natives and ruins when a policeman came and told me in Spanish that I must stop. I knew what he meant but pretended not to and backed up and took his picture. He went away in disgust or delight, I don't know which.

On our way up to Antigua we met a parade of hundreds of women bringing vegetables, fruit, chickens, eggs and turkeys to

market, all carried on their heads. They walk as straight as an arrow. One woman had on a hat-like basket, to the brim of which were tied eight live chickens, and in the center of the top of the hat was a live gobbler. In each hand she held two chickens, and in a hammock, which was strung from her shoulder and fastened around her waist, was a nursing baby. Often we saw a man, a woman and

donkey, the man walking and carrying her head. Native little considerations. The moved by oxen,



riding, the woman carrying a load on Indian women receive heavy loads are sometimes a dozen

teams yoked together, directed and controlled by the driver's voice.



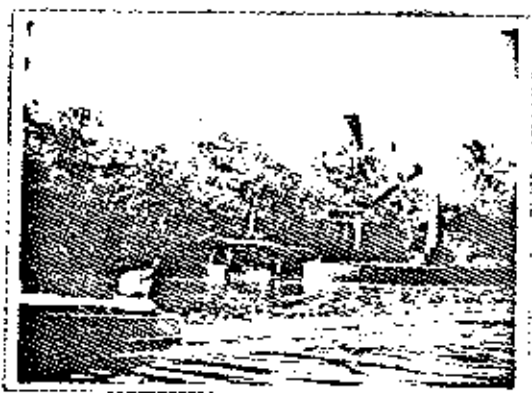
Another interesting sight is that of the native women gathered at the public laundries and a bit of gossip. Mothers with babies jiggling on their backs, as they happily go



ing sight is that of gathered at the to do their washing sip. Mothers with on their backs, as about their washing.

When we returned to the yacht we found all was well and that Florence and Mr. Johnson had been fishing in the Bay of Honduras, which they both enjoyed very much. Mother had been busy as usual with her fancy work and knitting. The next day Fenimore flew home. The plane landed near the yacht and we all waved goodbye to him as he flew away.

We sailed for the Panama Canal and anchored at Christobal, where we stayed several days. Dr. Darby and I went on a fishing trip through the old abandoned French Canal and saw a sloth (monkey-like animal) asleep in a tree near the water's edge. The guide said it would likely stay there all day, as they are nocturnal animals, weighing about fifteen pounds. We returned to the yacht for lunch and asked the ladies to go back with us as we thought the French Canal was so interesting. Its shores were lined with tropical trees filled with beautiful birds and iguanas. The iguana looks like a Chinese dragon and grows to a length of four or five feet.



When we arrived back at the place where we had seen the sloth it was gone so the guide and I went ashore to locate it. We found it in a near-by tree, but it was out of sight of those on the launch, so I told the guide to shake it out of the tree while I took a moving picture. As he did so the branch broke and the sloth fell on my head, and at the same time the largest iguana I ever saw ran between my feet. I was in a dizzy whirl



for a few seconds. We put a rope on the arm of the sloth and dragged it aboard the launch for all to see. Afterwards, when we placed it in a tree and took the rope off, it moved up the tree with all the speed of a slow moving picture. Returning to the yacht we saw a large boat snake, that had just been killed, in the water. It was about ten feet long.

From Cristobal we went thru the Canal to Panama City. The toll was \$1,600.00 to take the Caroline through the Canal, but it was the red letter part of the cruise to Mother. While I always enjoy the trip through the locks very much, I have never seen anyone who enjoys it as much as Mother. The chief steward served breakfast on the upper forward deck and everything was perfect. We saw a number of alligators and crocodiles in the cuts; one old fellow was sixteen feet long and perhaps one hundred or more years old. I have often been asked the difference between an alligator and a crocodile; the latter has a sharp nose with two tusks from the lower jaw projecting through holes in the upper jaw. In fighting they snap with a vicious set of teeth. The alligator has a rounded flat nose, smaller teeth and they strike a tremen-

dous blow with the tail. In the swamps of Panama not many years ago thousands of alligators could be found, but the demand for their leather to make shoes, handbags, etc., has greatly reduced their number.

The Canal pilot took us on beyond the City of Panama and anchored just outside the main ship channel. Soon the government officers came aboard, found everything in order, and gave us landing papers, which we were never required to show. Carmen de Obarrio Fitzgerald, a close friend in California, gave us letters to her uncle, Ricardo J. Alfaro, the President of Panama, and to the American Minister, a very close friend of Carmen's. Another uncle, Nini Alfaro was general of the Panama army. He was the only officer and there were no soldiers in the Army so he had plenty of time to entertain his friends. The General told us if we would give him our letter he would make appointments. We spent the evening with the General and his family at his home and arranged before leaving to meet him at his Club the next morning. When we met him he had made an appointment for us to meet the American Minister at eleven A.M. The President and Mrs. Alfaro had invited us to tea at four o'clock in the afternoon at the Palace. The President and Mrs. Alfaro were both charming and we were happy to have had the opportunity to meet them. Two years later Mrs. Alfaro lunched with us at Menlo. She was a great friend of Mr. and Mrs. Herbert Hoover and Mrs. Hoover invited Mrs. Alfaro and Mother to tea at her home in Palo Alto.

We invited some of the party that entertained us that day in Panama to dinner on the Caroline that evening. The General



had a beautiful cross of gold with a carved figure of Christ on it. He told me that when Pizarro looted the churches in Panama he was supposed to have buried some of the treasure.

A man came from New York and

asked the Panama government for the right to hunt for this gold with an electric detector he had invented, promising that he would give the government half he found for the concession. The man was turned over to the General, who owned the adjoining land to the old City of Panama. The General told the man to look on his land. The man traveled over the ground with his electric device and stopped at a place and started the diggers working. At a depth of about twelve feet they found quite a treasure, the gold cross being among the gold pieces. It could be proved that the cross was more than three hundred years old because the feet of Christ were crossed differently in the carvings made before 1600 than in those done since that time.

The shrunken Indian head made by the Indians was that of an Indian chief. The Indians will sell you one of these heads for fifty dollars. If there is any special head that you want you point it out while it is still walking around, and they say they will give you that one for one hundred dollars.



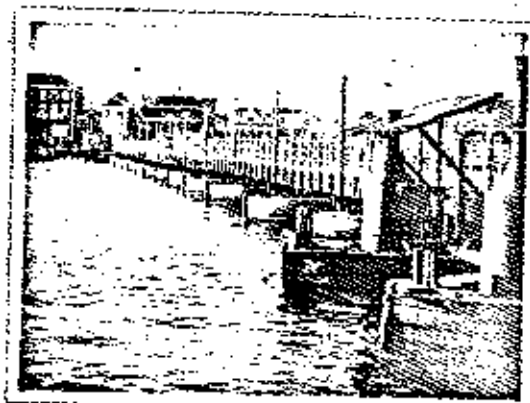
Mr. Johnson tried to get a pilot for the Galapagos Islands, located a thousand miles southwest of Panama, but the only two who knew the waters around these islands were engaged, so he decided he would take a cruise to an island in the Caribbean Sea, and it was indeed wonderful. We went back through the Canal and headed for the Island of Curacao, about one thousand miles east, on a three days run. On the way we had time to become acquainted



with Mono, the baby monkey Florence bought in the market at Panama to add to her collection of two alligators and several turtles. We all loved the monkey. Mr. Johnson kept "Chips" busy for several days making a cage and a tree for Mono (which means monkey) to climb around on. Florence took care of Mono like a baby and Mr. Johnson stuffed him with food. Mono had one meal a day that lasted from daylight until dark. Florence could hypnotize her alligators and they would sleep until she woke them. Florence found that the South American Jugar, mis-called Tiger, though only a baby, was anything but a gentle pet with its long claws.



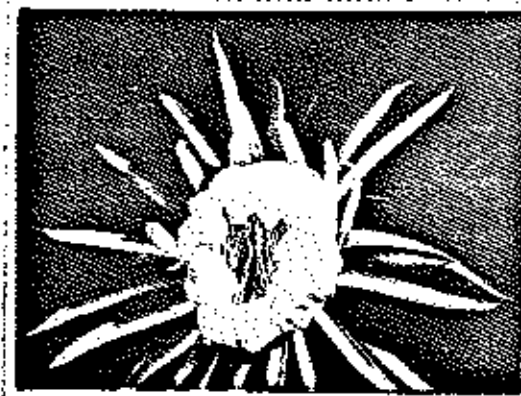
The Island of Curacao belongs to the Netherlands and the language is half English and half Dutch. It was strange to hear several perfectly spoken English words and then to lose several words spoken in Dutch. The island, about thirty miles long by ten wide, has no fresh water. Those who can buy water have to pay five cents a gallon for it and it is brought from Columbia, South America. The brackish water produces a bitter orange that is used to make the cordial curacao. As the yacht passed along the shore we were amazed at the colors used to paint the homes -- bright red, pink, green, yellow, blue and all the different shades of these colors. The harbor entrance was very unusual, about three hundred yards wide, with a pontoon bridge. One end of the bridge was attached to the shore and at the other end was a tugboat that carried the whole bridge around in order to let ships enter the harbor. Foot passengers were charged one penny to cross, but if you were barefooted you could cross for nothing. This was to help poor natives. To visit the stores was most interesting to Mother and the children. The shopkeepers made a social function of it as they served tea and discussed everything for about a half hour before asking if they could show you something.



We lay alongside a Holland cruiser. In the evening the Captain of the cruiser sent a message inviting us to come on board. Dr. Darby, George and the girls went on board and we were

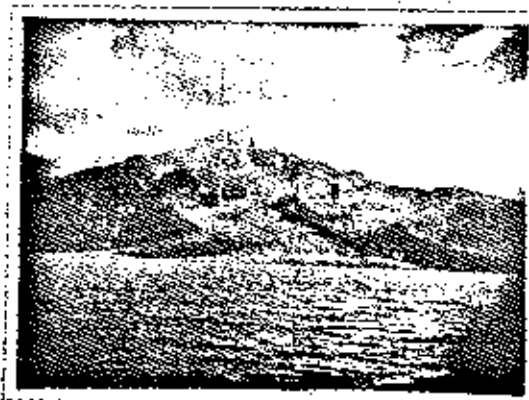
royally entertained. The girls asked a young officer, a relative of the Royal Family, to luncheon on the Caroline the next day which happened to be July 4th. He came early, had lunch, waited for dinner and then went home to sleep and was back the next day and the next. We were all pleased with him and he was most anxious to learn English well. He sent wireless messages to the girls until we were far out at sea.

The French Island of Martinique is a most interesting and beautiful tropical island, and is where Empress Josephine, Napoleon's wife, was born. We anchored in the harbor of Fort de France and went ashore to visit Josephine's birthplace. We were warned to look out for the poisonous Fer-de-lance snake. We particularly enjoyed the grand view of the island from the yacht. We were most anxious to visit the volcano on Mount Pelee, thirty miles away, so the Captain arranged for two cars, one for Dr. Darby and George and another for the girls and me. The ride over the mountains was one of the most beautiful rides I have ever had



anywhere. Thousands of fern trees almost a hundred feet high, small stream waterfalls and tropical wild flowers were everywhere.

We also saw natives cutting sugar cane, and native cabins so poor that they served for little more than shelter from the rain and a place to sleep on the dirt floor. Going up grade at a very slow speed, we came to an old man, a pathetic figure, clothes patched and torn, using a branch of a tree as a staff. He stood with dejected pose and gazed at me with listless eyes, so pathetic that almost unconsciously I raised my hand in salute to this forlorn figure. It almost took my breath away when the old man dropped his staff, rose to his full height and, with a light in his eyes and a smile spreading over his face like an angel, saluted me in return. In my poor telling of this, it may seem almost absurd to you, but if I live a thousand years I shall never forget it.



As we approached Mt. Pelee, a plume of smoke rose from the creter harmless now, but in 1902 it snuffed out the lives of 40,000 humans in the city of St. Pierre, in less time than it takes me to write these words.

This is regarded as the greatest single disaster the world has ever known. Three days later after the poisonous gas had blown away, searchers found only one man alive and he in a jail below the surface of the ground. The man was



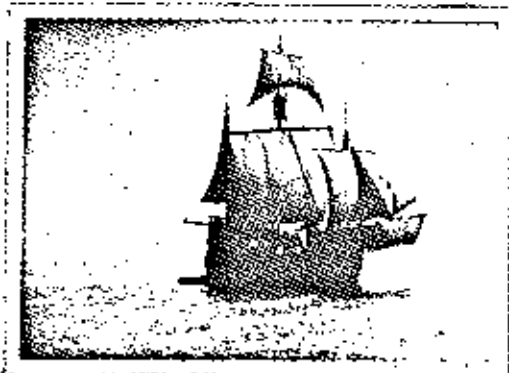
taken to Fort de France and, though he was apparently uninjured

he passed away before reaching France. The lava flow is two hundred feet deep over part of the city. Thousands of years from now it may be uncovered as was Pompei. The ashes were blown so high that they carried clear around the world as the earth turned under them. How powerful is nature, how insignificant man! As we descended to the ruins of part of the city not covered by the lava flow we saw the shells of buildings still standing that have never been restored. We sailed by on the Caroline the next day and it was a most impressive sight.



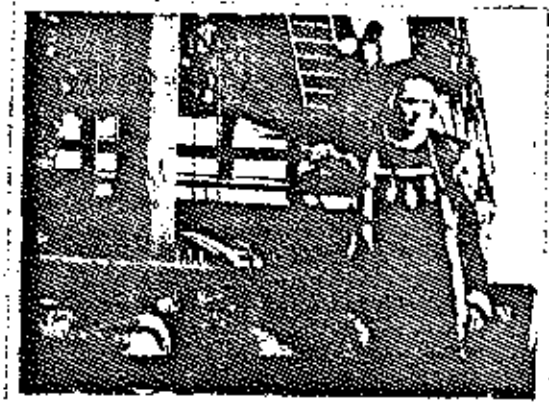
We followed around the Leeward Islands, passed the Virgin Islands, and Puerto Rico, now belonging to the United States, and our next port of call was Ciudad Trujillo, Dominican Republic. Here the water was so clear that we could see plainly the bottom fifty feet below. I saw a three-foot shark with a three-foot pilot fish attached to it, the largest one I ever saw. Even a 663-pound shark that I caught later had only a 24--inch pilot fish. It reminded me of the old man of the sea attached to Sinbad the Sailor. I dropped the line overboard and the shark took the bait. I pulled it up twenty feet to the deck and the pilot fish never unclamped but came on board with the shark. I measured them, photographed them, and then threw them back into the sea. It was not often, however, that I let a shark free.

When we landed from the launch a huge stump of a tree bore a sign in Spanish "Columbus moored his boats to this tree".



Mother translated the sign for us. Her knowledge of Spanish and French was useful many, many times on board the yacht and in the countries we visited. First we visited the well-preserved ruins of Diego Columbus, the son

of Christopher Columbus. From there it was a few blocks to the Cathedral where Columbus was buried. He had requested before he passed on in Spain, that he be sent to this island for burial. The memorial built



inside the church was fifty feet high and made of marble, onyx and gold. Spain sent a delegation to the island to get Columbus' remains three hundred and seventy-five years later. The Islanders claim that they foiled the delegation and gave them Columbus' son. The delegation was to take the remains to Havana, Cuba. Just before the Spanish-American War, Spain sent to Cuba for the remains and now claims Columbus is buried in Spain. Cubans claim that they also foiled the delegation and gave them another's remains and that Columbus is still buried in the Cathedral at Havana. We hope that the Dominicans are right, as it was Columbus' request, and also they have done him the most honor in a resting place.

The hurricane that visited Dominican Island a few years ago took a toll of seven thousand lives and tossed an American

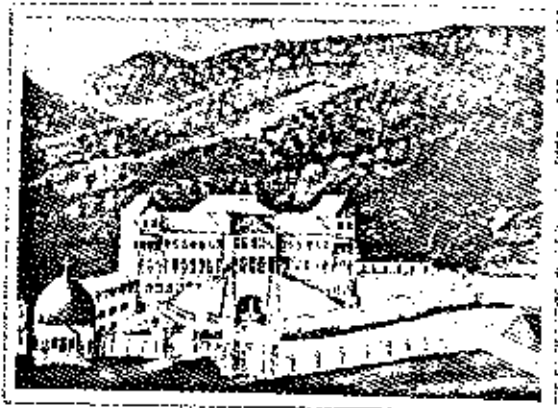
Navy Cruiser on land, thirty feet above sea level and a hundred feet back from the water. We saw a large palm with a two by four driven entirely through it twenty feet above ground.

The Dominican Republic has a Negro for President and his term of office is six years. The President had been in office twelve years without an election and if anyone suggested an election they were immediately disposed of.

We sailed around the island to Cap Haitien, Haiti, the other part of this island. We stayed in Cap Haitien for ten days and in some ways it was the most pleasant part of the cruise. I have not mentioned that as soon as we anchored in most ports we were surrounded by what the Captain called bum boats and he ordered the fire hose out to drive them away if they became annoying. Natives in the boats had many local articles to sell. They had carved conk shells, parrots, peanuts, (the finest I ever tasted) and the best oranges in the world. After tasting one I went into our cabin, found a pillow case and asked Mother if she had a quarter. "You're not going to pay twenty-five cents for a dozen oranges", says Mother. "I am not", says I, and came back in a few minutes with one hundred fifty wonderful oranges. However, I learned that they do not ship well.

On account of war and riots the United States had placed American troops in charge of the country and they were doing wonders for the natives. Mr. Johnson knew some of the officers and they did everything possible to make our stay pleasant. We were taken to Christophe Palace and some of the party went muleback up the

mountains to the Citadel where the children found and brought back many rusty and aged relics more than a hundred years old. The guide was a Christophe, a descendant from the cruel but powerful black Emperor. The



guide said he had a party one time up at the Citadel and came down for provisions. One of the party asked him to be sure and come to his tent and let him know when he returned. It was late by the time he returned and everyone had retired, so he went to what he thought was the man's tent and quietly called him. A woman's voice said: "Who is it?" and he replied: "Christophe". She let out a scream that woke the entire party. There is much talk of voodooism in Haiti and many strange tales are told of sickness cured by voodoo doctors.

Most of the native children out of town are entirely without clothing. The grown natives' clothes are mostly patches. Napoleon's sister lived here and her husband was one time ruler of the island. The ruins of his home still stand. The natives of the Caribbean Islands value gasoline cans and bottles most highly. The "big" boats stayed around the yacht buying bottles would be thrown overboard. We drank nothing but Poland water aboard, using perhaps the bottles a day. One time when I was in his boat several bottles were sold for each bottle. The Chief steward and the next day he gave the man a large number of bottles and the natives were almost hysterical with delight.

"Necessity is the Mother of Invention" for these natives in the countries and islands south of the United States. They utilize what we throw away -- even make homes of old tin cans. The social standing of the native is based on the number of five-gallon cans he owns -- with about twenty-five, he would be a nabob (with apologies to Mark Twain). One man made a water tank of old automobile tires. He laid down a concrete base, then placed one casing on top of another with cement in between as we lay bricks. He used about fifty old tire casings and built a water tank about fifteen feet high, which he filled with an old pump in a well. It was a crude but sufficient supply of water for his tin can house. One day a native with a little girl rowed along the side of the yacht. The child had a tin can with eyes painted on it. Mrs. Douglass asked in Spanish what the can was for and the native said it was the little girl's doll. Someone remembered that there was a real doll on board and it was let down to the boat in a basket. When the little girl received it she began to snuggle it up to her, starting to laugh and cry and screaming with delight, until she actually became hysterical. Small things give great joy to those who have so little, and still they seem happier than we who have so much. Something to eat and muchly patched clothes to cover them and they sing and dance -- they know no other existence and apparently care for no other. Packing cases served as their table and chairs and most of them sat and slept on the dirt floor. Their chief sport is cock fights.

A New York paper once offered a thousand dollars for positive proof that a shark had attacked a live man. I believe no one

ever received the award. True, human bones have been found in sharks' stomachs, but that was no proof that the man was alive when attacked. But the question was proved beyond doubt at Cap Haitien, Haiti. An American soldier in swimming was attacked by a shark and tried to fight it off, but the shark bit his leg off before friends close by saved him. He was in the hospital for months. A shark's teeth in both the upper and lower jaws are like saws and when it bites the jaws move back and forth sideways. At Cap Haitien they now have a place in the water fenced off to protect bathers from sharks. It is a common belief that sharks have to turn on their backs to bite, but such is not the case. I have seen them many times and they bite in any position. Governor Pinchot of Pennsylvania claims in a book that one shark will never attack another. In this I am sure he is mistaken, as one night after fighting a 500-pound shark to a finish, I was holding it just on the surface when another shark attacked and mutilated it. We had a powerful cargo light on it just a few feet away so the attack was seen by a number of us.

We left Cap Haitien with real regret. Through the windward passage we sailed to the English island, Jamaica. Kingston, the capitol, was the stronghold of pirates in the old days. Much to our surprise the black natives now speak cockney English. The Botanical gardens with their many varieties of orchids are beautiful. Planter's Punch, made with the famous Jamaica rum, was a dollar a drink -- expensive, but one lasted a long time. Much could be told of this lovely island and much has been told.

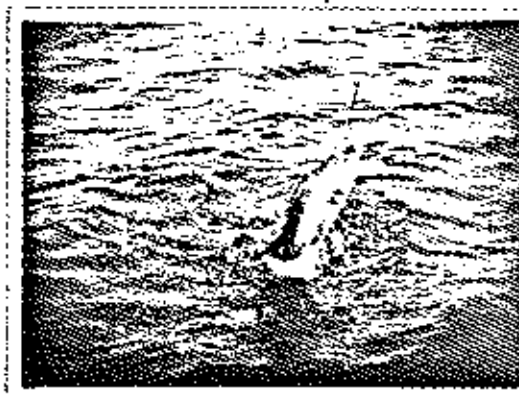
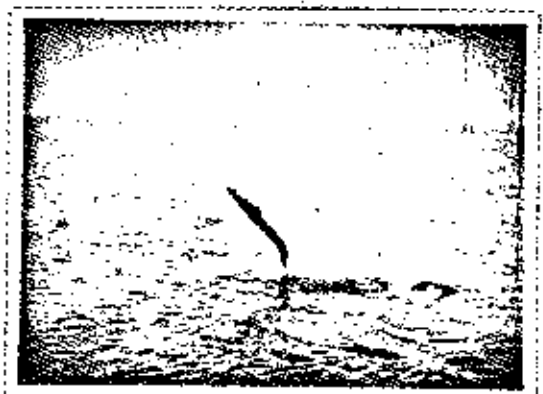
As we sailed for Cuba a storm was brewing and the sea was covered with foam. Just before we entered Havana harbor, the stabilizer blew a fuse and stopped. Immediately, we realized how helpful it was, as without it everything went off the tables including the lunch dishes. The yacht rolled over 29 degrees and we were all very happy indeed to safely reach the harbor. Hardly a ship left the port and we were storm bound for seven days. The pilot boat that came out to meet us was unable to get near. The pilot boarded us after we were in the harbor but charged the regular fee just the same. While we were in Havana there was some rioting, and bombing, and all ships were carefully watched. Everyone was under suspicion. We visited the beautiful capitol building which had guards at the door. After having waited some time for a guide one of the guards told me that he was waiting for an English speaking guide. I told him that Mrs. Douglass spoke Spanish and a Spanish guide would do. At that he sent two guides, one to tell us, the other to watch us.

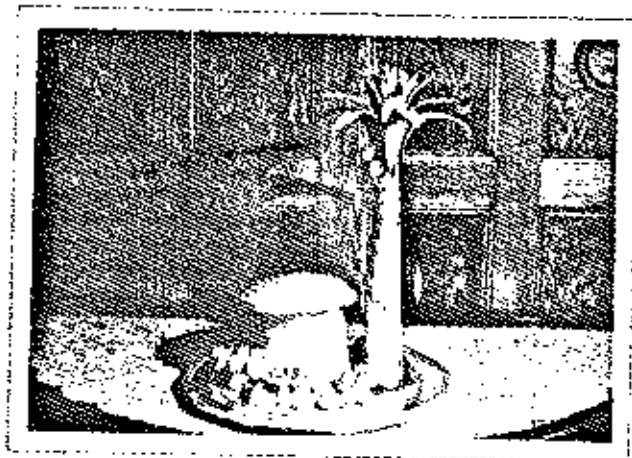
The Matson Liner, Lurline, was being taken to California to be put in the Honolulu service. We knew Captain Bernston very well. He often dined with us in Honolulu, so we thought we would go on board to see him but the local ship guards stopped us at the entrance to the dock. We told them we wanted to see the Captain, a friend of ours, but they said "Sorry". Finally, the dockmaster gave us permission to go on the pier and we thought the rest would be easy, but we were again stopped at the gangway. Looking down from the deck the Captain saw us and called to us to come on board. We told him the guards would not pass us. The Captain came down

and told the guards it was all right. The guards said "Sorry". But he said, "I am the Captain". Again they said "Sorry". He set up a call for the dockmaster that was echoed all over the place. When he came he gave us passes. The Captain then told the dockmaster that he was going ashore and asked how he would get back. He was given a pass. It was his first experience of having to have a pass to get aboard his ship.

We did not stop at Porto Rico on the cruise because we had some anti-18th Amendment on board and did not wish to meet the American customs until it was disposed of. From Havana to Key West is only ninety miles, where we were once again in America, after a - about a ten thousand mile cruise. We settled down in Key West for a week of wonderful fishing. Out on the reef Florence caught an Amber Jack, 54 pounds. It took her an hour to land it and she was a very tired girl as she would not allow anyone to help her. Mr. Johnson sat by and smiled, as proud of her as I was. The fishing in the channels through the small keys could hardly be surpassed anywhere in the world. With a water-glass we could look down into the water and see thousands of brilliantly colored fish, sponges and shell fish.

Mr. and Mrs. Johnson had friends at Key West so many came on board for teas and dinners, and we were all invited to parties on shore. We met many charming people, especially the army officers who did all they could to make our stay pleasant. As we were on the last leg of our cruise Mr. Johnson was anxious to arrive at Miami for the fishing for swordfish out in the Gulf Stream. We spent almost a month at Miami because it was too cold to go north.





Mr. Johnson chartered a special launch equipped for deep sea fishing. He was most anxious to land a broadbill swordfish. He hooked several but lost them all. I landed only one in three weeks fishing. Mr. Johnson wanted Florence to go with us and the first day out she landed an eight-foot ^{Martin} broadbill swordfish, after a terrific battle. She would let no one help her and when the huge fish was brought on board her arms were so numb that I had to massage them for some time before she could raise them to her head. Mr. Johnson was delighted and that night we had a special dinner in celebration. x

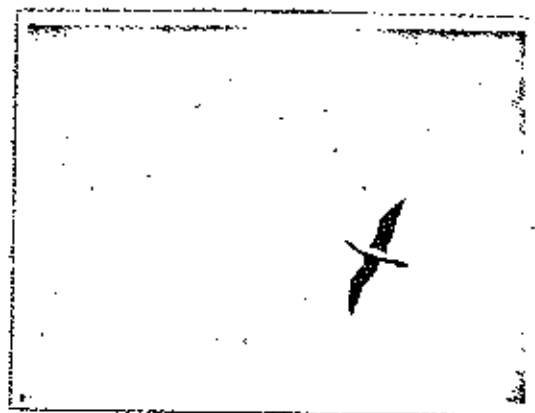
The swordfish was mounted and it is a beautiful specimen. Mr. Johnson landed a sword sailfish. They are much more beautiful than the broadbill but not so rare. Mr. Johnson wanted Florence to go fishing again and get a sailfish, but Florence refused because when she was out Mr. Johnson insisted on her taking his place and he just sat by. Next morning when I went to breakfast with him he asked where Florence was and I told him she was not going. He asked if she was sick and I had to say no and finally tell him the real reason. He then said that if Florence didn't go he wouldn't, so she went.

While we were at Miami, Mr. Cyrus Curtis, owner of The Saturday Evening Post and other publications, was anchored there on his yacht "Lyndonia". Few people know that he was one of the richest men in the world. We were invited several times to the "Lyndonia" and Mr. and Mrs. Curtis were invited to dinner on the Caroline. Mr. Curtis remarked at dinner that Mr. Johnson had told him that I was the first to ever place an ad for the double center

page in The Saturday Evening Post. I said that was true and that it had cost \$1,700.00 (now \$17,000.00) and that it was a lot of money for us in those days. Mr. Curtis' reply was: "It is a lot of money now." When we were first married Mother sometimes, in speaking English, expressed herself as "I am going to subscribe myself to the Ladies Home Journal". It was a joke between us for many years. I now told Mr. Curtis the story and to our surprise he turned to Mother and conversed with her in Spanish. Mrs. Curtis, one of those sweet motherly women, was unfortunately lame and for this reason Mr. Johnson was worried about her going down the gangway. She had had no trouble coming up but it was difficult going down. Mr. Johnson spoke to the Captain about it and he said: "Leave it to me". When we came on deck, twelve seamen stood by the gangway and lifted it to their shoulders. Mrs. Curtis walked out on an even keel and the sailors then lowered her gently to the dock.

One day while trolling, a sea-gull followed my bait, seized it and carried it high in the air. There are many birds of the gull family. While off the coast of Columbia two gannet birds had followed the yacht all day. They flew along beside the ship for hours while diving for fish. I believe they did this because as the ship moved along it frightened the fish out of its path and this gave the birds a chance to make one of their graceful swift darts for a fish. They made many, many dives, each time just forward of the stern and about fifty feet from the yacht. They are of the gull family but many times as

swift. Their great beauty is in the way they dive from high in the air; fold their wings and like an arrow dart to the water with incredible speed -- so fast, in fact, that it is only ten seconds before they



appear again, but always with a fish in their beaks. They are a rare bird -- I have seen only four, all off the coast of Columbia, South America. The graceful frigate-bird, with its



seven-foot wing, soars above the sea without ever landing in the water. Just lately I learned that once in the water they can not rise from it, though they spend their lives over it. They feed only on fish which they

steal from other birds. A gull will rise with a fish in its beak, and the frigate-bird will dart at the gull and, as it drops the fish, will catch it before it reaches the water.

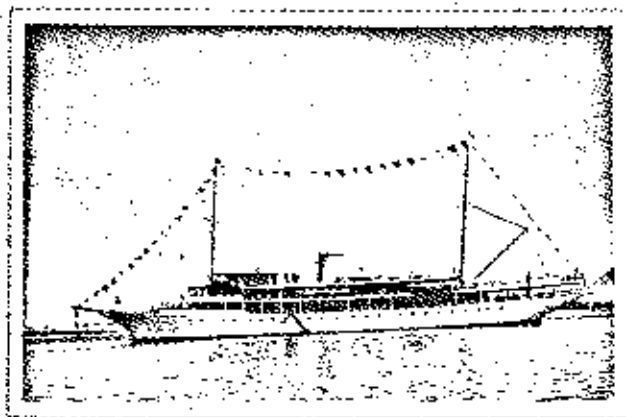
We made a trip in the Everglades across Florida, and on this trip saw thousands of egrets. The picture opposite illustrates how picturesque they appear against the sky.



It was now time to start for home, after a three months cruise, wonderful in every respect. It was a touching moment as we landed at the dock. Every officer, sailor and steward, more than fifty in all, came to the rail to wave good-bye. I hope I have described to some extent what one does during a cruise on the finest yacht in the world. That evening Mr. Johnson boarded a private car for Philadelphia, and next day the Caroline II sailed for her home port in New York City harbor, while we entrained for home via New Orleans.

CHAPTER XII

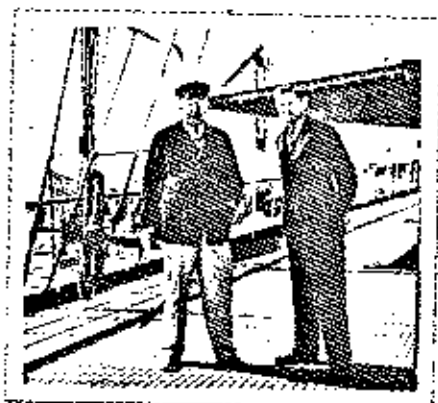
JOHNSON-SMITHSONIAN DEEP SEA EXPEDITION



We were back again in Menlo Park where we passed the winter. In letters from Mr. Johnson, he told me that he had offered the use of the yacht to the Smithsonian-Institute for an exploring expedition. As there would be many scientists on the trip he doubted whether there would be room for him. He told me that he was spending \$150,000.00 for special equipment: one ten-mile steel cable with electric drum; another larger cable five miles long for deep sea trolling; the deepest depth sonic sounding instruments, (this required the dry docking of the Caroline to put a large steel diaphragm on each side of the ship below the water line); ten deep sea thermometers costing \$500.00 each that were equipped to take samples of sea water down to five miles; deep sea nets, fifty of them, each fifty feet long; and many deep sea dredgers. This equipment was only a part of all that was required.

A little later he wrote me that he was going and that his greatest regret was that he did not have room to ask us on

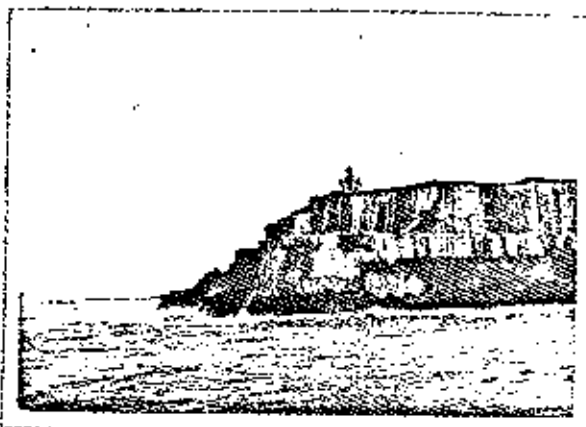
the cruise. Then to our surprise came a wire saying that he had discussed the matter with Dr. Paul Bartsch, the head of the Expedition, and they had planned to make room for us and so it was settled that we would go. (Dr. Bartsch told me afterwards he had feared that with ladies on board it would interfere seriously with the work, but was kind enough to say that all were a great help and that we contributed much to the success of the Expedition.)



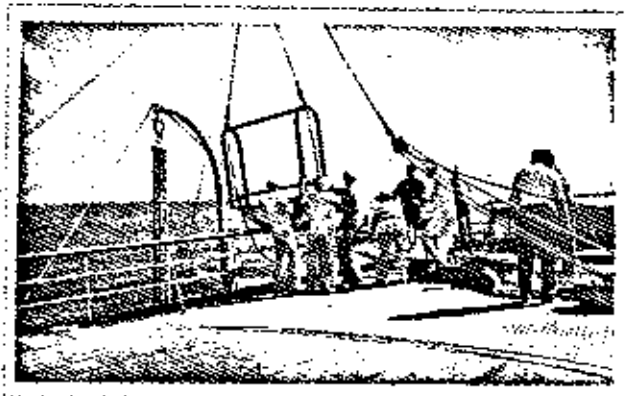
We were waiting at Miami when the Caroline arrived. On board were Mr. Johnson, Fenimore Johnson, Dr. Darby, Dr. Bartsch, and nine scientists, four officers, forty-six sailors, chef, two helpers, four stewards and a laundryman. With our four it made a total of seventy-five. The yacht stayed in Miami only long enough for us to go aboard and then we were off, stopping one day for liquid supplies at Nassau.

A three-days sail brought us to San Juan, Porto Rico, as it is now spelled, instead of Puerto Rico, as it was known when the Spanish owned the island. The harbor is perfect and large enough for a great number of ships to anchor. The next day after our arrival Dr. Bartsch presented his letters to the Governor and, the following day being Sunday, the Governor and his wife came on board for tea. Monday at six A.M. the stabilizer was started. It required about an hour to get up full speed. As we passed out of the entrance, on our right was the

old fort El Morro, with its dungeons and battlements, which has stood for centuries and is in good repair and still in use.



The ocean bottom drops away to a depth of two or three miles just off shore. There we made our first haul. A net fifty feet long was attached to a metal frame six by twelve feet. As it was lowered to the



water, attached by a swivel to the steel cable five miles long, the yacht moved forward at a speed of five miles per hour, dragging the net behind, and as it sank to the bottom the sonic

sounding instrument showed a depth of about three miles. This part of the Atlantic was selected for the Expedition because it is the deepest known in the Atlantic Ocean. To reach the bottom it was necessary to let out five miles of cable, as the movement of the yacht towed the net some distance behind. After dragging the net for about three hours, on or near the bottom, it was reeled in. It required about two hours to bring it up. What excitement when the first net came on deck and the bag at the end was unlaced and thousands of specimens were shown! Most



of us were on our knees, sorting into buckets the known and unknown specimens that the human eye had never seen before. Many of the colored fish were more gorgeous than the rarest flower. It is still a mystery to me that these fish, living in water so

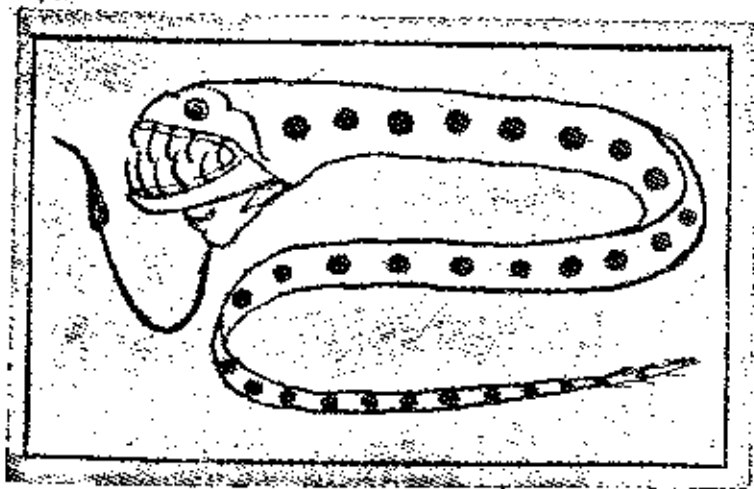
black that not the faintest ray of light can reach them, should have such beautiful coloring. Many of them carried their own

lighting system --

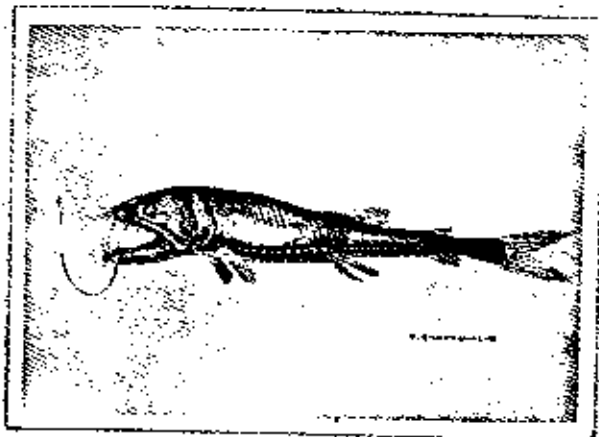
luminous spots --

on their sides .

One I called a sea serpent, as it was shaped like a snake with a large head. It had illuminous spots



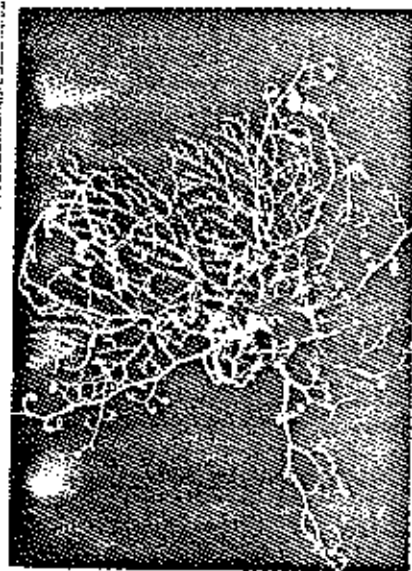
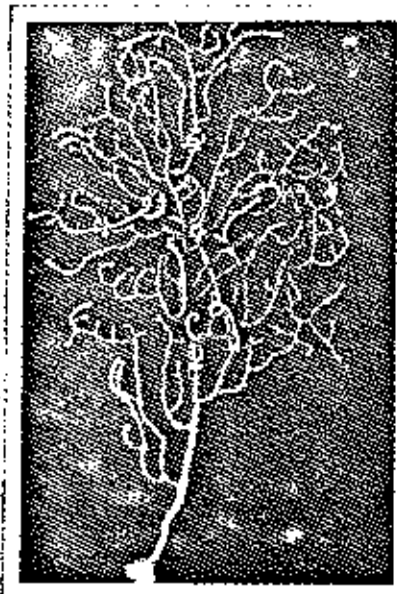
along its sides, its mouth opened to 180 degrees, and it had



many fangs in both the upper and lower jaw. From its lower jaw a barbel held a light several inches ahead of its mouth. This was shaped like, and as perfect as one of our electric light globes. The theory is that it is

used to attract other fish and then the fangs close upon the prey. Above is shown a similar fish which is also rare.

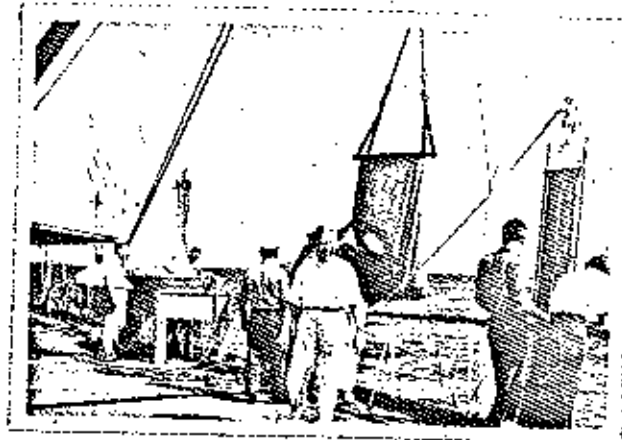
We made many hauls with these nets and lost thirty nets which were torn by the rough bottom. Each haul brought up new and different wonders. One fish with four eyes, two at each end, two of which were dummies. At a few feet distance you could not tell the difference between them, perhaps they were for protection. There were various colored coral-like ferns, beautiful to



behold, and glass sponges that had the appearance of spun glass. One variety threw thousands of spear-like darts into the hands of those who handled it. Nothing stopped the terrible itching that this caused -- it was so irritating that I walked the deck for hours at night, and some of the others suffered more than I.

Mr. Johnson believed that we would be able to bring up stardust from the deep. He had a dredger made and we brought up several hundred pounds of mud from a depth of three miles. It was so cold you could hardly handle it without freezing the fingers. Thousands of small mollusks were in the mud, which we

discovered as it was strained through the sieves. The mud, when dry, was fine as powder due, no doubt, to the great pressure, which is about fifty pounds to the square inch. How the fish can stand such pressure I don't know, but my theory is that the fish of the great depths are microscopically porous, permitting the waters to penetrate through the fish, thus equalizing the pressure. Some of the fish which were brought up exploded, blowing from the inside out, but many came to life and swam around in a glass tank of ice water, and I was able to make a moving picture of them in action.



One crab attracted my attention. Its front legs had three

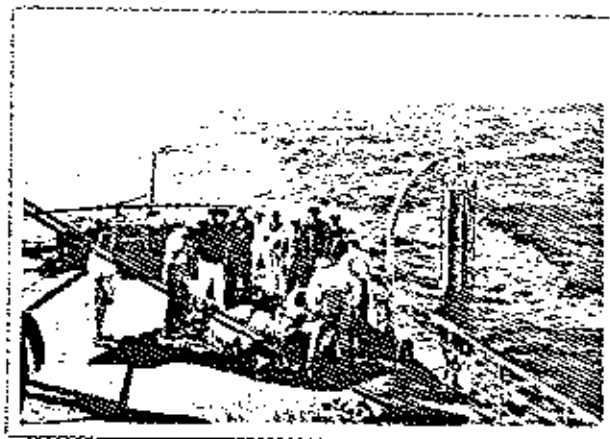


joints with claws at the end. The joint next to the body was like the holder of an old fashioned razor blade. The second joint was sharp just like the blade of a razor. As a fish swam by, the crab grabbed it

with one of its claws and placed it under the razor blade on the other leg and cut it in two, as you could with a real razor. Then with both claws it held the two pieces and devoured them. I saw it all in the tank as I photographed it. Another strange creature that we brought up from more than a mile below the sea waves

was a crab with a feather attached to its back. Dr. Bartsch said that the crab that placed the feather on its back did it to camouflage itself from its enemies, but to me the mystery was how the crab attached the feather to its back. It was fastened as firmly as if it had grown there.

We put over a tangle made of untwisted rope. This was dragged on the bottom the same as the net already referred to.



When it came on board it required hours of work to gather the small specimens that had been picked up from the ocean floor several miles below the surface. Many hours were spent in sorting the specimens into groups. Florence even turned her hands to mending nets.



Every morning and evening we sent up a balloon about three feet in diameter to get the speed of the wind at different elevations. Some were followed with the telescope instrument to a ten-mile height. At one time, at about 5,000 feet, the wind was blowing eighty miles per hour when it was almost calm on the surface of the sea. Taking the temperature to the depth down four miles and securing a sample of the sea water each half mile was interesting work. We sounded the ocean north of Porto Rico for an area of twenty miles wide and eighty miles long. Every five miles the yacht was stopped and soundings made. All together sixty-four soundings were made which required three days and nights. The children helped. They were on duty four hours and off four hours just like regular sailors. We checked the Nares Deep and found it a little deeper than that recorded on the ocean chart.

Our sonic sounding depth finder was the most powerful ever made. It was furnished by the Navy for the Expedition. Mr. Brown, from the Naval laboratory at Washington, D.C., a most scientific electrical engineer, was in charge of it. In operation we had one of the girls and Mr. Brown or Fenimore on duty, each two on duty at one time. They wore head phones and each held a stop-watch. A strong electric impulse was sent



out from the diaphragm on the hull of the ship. This was the signal

to start the stop-watches. The sound went to the bed of the ocean and was reflected back as an echo to the head phones, when the watches were instantly stopped and compared. If the time agreed, that depth was recorded as the depth at that point. If the watches did not agree the signal was repeated. Usually it was unnecessary to repeat more than three times.

Sound travels through the air about 1000 feet a second, through water about five times as fast, or roughly about a mile in two seconds. If the ocean was a mile deep it would take two seconds for the sound to reach the bottom and two seconds for the echo to come back to the listeners, so if the time was four seconds they knew the depth at that place was one mile. The yacht was stopped at each test, the stop was numbered, and the officers on the bridge computed the location and later the records were compared and computed. On one occasion where the ocean was over five miles deep and we were in a storm, the echo was very faint so in order to hear better, Fenimore ordered the stabilizer stopped, and as a result many of us were thrown out of bed.

One morning at about four A.M. I went to the laboratory to say "hello" to those on duty. They had been on duty three days and three nights and were a bit groggy. Fenimore sent out the signal several times, started his stop-watch, listened, but no sound came back to his ears. Then I noticed that he had forgotten to put on his head phones. We had a good laugh and by then Fenimore was wide awake.

The great pressure of the water as discussed by the scien-

tists amused Dr. Darby. He said he did not believe the water had any more pressure at a depth of five miles than it had at the surface, and that he would bet ten dollars he could take an empty can, solder a new cover on it to make it air-tight, and let it down five hundred feet without any effect on the can. Someone took the bet and I was selected to send the can down. I measured off five hundred feet on a line and with a weight attached to make the can sink, I let it down. When it came up it was flat as a pancake.

It was warm in the tropical weather and working in the sunshine made it hot. All the men came to lunch with their coats on. Mother suggested that they take them off and be comfortable and as one man they rose, thanked her and removed their coats.

I told the following story at lunch one day on the yacht. "Once as a small boy while driving across the prairie in a heavy rainstorm, small frogs came down from the sky by thousands. They were jumping around me on the seat and on my lap, and there were dozens of them on the floor of the buggy." At first they all thought I was joking but I told them I was serious and that it really happened. Dr. Bartsch said I must be mistaken that he had never heard of such a thing. Mr. Johnson said he did not believe the frogs came from the sky, but were probably thrown up by the buggy wheels.

Several months later at the University in the desert of Arizona, miles from the nearest water, there was a rain of small fish. This was confirmed by several of the professors of the University. I sent a copy of the report to Dr. Bartsch but he never replied. I know the frog story was true and I see no reason

why small frogs could not be sucked up with the water, because I recall having seen a cookstove that had been drawn up by air suction and carried a mile in a cyclone that I witnessed some years later than the rain of frogs. I have also seen water spouts at sea with their spiral columns that sucked up water for hours with a terrific roar. They traveled along at a slow speed. It has been said that a water spout will lift a small ship out of the water. Whether this is true I cannot say, but it does lift tons of water in its hollow spiral column.

San Juan was our headquarters and we went into the harbor every few days. The Governor asked us all to lunch at the old Palace. We visited the cathedral where Ponce de Leon's remains rest. We also visited his old home built in San Juan. His spring of eternal youth ran into a large pool where he bathed. We drank some of the water and splashed some on our heads. After the others passed on, I asked Mr. Johnson if he was not going to drink of the water and dip his fingers into the pool. His reply I thought wonderful. He said: "How would it help me, it did Ponce de Leon no good."

The Aide-de-camp of the Governor was a Spanish gentleman who had been in Porto Rico when the Americans took it over. He spoke to me of Mother's Spanish. He said he had fallen in the ways of the Porto Rican Spanish and it was a pleasure to hear someone speak real Spanish. He said he had to be right up on his toes to talk to her. There were several other Spanish people at the dinner we gave the Governor. They all sent beautiful flowers to Mother when we sailed from San Juan the last time.

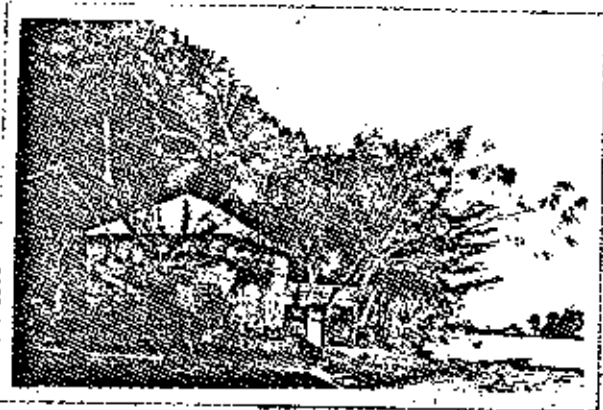
As we worked to the west of Porto Rico we anchored one night at Mono Island (mono meaning monkey). It was uninhabited. Going ashore next morning Dr. Bartsch found hundreds of the rarest shells known. The rarest of these was the Mollusk, Cerion Monaensis, of which up to this time only nine had ever been found. The only place where they are found is on Mono Island. Here Dr. Bartsch found several hundred. He gave me seven. He also found the largest hermit crab he had ever seen. Florence named it "Mona" and kept it alive with bread and jam for several years. Anyone may become an explorer but it requires years of experience to find the specimens wanted. Until I went out with Dr. Bartsch I did not know what to look for or where to hunt. Among the rocks he found rare objects, beautiful shells, and unusual plants. Man does not know all the varied life on the earth or under the sea. A million expert men know only part -- all living people do not know all. The average man knows the owl and bat prowl by night, but does he know that millions upon millions of animals, birds, fish and insects move about at night in search of food and then at sunrise seek seclusion for the day.

Several nights we ran into Samana Bay of the Dominican Republic. Almost every time we went in or out we passed a school of whales. Inside the entrance we went



up the bay about fifteen miles, where natives rarely saw a white

man. One day we stayed over and most of the party went ashore looking for land specimens. As we leaped from the launch, up to our knees in water, we saw a native cottage with a family of



about ten children, some without clothing of any kind. As we approached, the Mother and children ran into the woods. The Father, dressed in rags, timidly approached. I gave him some money and tried to

get the children back to make a movie of them. The Mother came first with a large butcher knife in hand, the children timidly following. We gave them some candy, but they did not know what to do with it. I don't suppose they ever tasted candy before. A fancy handkerchief



caused the Mother to lay down her knife. The cottage was bare except for a table made of an old box. The room had a dirt floor with a few rocks in the center of the room which they used as a fireplace for cooking. I saw a few chickens and a duck around the place. Not to be outdone, the Father offered me two eggs. I said: "No gracias".



When the rest of the party came back, including Florence we were obliged to wade to the launch. I was seated in the bow and, as I turned to look back, Florence, seated in the stern was juggling a couple of eggs. I asked: "Where did you get them?" She replied: "The Father waded out to the boat and handed them to me, but I don't know why he gave them to me." I knew and was sorry that his children would not have the eggs to eat, and before we reached the yacht, Florence, while juggling the eggs, broke them both. I learned that people from other islands in the Carribean often made a raid and stole children and made them work in the cane fields, hence the butcher's knife in the Mother's hand.

On another of our trips to shore, I saw a cabin where a mother about forty years old and her two daughters about twenty years old lived. All wore a single garment -- mother hubbards. One was washing and the other two cooking over an outdoor fire. I wanted to take a movie of them so showed them a fifty cent piece and motioned to them to go on with their work. While I was taking the picture one of the boat men came up and told me that the launch to take me back to the yacht was just around the bend. I said that I could be ready in just a few minutes and the Mother spoke up and said: "Why didn't you all say you spoke English". I told them that I thought they were natives and could speak only Spanish. They told me they came from Georgia and spoke no Spanish. They had been there five years. The husband was up on the mountain side chopping wood. I asked them why they stayed there and their answer was so evasive that I thought per-

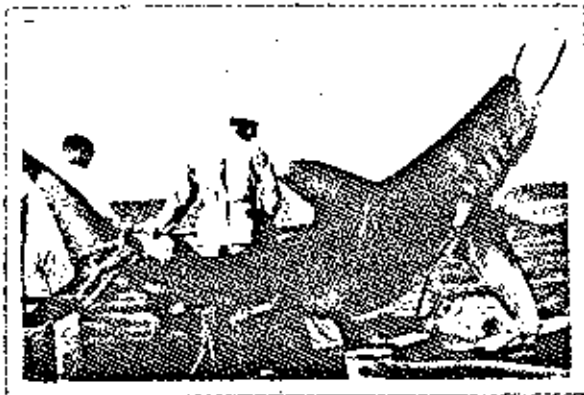
haps the father was evading the law. In my surprise at their speaking English, I forgot about the fifty cents I had promised them, but they had not, and asked me for it. I gave them a dollar.

One afternoon as we came into the San Juan harbor, mountainous seas were running. The harbor entrance is narrow with a sharp left turn. Near the entrance, just as we were about to enter, a huge ship turned right in front of us and we had to stop and back out for a half mile. As we went back again, just at the entrance, a tremendous wave gave the yacht a thump under the stern and lifted us high in the air with a roar. The Captain handled everything perfectly. After we anchored I suggested to Dr. Bartsch that we go up on the bridge and compliment the Captain on his good work. Dr. Bartsch, who has the greatest command of English I have ever heard, made a very nice speech to the Captain and ended by saying: "But wasn't it beautiful!" "Beautiful, hell!" replied the Captain.

As we worked our way east, we visited the Virgin Islands. It was my custom as soon as we anchored to put out a shark line. Many man-eaters fell prey to the baited hook. One night we anchored off Culebra Island,



which is a very beautiful island. I hooked a huge tiger shark.



It was a female and weighed six hundred and sixty-three pounds. Dr. Price, one of the scientists, took thirty-nine young sharks from her, each about eighteen inches long.

Next morning we visited Flamingo Lagoon. There were many snakes, but no flamingos were at home.

It was now time to start for Washington, D.C. with our load of more than 100,000 specimens, preserved in pure alcohol. These specimens will give work to the scientists for many years. Our last haul was to be in the Nares Deep on our way home. We reached the bottom by dropping about eight miles of line, but a storm came up and we were obliged to bring up the small net with great difficulty. We passed through the Saragossa Sea where it is said ships become tangled in the great mass of seaweed and never can escape. An interesting myth -- there is no place in this sea that one could not row a boat through it. The Saragossa weeds that grow on the surface are only a few feet long and have no connection with the bed of the ocean. The surface of the ocean looks like a beautiful oriental carpet -- for miles the Saragossa weed in beautiful shades of color rise and fall with the rolling waves of the sea. We dipped up Saragossa weeds with hand nets and with them many small colored fish and all manner of sea life that makes its home there.

Mr. Johnson told me on the side that a sixty-mile gale was

blowing off Cape Hatteras, and he had told the Captain to run into a southern port until it was over, but as we neared Hatteras it became like a mill pond. We ran through the Chesapeake Bay and up the Potomac River to Washington, D.C., where we moored the yacht at a navy dock. Many were there to meet us, including noted scientists, among them Dr. Abbott, Secretary of the Smithsonian Institute, and a delightful man to meet.

The Vice President of the Carnegie Foundation rushed up to me, shook my hand and proclaimed to all that I had saved his life. I sat next to him at the luncheon Dr. Morley gave us in Chichen Itza. How did I save him? You guess -- I don't know.

It was with real regret that we said good-bye to Dr. Bartsch and the other members of the party. However, we had the joy of looking forward to a cruise of the Mediterranean that Mr. Johnson told us he was planning for the next year. Unfortunately, he was taken ill and so we were unable to make the cruise, and the Caroline II has now been sold.

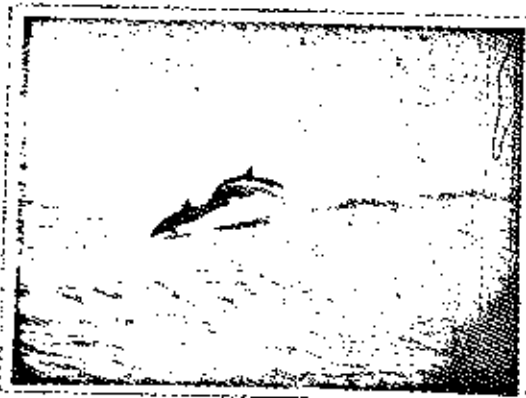
CHAPTER XIII

SOUTH AMERICAN TRIP

I had long wanted to visit Lima, Peru, where Mother was born. We sailed for Panama from San Francisco, staying twenty-four hours in Los Angeles. The next day after we left Los Angeles Florence was covered with red spots. The ship doctor said it was measles and we thought it was, as there had been an outbreak of measles at the University of California where she was going at the time. The Captain, an old friend, came to our rooms to see us and asked Florence why she did not grow up. Strange to say the next day the spots were all gone and Florence was herself again.

I visited the Captain in his cabin several evenings and one night he told me a fish story -- the tallest one ever told. He said about a year before, while he was anchored off the coast of Mexico, he looked over the side from the pilot house and laying along side the ship a few feet below the surface was a fish so large that he could not believe his eyes. He called his officers and one went aft and stood at the end of the fish's tail, another went forward and stood opposite its nose. They then measured along the deck and it was 375 feet long. He said they watched it for an hour and after that it just settled down out of sight into the depths. The Captain said he never told the story to anyone else, because he didn't want to be known as the greatest liar on earth, but he assured me it was true -- strange if true. I believe there are many wonderful things "we know not of" in the depths of the oceans.

We visited friends in Guatemala City and Salvador as the ship laid over for a day at each port. We have made the cruise many times along the west coast to Panama. It is always interesting. You see thousands of porpoise, playing follow the



leader on the surface of the clear blue water; sword fish leap about; and porpoise larger than tubs are floating on the surface. A terrific electric storm came up just as we entered the bay of Panama.

Lightning struck the mast of the ship with a loud crash but did no real damage.

Mother is very fond of the Panama Canal and though we have been through many times it is always a high point in the trip to her. For this reason we went through the Canal and stayed two days in Cristobal waiting for the ship Santa Lucia to continue our trip to South America. We then went back through the Canal and were on our way. Fausto Moscoso, the purser, was the most efficient purser we ever met. No wonder he is now chief purser of the Grace Line. He is a small man, born in Ecuador, and speaks several languages perfectly. He added much to our comfort and pleasure. Our first stop was at Guayaquil, Ecuador, forty miles up the Guayas River from the sea. Not many know that the straw hat called the Panama is not made in Cuba but in Ecuador. Hats like we paid \$20.00 for in Panama could be bought here for a dollar. The Monte Christo hats are the finest woven, as fine as

cloth. One sells for \$12.00 that would cost \$150.00 in the United States. Many people are under the impression that the Panama hats are made under water. Such is not the case, the fog dampens the straw. The reason that the Monte Christo hats are the finest is because there is more fog in the Monte Christo district.

We bought two honey bears. The female was as tame as a kitten and we often found her in bed in the morning. We also bought a pair of casique birds. They whistle tunes -- one is whistling now a few feet away from me as I write these lines. They eat oranges and drink milk but never take water or eat seed. The honey bears are now in the Zoo at San Francisco. Florence was never happy without pets on a tour so we always had them.

Small islands, covered with flowers, float past the ship both ways with the change of the tide. Natives live on rafts made of Balsam wood, which is much lighter than cork. The rafts float with the tide so you would never know where your ticket was taking you, unless you tied up to the shore as some of them did. Many alligators are found along the shore of the river. You can buy a beautiful pair of ladies alligator shoes made to order for two dollars.

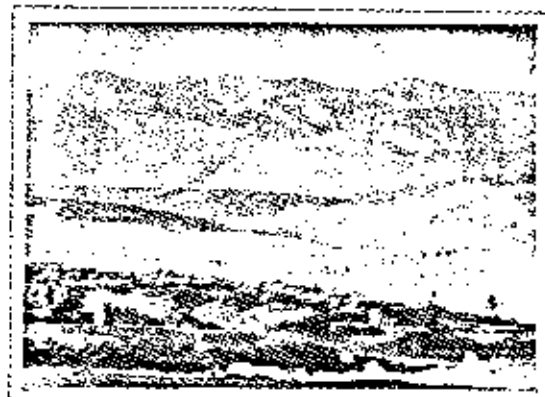
On our way we stopped at Talara, Peru, where the Standard Oil Co. has hundreds of oil wells. The harbor at Talara is only a roadstead and the sea was so rough that we could not discharge or take on cargo. I understand that the tax on the oil pays almost all the expenses of the Peruvian government. Strange there are so few real harbors on the west coast of North and

South America. The Pacific Coast is unlike the Atlantic in this respect. Lima and Valparaiso, Chile, are the only two where it was not necessary to be lowered from the ship in a basket to a launch and lifted in the same way to the pier. It was a picture to see the man on the pier direct the rising and lowering of the basket. He did it with his fingers -- they moved like he was playing a piano. In such a manner he lifted the basket from a heaving deck without the slightest jar and lowered it with its load of passengers in the same way.

Due to the Humboldt current the sea is quite cool and gives a lovely climate to the country though it is not far from the equator. As we entered the harbor of Callao we passed through thousands of jelly fish. The gorgeous designs on their backs, sometimes two feet in diameter, are tinted in beautiful pastel colors and more delicately shaded than an artist could paint. Old school friends of Mother's came to meet the boat and it was a most happy reunion. I was not very well so Mother and Florence went with them to Lima, eight miles away, the City of Kings (and one Queen, called by her friends "La Perla Linena"). They had a wonderful time seeing old familiar places and meeting the many new children of her old friends. They visited Mira Flores, a resort where Mother went swimming when a small girl.

While the others were ashore Moscoso introduced me to a high Peruvian official who spoke no English and I spoke no Spanish. I invited him into the lounge to have a drink, in fact we had two, with smiles and bows, it was a greeting without words. On our return visit no one was allowed on board so Mother was at the

rail talking to a dozen friends on the dock who had come to bid her farewell. The official I had entertained saw them, shouted an order, and they were all immediately escorted on board. I shouted: "Gracias". He in that polite way of the Spanish called back: "No hay de que" (It's nothing).



Farther south we anchored at Mollendo, the land that Peru and Chile fought over for so many years. I wonder why, for it is just barren desert. We rolled around at anchor all day while those who had business went ashore by the bas-

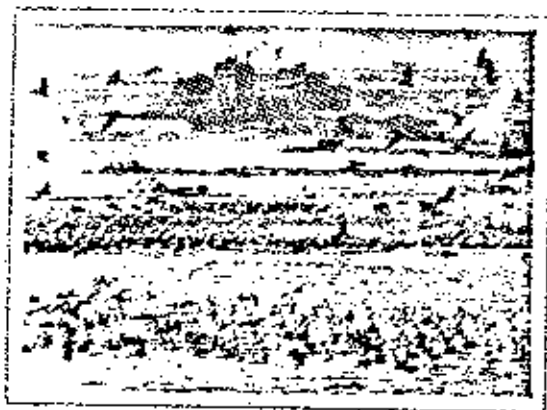
ket route. We next passed the Guano Islands that have been a source of revenue as fertilizer to Peru for a hundred years. As we were passing the sea birds started out from the islands to feed. To say there were millions is a mild estimation. For some reason these birds



always try to pass in front of the ship. They passed in a line, twenty or more side by side, for over two hours, and were still coming as far as the eye could see. There were many kinds of birds: gulls of all types; rare albatross with an eight-foot and more wing spread; and pelicans in line for miles. This flight proves the saying "birds of a feather flock together" as the same

kinds were together for miles in a stretch. The Captain told me that on one occasion in passing, in a slight mist, so many birds hit the mast and spars that it required fifteen seamen four hours to throw the dead birds over the side. If you wonder where the birds get their food it is only necessary to look into the clear water of the sea. To say there were billions of sardines would not be overstating the numbers. So numerous were they that it looked like a solid mass of fish as far down as one could see. Whales feeding here would come up under the fish with their mouths open and so filled with fish that as they closed their mouths a silver stream of fish flowed down on both sides of the jaws. Pelicans sat on the water, dipped their beaks under, and came up with a pouch of fish. As the boat moved along the birds were so full that they could not rise from the surface. The bow of the ship pushed them aside.

Along the coast in Peru it almost never rains. The people are dependent on rivers made up by melting snow from the Andes Mountains. Many are under the impression that the potato came from Ireland. In fact, it is often referred to as the Irish potato to distinguish it from the sweet potato. The original home of the potato is Peru. There they also have a yellow potato, not sweet but with the same general taste as the white, only a much better flavor. At considerable trouble some years ago I brought some of these yellow potatoes to California and planted them. They grew a fine crop and I planted some of the new crop the next year, but not a single one of them grew. Perhaps that is the reason that we have none of these superior Peruvian potatoes in the United States.



Our next port of call was Antofagasta, Chile, or "Ante-go-faster" as Moscoso called it. Much of Chile's copper is shipped from here. It is a desert country backed by the high Andes. Water is very scarce but the people make much

of the "plaza", as they call it, about twenty feet wide and six hundred feet long, which is kept up with all the water they can spare. At least it gives them a chance to see what grass looks like. Every Latin American city has a plaza. They are always good to look at and a welcome relief from the cooped feeling given by the narrow streets.

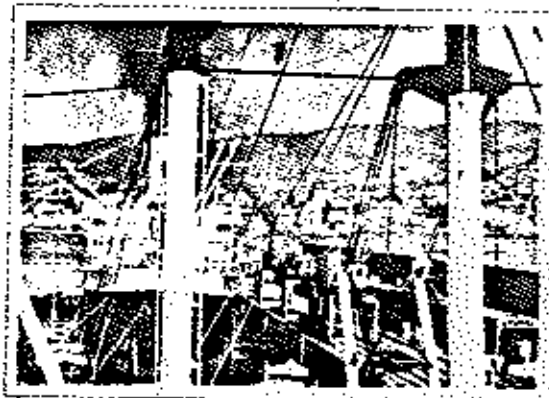
Before leaving San Francisco, Mr. Ford, President of the Grace Line, sent a letter to the managers of all the ports-of-call. He must have sent a very urgent letter because everyone on board the three ships we traveled on showed such unusual attention to us. The managers at every port came on board to see if they could do anything for us, invited us to lunch, dinner, etc.

I had bought a fine radio, direct current, as that is what all the ships use. I asked the purser if I could put out an aerial over the side. He said you had better ask the Captain, he has never allowed anyone to do so, but he may let you. I asked the Captain about it and he said: "I don't like the damn things but I will have the electrician fix you up." The electrician put out a fourteen-foot pole which looked bad from the deck.

I spoke to him and said that I did not want to annoy the Captain and I thought a shorter one would do. He replied: "To hell with the Captain, he told me to put it up didn't he?" Our reception over my radio was so much better than the ship's that the Captain often came down to listen to it. After the trip was over I gave the radio to the Captain. I had expected that along the coast of Chile the reception would be poor because of the 25,000 foot Andes, but was pleasantly surprised to pick up London, over 10,000 miles away, like a local station. The reception from the United States was not so good.

I had not been well all the way from Panama so was unable to go ashore. We had bought tickets including cars, guides, and all shore expenses, called the "All Expense Tour". I used to joke Moscoso calling it the all expense cure. The night before we arrived in Valparaiso, Chile, was the Captain's dinner and everyone was in costume. Moscoso marched the entire party down through my room, all laughing and greeting me with kind words.

It was winter in Chile with snow on the ground (June in California). We enjoyed our trip up to Santiago. A good guide took us everywhere. The view of the snow-covered Andes high above us was very



beautiful. The manager of the Pan American Airlines thought I was the Douglas of the Douglas Aircraft Company and called on me.

When he found I was not he took it upon himself to entertain us anyway for the three days we were in Santiago. They ran a plane every-day over the Andes to the Argentine. He said it was necessary to rise to 23,000 feet and passengers were supplied with oxygen tubes.

We were shown the English golf course and also the German. The Ministers from those countries get their trade by entertaining and making a great display for their countries. I asked the guide where the American Minister lived and he turned to the driver and asked him -- neither of them knew. We are far behind others in the diplomatic branch of our government. We are turning out many students from our colleges that are having a hard time finding jobs. If we had a college to train diplomats and sent twenty-five to each country in the world, just for the social part to entertain and make friends of the people, it would have a great effect on our foreign trade and pay the expenses many times over by the increased trade. England and Germany are the only ones that work the propaganda for foreign business. This reminds me, when I was directing the Victor Co., I sent men to South American to increase our business in the Spanish countries. Music dealers there laughed at our salesmen, claiming the German records were far superior to ours. When our men told them that the German records were made from copies of our records which we supplied to the German factory, they only laughed some more and called our men liars. However, this was true, the Germans paid us ten per cent on all records they sold on this account. They used cheap materials

to press their records on, and in this way made up for the commissions paid us. Theirs were much inferior to ours, but could you make South Americans believe that? Such is the German propaganda -- they promote while we sleep. Only when we told the German factory that they must not sell records to South America did our trade increase. But they still claimed that the German records were the best. When will the United States awake to its own interests?

We enjoyed our stay in Santiago as will all who visit it. We took a good train back to Valpariso, a distance of about one hundred miles. Here we stayed over night at Vina Del Mar, the O'Higgin's Hotel, as modern as the good New York hotels.

The next day the manager of the Grace Line gave us a luncheon at a most delightful restaurant overhanging the sea. He invited a number to entertain us, among them Moscoso, who said that he could make a cat pick up a quart bottle of champagne from the floor and put it upon the table. The waiter went out and found a stray cat. Moscoso wound a bunch of string around the neck of the bottle and sat it on the floor. The cat was placed on the floor beside the bottle and Moscoso grabbed the cat by the tail, held it over the bottle; the cat put its claws into the string on the bottle; Moscoso lifted the cat and the bottle and let the champagne down on the table. A very clever trick we thought. I had told Moscoso of our intended visit to Easter Island which is owned by Chile and is two thousand miles west in the Pacific. After lunch we returned to the ship and in our rooms found these two grotesque



wooden figures, carved by natives on Easter Island and presented to me by Moscosco.

I was now in good condition and when we arrived in Antofagasta on the return trip; Moscoso and the Chief Engineer took me to Seal Island, ten miles away, to get some undersea pictures, but the seals were away. On our way back I did see some huge seals that must have been twelve feet long. Native fishermen came along side with a broadbill swordfish. I judge it weighed about 1500 pounds. The chef bought it as food for the sailors. It was caught in a net.

I enjoyed our visit to Lima, founded by Pizarro in 1535. Moscoso went with us. I told our guide that Mrs. Douglass was born in Lima. He asked her maiden name and when she said "Adams" he remarked: "Oh, yes, I knew your father well." We knew it was true as he showed us so many things: the Opera House Adams built; his printing office; and where Mother's home was. Now a twelve-story telephone building has taken its place. We visited the old bull ring and also the Cathedral where we saw the mummy of Pizarro. Mother was anxious to find the Sacred Heart Convent where she went to school. We visited at least six convents. Moscosco went in and asked at each one, if at one time it was the Sacred Heart, and they all said no. Finally, after the last one, Moscoso said: "Mrs. Douglass, did you ever go to school?". Next day one of her

old school chums told her that she was at the right one but the name had been changed many years ago.

Knowing that the Llama was the emblem of Peru I wanted to see one and asked the guide to point any out. (I thought you would have to dodge them in the traffic.)

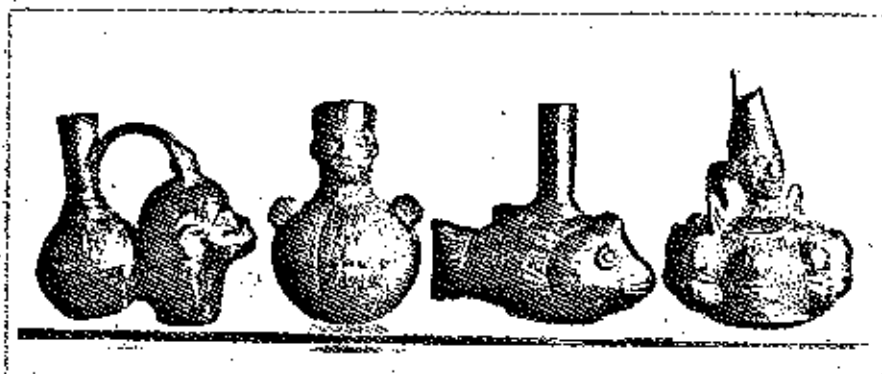


"Oh", he said, "you will only find them up in the mountains". I asked: "Haven't you one in the Park?" He said: "No". So we bought several silver ones.

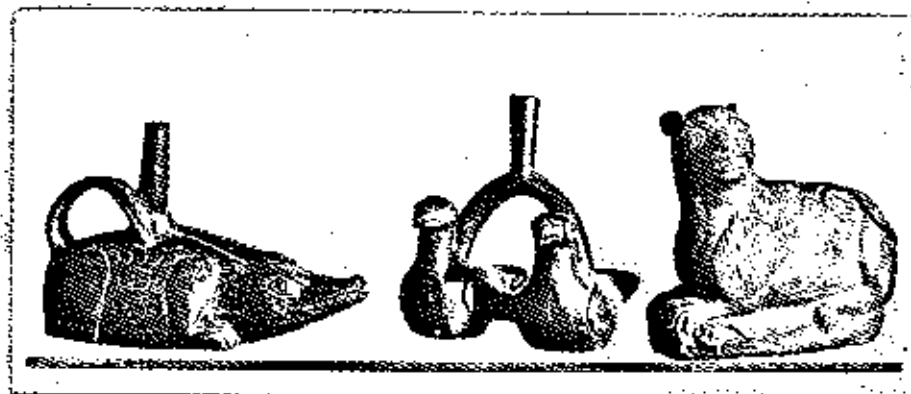
I wanted to see the Museum and the old Inca relics but it was a church holiday so we found the Museum closed. The guard at the entrance said: "No entrance". Moscoso asked for the Director who lived next door. The Director came and said: "No!" Moscoso told him I was a United States Senator from New York and the American Government would be offended should I be refused. We were immediately admitted and shown everything. It was most interesting. The guide looked at me with awe and wonder.

The next day many of Mother's old friends came to the ship to say good-bye and in the Spanish custom brought presents and flowers. What I liked most were the relics of the old pre-Inca days, called "wacos". This pre-Inca pottery is believed

to be several thousand years old. The wacos are found buried with natives and supposed to be symbolic of the work they did while living. When found the soil around them is immediately soaked with water and the wacos covered again with soil. In a few days they are dug up. If this process is not followed



the wacos fall into dust in a few hours. These pottery pieces are models of men, women, and children, birds, animals, etc., all beautifully colored works of art, some of them thousands



of years old. As can be seen from these pictures, the Chimú pre-Inca Indians show artistic ability in waco designs and as makers of the pottery. It is against the law to take wacos out of Peru without a permit.

It was with real regret that we left Lima, a truly beautiful city. We bought baskets of tropical fruit that Mother had told us of for years. It was the most delicious fruit I ever tasted due, no doubt, to the climate of Peru which is different from any country. Peru has the highest railroad in the world, the elevation being 15,000 feet.

When we were married Mother had about a hundred chinchilla skins she brought from Peru. They have become the most valuable fur on earth, worth about \$3,500.00 each. The skin is about the size of a squirrel. They are nocturnal in habit. Efforts are being made to grow them in the United States with some success. Great care is required to raise them but at \$3,500.00 per skin one can afford to give them considerable care.

We sailed for Salaverry, two hundred miles north of Lima. There we landed by the basket route through a wild sea. Moscoso had a new Ford waiting that carried us to Trujillo through a desert. We saw several mirages on the way. A few miles beyond Trujillo we came to the ruins of the age-old city of Chan-Chan, the imperial city of the Chimu Empire, overcome by the Incas in 1400. The entire city was built of adobe, including the Palaces and Temples. In the burial grounds we found cloth said to be more than four thousand years old. Florence excavated a skull and brought it home. It is claimed that it has rained there only four times in the last thousand years. For that reason everything was in perfect condition. That is why the cloth was not decayed and its colors were bright -- reds, blue and green with no sign of having faded.

Ten miles farther north through the desert we came to the Hacienda Chiclin, a perfect oasis, thousands of acres in extent. It was a proverbial garden of Eden. The Larco Henera, three brothers, now own the place built by their father before them. The brothers, all bachelors, are large handsome men and all graduates of Cornell. They look like Arabian chieftans. They employ about three thousand natives to raise sugar cane and make syrup, and produce the food they use. For these natives they provide homes, a church, schools, and a moving picture theatre. It was a small town with perfect sanitary conditions, ruled by the three brothers like a little kingdom of their own, and lucky indeed were these natives.

Peru is noted for the finest saddle horses in the world. Here we saw the champion of them all with five gaits. Such grace in a horse I had never seen before. They are descendants many years ago from the Arabian horse. The Arabian horse has two less vertebrae than other horses. These saddle horses could carry a glass of water on the saddle at a fast gait and never spill a drop.

The brothers gave the Museum that I spoke of to the city of Lima. For many years they have been excavating the burial grounds where we found the cloth. They also have a Museum here and in it many cups and strange figures all of pure gold. More refined gentlemen than the three brothers would be hard to find. Moscoso was a great friend of theirs so we were received most kindly. As we were leaving, near the entrance, a little girl offered us a strange tropical fruit "Paci". It looked like a

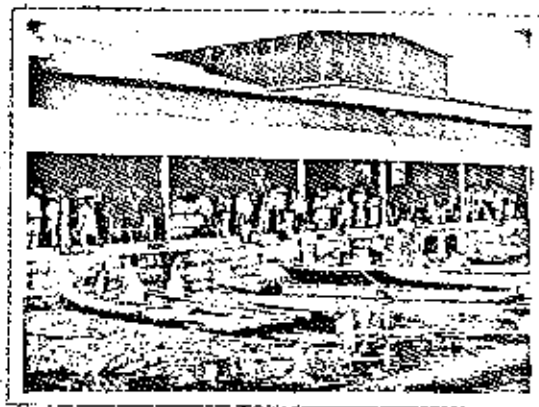
huge string bean about two feet long. The inside was most delicious and tasted much like the Mangostein for which the Queen of Holland, they say, offered to pay a thousand dollars to anyone bringing her one from Siam in fresh condition. Mother planted some of the seeds and we now have two trees about five feet high. As soon as Mother saw the fruit she exclaimed: "Oh! Paci, buy all she has!" which we did. I failed to mention that the water supply to keep up this wonderful garden spot came fifty miles from the Andes in conduits built by the Incas hundreds of years ago.

We stopped a few hours again in Tulara. Some friends from San Jose, California, lived there and came on board to visit us and brought us several of the wacos, which I have already described. We were in our rooms talking and did not hear the gong for visitors to go ashore. Before we knew it, we were under way and our friends had to be taken off by the pilot.

Moscoso told me that he could arrange for a launch to take Florence and me up the Guyas River to hunt crocodiles. I told him to do so but the stay in Trujillo had delayed us and consequently we did not arrive until two A.M. A large crew loaded bananas all night so we did not stay long enough for the hunt. However, the trip down the river was beautiful.

The day at Buenventura, Columbia, was nothing special except that the many natives were interesting to watch in their dug-out canoes, paddling their way around this tropical bay, which is almost on the equator. Moscoso stood beside me on deck and as a dug-out canoe with a native aboard passed, Moscoso

asked me if I would like to buy the canoe. I asked him how much I could buy it for and how I could get it home. He said two dollars and he would get it home for me. I said: "All right, buy it."

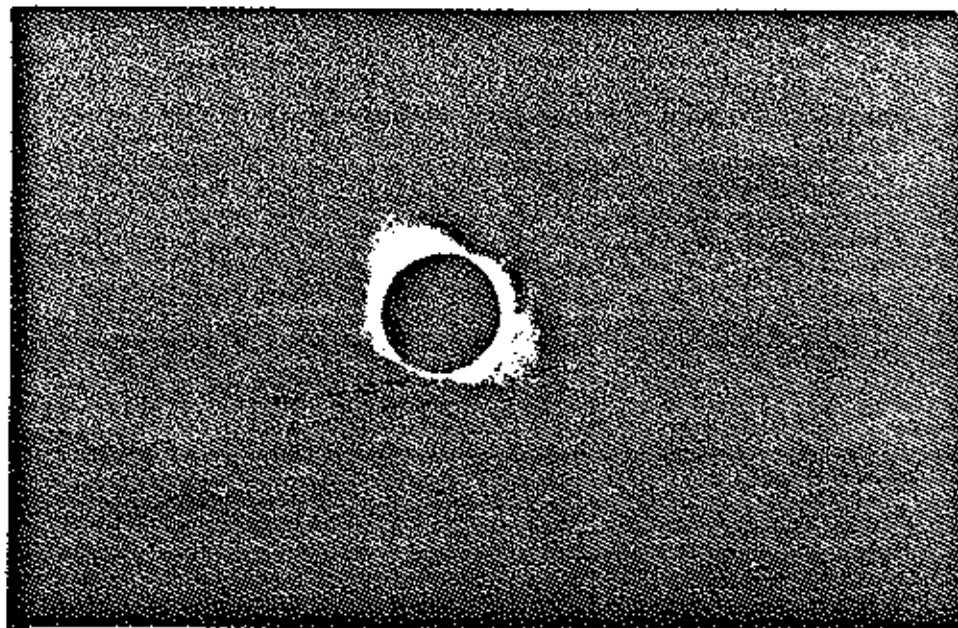


He hailed the native and asked him in Spanish if he would sell the canoe. The native said "Yes" but wanted to know how he would get home which was twelve miles away. Moscoso said "Swim" but this did not interest the native, swimming through the crocodile waters, so I did not get the dug-out canoe.

After this wonderful cruise along the Pacific coast of South America, we were indeed sorry to leave the Santa Lucia at Cristobal. Here, we changed to the Santa Elena and in ten days reached home.

CHAPTER XIV

EXPERIMENTS AND HOBBIES



Eldridge made this moving picture of the total eclipse of the sun with one of my cameras in the Fall of 1931. It was taken from a small island off the coast of New England. The astronomers from Mount Wilson and Lick Observatory were not successful in their efforts to get this eclipse as it was cloudy where they were set up on the mainland. I sent them a copy of the film and both sent letters of thanks. The following is an excerpt from Dr. Atkin's letter:

"Mount Hamilton, Dec. 12, 1932.

Dear Mr. Douglass:

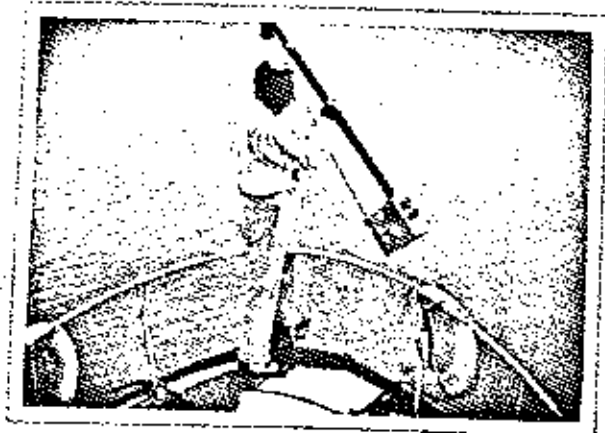
That eclipse film came safely and has been carefully examined by a number of men here on the Mountain. I want to congratulate you on the success you obtained, and want to thank you for your kindness in sending the film to me. -----

Yours sincerely,
R. G. Atkin"

This picture gives you some idea of what a million miles look like ninety-three million miles away. The light streamers from the edge of the moon reach out into space from the sun more than a million miles.

When Mr. Johnson first told me that he was planning a trip to do some deep sea exploring, I started developing a submarine periscope camera. Water covers three-fourths of the earth, but we know comparatively little of the wonders under the sea -- "though only a few feet separate one bright world from another. The surface of the sea, a mirror that vision cannot penetrate, is the boundary between the world of men and the fantastic realm of the deep -- a realm that but few persons have seen, that surpasses in weird beauty and variety anything to be found in the world above." Most of the world and much of the sky have been explored and photographed but few undersea pictures have been made in the past due to the troubles encountered in making them. Any step taken to simplify old methods would seem to be very desirable.

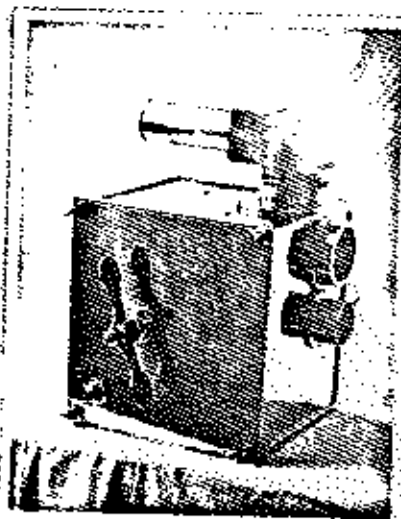
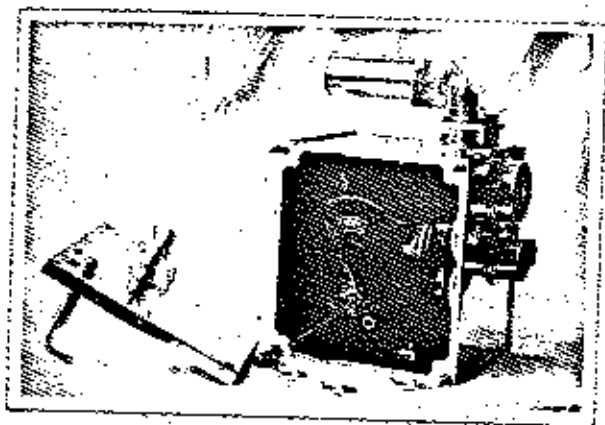
I spent months experimenting with undersea cameras in the South Seas and the West Indies, and on the Johnson Smithsonian Deep Sea Expedition. The results of these experiments have developed my periscope camera which makes it possible to see and photograph, from the deck of a boat, many under-water scenes in the time required to make a single scene by any of the old methods, and to be free from the dangers of sharks or failure of diving equipment. It is simple to make scenes far



from land where the water is always clear, but where diving suits or helmets are almost useless because of the great depth of the water. It greatly reduces the costs. It also opens the field to all camera men even though

they know nothing about the art of diving.

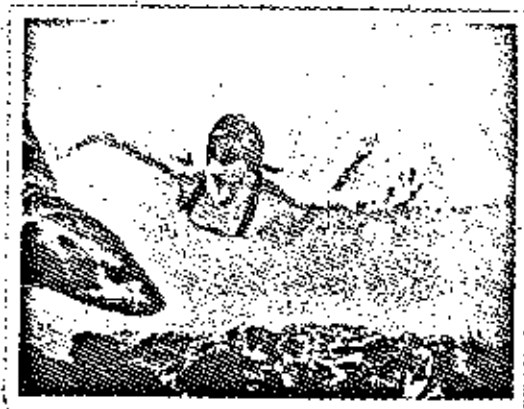
The water-proof periscope case is designed to hold the 35 mm Eyemo Camera which is wound, operated, and focused from outside the case. The periscope is made up with extension tubes for convenience in carrying and shipping. The optical system has been designed to use as many extension tubes as desired.



The outfit will almost float when submerged. The equipment can be adjusted to take scenes at any single angle and great depth. A ventilating system is arranged through the tube to prevent the fogging of the lenses. With periscope tubes detached the outfit

may also be used by divers.

No field in the moving picture art offers so many new possibilities as fascinating submarine stories, now that many of the difficulties of making them have been overcome. The following pictures of Florence which I took with the camera are examples of what may be accomplished.



Feeding the Seal

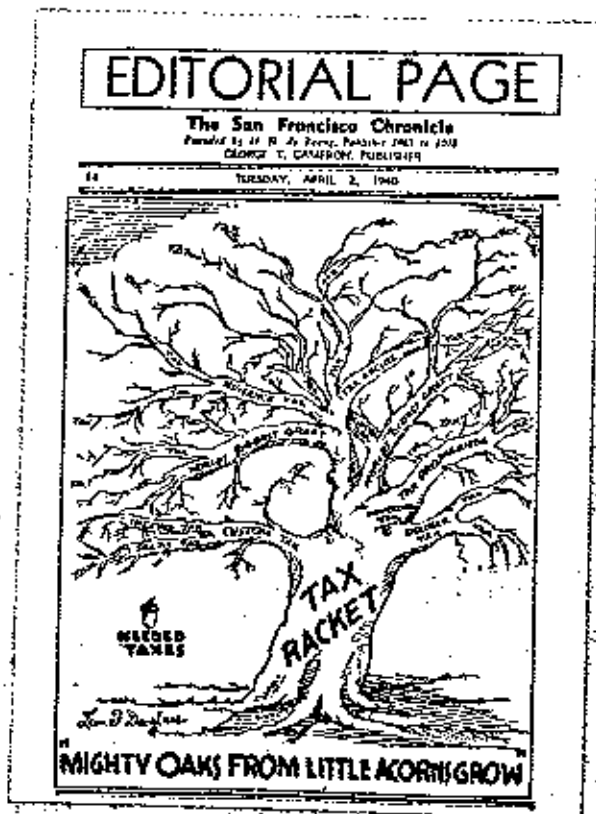


Fighting the Octopus



Last year I filed patent papers on a new device which may prove of incalculable value in tracing the fate of airplanes or ships lost at sea. This device is a metal ball, a foot in diameter and equipped with reflector facets capable of picking up light beams and returning them for a distance of ten miles. The ball would be carried atop the plane in a recessed socket, and automatically float free when the ship struck the water. A "sea anchor", similar to a silk "parachute" dragging in the water, would serve to check the ball's drift. I have offered this device, without charge, to any airplane company desiring to make use of it, as my contribution to aviation.

Besides my experimental work I find much pleasure in trying to make a success of those things that I am supposed to know nothing about, regardless of the old saying "Jack of all trades and master of none". To obtain this objective I have made several cartoons which have been accepted and published in two of the large San Francisco papers. In each of my cartoons I have endeavored to present to the public some current vital problem that needs the attention and consideration of every good citizen and weary taxpayer.



No question is of more concern to each of us than that of TAXES and the TAX RACKET that has become so strong in this country. My most recent cartoon is shown here and a photostatic copy of a letter received from ex-President Herbert Hoover.

HERBERT HOOVER

April 5, 1940

Dear Mr. Douglas:

That was a powerful cartoon.

Many thanks for sending it to me.

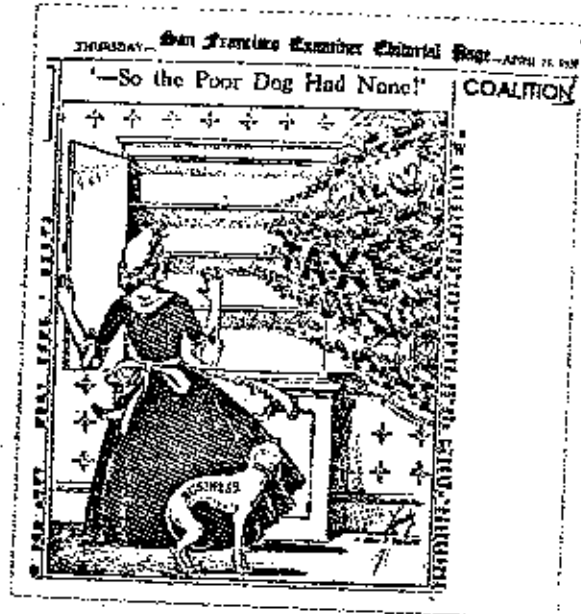
Yours faithfully,

Herbert Hoover

Mr. Leon F. Douglas
 Menlo Park, California



Save your money for a rainy day and the Government will take it away from you in taxes. What is the use of the individual working and saving if the Government makes spendthrifts of us all? And where eventually will the Government get its money? Business has tried in vain to make the Roosevelt Administration realize this fact and, even though I have been retired for many years, it gave me pleasure to help drive home this point in one of my cartoons.



Self-preservation makes tax slackers of us all, especially when the taxing power pursues us as if we were its prey. Everyone, therefore, clamors for exemption. Yet for everyone exempted, someone else must pay. The total sum demanded is in no way diminished on account of exemptions. All that results is that a larger share is demanded of those who bear the burden. Exemptions do not solve the tax problem, for nothing is really solved until it is solved right. The masses if exempt from taxes would be the objects of the munificence of the rich. The Stars and Stripes would wave above them by the grace of the few. Selfishness raises a barrier around each of us and few can see beyond it. Selfishness rules the world. All men are willing to divide with those who have less. Self-preservation is indeed the first law of Nature and no law of man can ever change it.

Two Italian gardeners worked for me. One, Melano, a hard worker, saved and bought a lot and built himself a home, working on it nights and Sundays. After he finished his own home he built another house on the same lot and rented it. He had strong social ideas and believed that everything should be divided up evenly. The other gardener, Tom, spent his money as fast as he earned it, having a good time with no thought of saving for a rainy day. Melano denied himself many things to save for his children and old age. He was telling me one day that everything should be divided equally between all people. I told him that if he really believed that he should divide with Tom, the other gardener, and give him one of the two homes he had built as Tom had none. Melano's reply was that it was a damn fool idea. I never heard from him again about dividing. His idea was simply that those who had more than he had should divide with him. It never occurred to him that he would be expected to give any part of what he had to anyone who had less than he.

What would be the inducement for one to work hard, make sacrifices and save for one's family, if he was required to give part to someone who had spent all he earned without thought for the future? Without reward there would be no incentive to work and save for those we love.

The masses continually grumble and criticize the government for the manner in which it rules. They are merely finding fault with themselves, without being candid enough to recognize their fault, or sincere enough to try to correct it. It is within



their power, however, to operate the government as they see fit, and put a stop to promiscuous spending and the future burden that it is placing upon them and their children.

They are the sovereign people. For this, they gave themselves the right to self-determination by vote. They can change every law in the land by exercising their right. Their power

is supreme. When matters are left to the votes of the people we can safely trust the majority, for it will have the best interests of all at heart. So long as this right remains sacred to the



masses and is exercised by them in a spirit of fairness, there is no more chance of a Bolshevistic revolution in this country than there is for a snowball to exist in the place which Sherman considered the synonym for war. The doctrine of the Bolshevik, like that of war, blasts all hope and gives nothing in return. The Bolshevik gives everything to the state and leaves the individual nothing. Nature, on the contrary, gives her fruits to those who labor.

With Europe again involved in war, this country is being flooded with propaganda. Countries in Europe put forth the claim that the United States in taking the land from the

Indians, was doing the same thing as the large nations of Europe in their grab of the small nations. Foreign nations would be right if their propaganda claim was true. But it is not true. Indian wars were started long before there was a United States, and they were started by the people from the nations of Europe. It was only after the United States was formed, with its liberal constitution and the inter-marriage and amalgamation of people from all nations, that the Americans became a more tolerant people, and the racial hatred and jealousies that existed among the foreign nations were no longer found here. When the United States began to see the injustice done to the Indians then some atonement was made for the wrong done them by the people of European nations. But Indians were in the most part savage tribes and it took many years to civilize, educate and improve their conditions.

All the land of the United States was acquired from foreign nations who had taken it from the Indians. The Louisiana Purchase was made from France; Texas, New Mexico and California were acquired from Mexico; Alaska from Russia; and the Northwest Territory was ceded to the United States by Spain and England.

The kindly but gullible Americans are preyed upon more than any other nation by foreign propaganda. How long before the worm will turn a somersault?

In Europe today the practice of Daylight Saving is being widely accepted and used even to the extent of being put into effect two months earlier this year. However, in this country Daylight Saving is the least understood of all our regulations for the benefit of the people. Many well-educated men do not

understand the benefit of Daylight Saving. A friend of mine who speaks seven languages fluently said that he loses an hour's sleep every night under Daylight Saving. His regular time of rising was seven A.M. and he went to bed about ten o'clock at night. When Daylight Saving came in he still rose at seven but insisted that it was six, and he went to bed at ten o'clock and insisted that it was eleven. This friend frequently made trips to New York and in four days changed his time by the clock three hours. If he rose at seven o'clock in California and rose at the same time in New York, according to the clock he would really be rising at four o'clock in the morning in California, but he adjusted the difference in time and lived by the clock without interfering with his rest and sleep. His contention that he lost sleep was silly, of course, but no more so than the farmer who says: "The good old suntime is what I want." No one in the world uses suntime.

In 1882 the railroads adopted their own time so as to better equalize the train schedule. At Lincoln, Nebraska we had a clock in the telephone office with two hour-hands, one a red and one a black. There was twenty-four minutes difference between them. If a subscriber asked the time, we replied, for example: "Ten o'clock suntime, 10:24 railroad time." After awhile the suntime was discontinued and everyone used railroad time.

If you move a step East or West you change the true suntime. Farmers say they cannot change time because the cows will not eat the grass while the dew is on it. By the clock it is the same time

west of Pittsburgh to North Platte, Nebraska, about 1200 miles, but the sun rises in Pittsburgh more than one hour before it does in North Platte. Still the farmers use the same time by the clock, but the cows eat by the sunrise and not by the clock. As a matter of fact, the farmer does the same thing regardless of what the clock says. But to those in the city, who are living by the clock, it does make a difference for they are regulated by the clock. Why not give them more daylight, more sun and added time in the outdoors for health and recreation, and also a saving of electric light bills.

CHAPTER XV

MIZPAH



After Florence was married Mother and I found the big house lonesome so we moved down to Mizpah, a near-by cottage that Mother had planned and built within an enclosed garden. When it was planned Mother thought we would use it just for a daytime retreat. We soon found that it had been so well arranged that we decided to live in Mizpah all the time and have the servants bring our food from the large house. Mizpah has been a blessing as we almost live out-of-doors and Mother has arranged an orchard of oranges, lemons, tangerines, grapefruit, nectarines, figs, peaches, cherries, plums, almonds, walnuts, pomegranates, loquats, guavas, quinces, melons, and many varieties of apples. They not only keep us supplied with fresh fruit but in Mother's kitchenette she has preserved hundreds of jars of tasty fruit.

Mother takes entire care of her Orchid House which contains many of the rarest orchids blooming throughout the year. Christmas she had more than fifty blooms and made many happy with lovely corsages. Her orchids require careful attention every day. Mother is always one of the busiest ladies, baking bread and preparing many delicacies. She is never idle from daylight to bedtime -- millions of stitches flow into lovely garments from her nimble fingers.

Much of my time has been spent in photography and in working at my various hobbies. This last year I made a mechanical moving Circus for my grandson "Billy Boy". It is in Mizpah Jr., his playhouse, and he knows all the animals by name. At Christmas time it was shown to the children at Stanford Convalescent Home who enjoyed it.



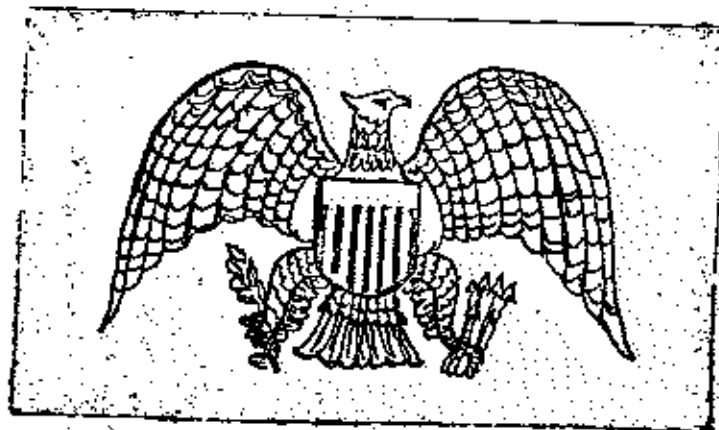
Great things seem small when they become common. The great advance in mechanics and electrical instruments has grown upon us with such a slow advance that what first awed us with a big "OH", as at a sudden burst of gorgeous fireworks, has now cooled to taking it all for granted.

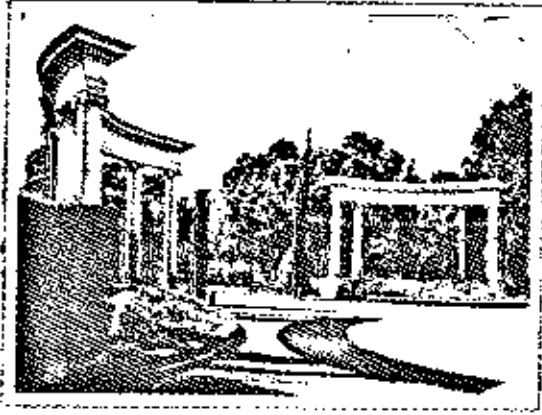
Father used to say that they are making machines do everything but talk. Then Edison invented the phonograph, Bell the telephone, and Marconi the radio -- each at first a great thrill. Since, they have become so common that they leave us cold to the magic and wonder of it all. But as marvelous as the past has been, the future holds for us greater thrills than one dreams of, and chemistry will hold not the least of the wonders you will see in the next twenty years.

In writing the happenings of the past, the wonder of it all is that we have the wand of memory and call back millions of events, acts, sights, and sounds of long ago. They are all recorded on that invisible mental record and stored for future use.

In the short span of the last eighty years much has happened, more than in the whole history of the world. From the dim candle to the brilliant electric light; from the horse to the automobile with sixty or more miles per hour; from pony express mail to the speed of the telephones, about eight times around the world in a second; from the swift flying bird to the flight of man with three times the speed; from the slow moving news that required months, even years, to reach all parts of the world, to the radio which now reaches everywhere in only a part of a second. Even telescopes have been perfected so we may now see stars billions of billions of miles away in the sky.

One could go on and on recounting the wonders of earth and sky that have blessed us and for which we pour forth our gratitude to the One from whom all blessings flow. Who can say the world just happened and no one made it with all its million mysteries far beyond the comprehension of man? Human minds have explored into nature's mysteries to the advantage of us all, but the simplest and secret work of nature -- the growing of a blade of grass -- is known only to God. Can anyone believe there is no guiding hand?







The National Encyclopedia of American Biography

Lin A. Douglass

ciations and the Racquet and Tennis Club of New York city, the Round Hill Club of Greenwich, Conn., the Blind Brook Club of Port Chester, N.Y., and the Maligane River Anglers Club of the province of Alberta, Canada. In religion he was an Episcopalian, and served as a member of the board of managers of Christodora House, New York city. Politically he was a Republican. Fishing and golf were his chief recreations. He was married in New York city, Nov. 30, 1929, to Florence (Lincoln) Rockefeller, daughter of Fretick Lincoln, a merchant of that city, and former wife of William A. Rockefeller, and had two daughters: Florence Lincoln and Anne. George A. Sloop died in New York city, May 20, 1955.

DOUGLASS, Leon Forrest, inventor and manufacturer, was born in Syracuse, Nebr., Mar. 12, 1869, son of Seymour James and Matie (Huller) Douglass and grandson of James and Mary (McClaren) Douglass. His father was a millwright and carpenter. Leon F. Douglass attended schools in Lincoln, Nebr. He was apprenticed to a printer at an early age, became a telegraph messenger boy at the age of eleven, and in 1882 became one of the first telephone operators in Lincoln. In 1884 he went to Wyming to install the electrical equipment in four hotels operated by the Union Pacific Railroad Co. in that state. He became manager of the Nebraska Telephone Co. exchange in Seward in 1886 and in the next year was made manager of the exchange in Grand Island. In 1888 he was made district manager for the Grand Island and Kearney exchanges. Douglass had meanwhile become interested in the early developments of the phonograph, and in 1889 he invented the first nickel-in-the-slot phonograph machine, the patent for which he sold to the Chicago Central Phonograph Co. for \$500. In the following year he moved to Chicago and invented the first machine for duplicating phonograph records, selling his patent for that device to the American Gramophone Co., Washington, D.C., for \$2000. He became vice-president and treasurer in 1892 of the Chicago Central Phonograph Co., but he resigned a year later to found the Chicago Talking Machine Co. to manufacture and sell his invention of the first spring-motor phonograph. In 1898 he sold that company and became associated with the Columbia Phonograph Co., Chicago. Two years later he entered the services of the Berliner Gramophone Co., Philadelphia, as general manager. Douglass experienced some difficulties with the Berliner company over patents and resigned in 1901 to become sales manager for Eldridge R. Johnson Co., Camden, N.J., manufacturers of gramophone machines. In that capacity he was in charge of sales, recording, and advertising, and it was in that period that he placed the first advertisement showing a fox terrier listening intently to a gramophone horn and bearing the legend, His Master's Voice. When Johnson later in 1901 with several associates, including Albert Middleton, Belford Royal, Charles E. Haddon, and Albert W. Atkinson (q.v.), incorporated the Victor Talking Machine Co. with an authorized capital of \$2,500,000, Douglass was one of the organizers of the corporation. He was named first vice-president and general manager, and later became chairman of the board of directors, a post he held until 1923 when ill health forced him to resign. Thereafter he held the title of honorary chairman of the board until 1926, when both he and Johnson disposed of their stockholdings in the Victor company to the Wall Street firms of J. & W. Seligman and Speyer & Co. for a reputed \$27,000,000. At the time of the incorporation of the Victor Talking Machine Co., it purchased from the United States Gramophone Co. and the Berliner Gramophone Co. the basic talking machine and recording patents of Emile Berliner (q.v.). The success of the Victor company was assured from the start, and it soon achieved the dominant

position in the rapidly growing industry concerned with the manufacture of talking and sound reproducing machines, records, and related equipment. In 1901 also, the company acquired the right to use on all Victor products the trademark, His Master's Voice, which Douglass had used in the early advertisement. A fire destroyed the original plant of the company in 1902, but a new one was built immediately. The first phonographs manufactured by the company were ungainly in size and appearance, requiring a large horn for the transmission of the sound. In 1906 the horn was enclosed with the other mechanical parts in a cabinet, and the machine thereafter was marketed under the name, Victrola. New techniques for improved recording were also being developed, and by 1903 astonishingly perfect reproduction of the voice in particular, had been achieved. As a result of the excellence of the newer methods of recording developed by Victor, operatic stars, famous violinists and pianists, and symphonic orchestras placed themselves under contract to reproduce their performances exclusively for Victor records. Through the ensuing years the Camden plant became the largest talking machine factory in the world, comprising thirty-three large fireproof buildings, with fifty acres of floor space. Branch plants were maintained in Oakland, Calif., and Buenos Aires, Argentina, and the American company owned the entire stock of the Victor Talking Machine Co. of Canada, Ltd., and 50 per cent of the stock of Gramophone Co., Ltd., London, England. In 1926 the company acquired the entire capital stock of its wholesale distributing agencies, the New York Talking Machine Co. and the Chicago Talking Machine Co. When Douglass sold his holdings in July, 1926, the Victor Talking Machine Co. had grown into a \$50,000,000 corporation and Victor records, with vocal music being recorded in forty languages, were going by the millions to every civilized country, carrying the works of the great composers and the performances of the foremost artists into countless homes. During the intervening years, Douglass had been applying his inventive ability to a number of other devices besides those for the phonograph industry. Included among these inventions were the first snap lighter, the zoom lens for motion picture cameras, a number of modifications and improvements in electrically recording sound, a submarine camera that would take pictures at a depth of five miles, an underwater movie camera, and apparatus for producing trick and unusual effects in motion picture photography, particularly in the areas of stereoscopic and panoramic photography. He also did extensive work in natural color motion picture photography. Starting his initial experiments in that field in 1912, he patented in 1916 the first successful process for making movies in natural color. This process later formed the foundation on which technicolor photography was based. His last invention was a device to indicate the spot in the ocean where a ship, plane, or balloon had sunk. During the First World War he perfected a magnetic torpedo which the U.S. Navy used against German U-boats. He also at that time donated his natural color invention to the American Red Cross. Douglass was a member of the Bohemian and Family clubs of San Francisco. Politically he was a Republican. Until the end of his life his most absorbing interest was experimenting with new devices in his home laboratory. He was also interested in the welfare of young people. While a resident of San Rafael, Calif., he purchased the entire bond issue for the municipal bathing pavilion and donated bathing suits and the services of a swimming instructor, asking in return only that all under the age of eighteen might be permitted to swim there once a week. Douglass was married in San Francisco, Calif., Feb. 10, 1897, to Victoria;

daughter of Daniel Elias Adams, an American who had settled in Lima, Peru, and had six children; Leon Forrest; Dorothy Victoria; Earl Seymour; Eldridge Adams; Ena Lucile, who married William McNabb; and Florence Carol, who married Lawton William Langdon. Leon F. Douglass' death occurred in San Francisco, Calif., Sept. 7, 1940.

HULETT, George Augustus, chemist, was born in Du Page Township, Will Co., Ill., July 15, 1867, son of Frank Amos and Lois (Holmes) Hulett. His first paternal American ancestor was John Hulett, who came to this country from England in 1740 and settled in Scituate, Providence Co., R.I. From him the descent was through Mason and Elizabeth Mathewson, Amos and Hannah Williams, and Feustus and Amanda Norton, the grandparents of George A. Hulett. His father was a rancher. The son attended Oberlin College during 1888-90, was graduated B.A. at Princeton University in 1892, and received the Ph.D. at the University of Leipzig in 1898. Meanwhile, during 1892-96 he was assistant in chemistry



at Princeton University. He became instructor in physical chemistry at the University of Michigan in 1898, and he was advanced to assistant professor at that institution in 1904. In the following year he returned to Princeton University as assistant professor of chemistry, and in 1909 he became the first professor of physical chemistry at Princeton, retiring from that chair as professor emeritus in 1935. In the course of his scientific career Hulett devoted much of his time to research and experimentation. While at the University of Michigan he was the first to demonstrate the increased solubility of very fine particles, which was of great importance in analytical chemistry and in studying the properties of solid surfaces. He also revealed the importance of the chemical concept of hydrolysis of salts in the preparation of precision standards of measurement of electromotive force. At Princeton University he continued these experiments in electrochemistry and constructed hundreds of standard electrochemical cells, maintaining a record of each cell's performance over a period often exceeding twenty-five years. In the course of

time this cumulative body of data on electromotive force and the properties of cells became a standard reference for other workers in the field. Among his other discoveries was a novel method of using phosgene for the removal of iron oxide from glass sand, a process which had many possible industrial applications. At Princeton he was also a leading proponent of new and improved laboratory facilities as early as 1916, and his recommendations were later realized in the construction of the Frick Chemical Laboratory on the campus in 1929. In addition to his responsibilities in teaching and research, Hulett served the federal government in a number of capacities in the course of his career. In 1906 he was a member of the U.S. Assay Commission. In 1912-13, while on leave of absence from Princeton University, he served as chief chemist of the U.S. Bureau of Mines. For some years he was also consulting chemist for the U.S. Department of the Interior and the U.S. Department of Agriculture. Following the entry of this country into the First World War, he was sent abroad as a member of the American Scientific Mission, a special foreign service commission comprising six scientists appointed by the Council of National Defense and the National Research Council to study the organization and development of scientific activities for waging war. In that capacity he spent four months on the French and English battlefields, giving special attention to the use of noxious gases in warfare. He then served as consulting chemist at the headquarters of John J. Pershing (q.v.), working on the organization of the chemical division of the AEF in connection with gas warfare. Upon his return to this country he organized a research group at Princeton University to study chemical problems related to the war, especially the physical properties of possible gas mask absorbents, such as charcoal. This investigation uncovered a number of new facts regarding the absorption of gas by charcoal. In 1923-24 he served as a member of the New Jersey commission on workmen's compensation for occupational diseases, by appointment of the governor. During this period and in later life he was frequently called upon to give expert testimony on chemistry in court cases. In 1928-29 he was chairman of the division of chemistry and chemical technology of the National Research Council, Washington, D.C. He also served as chairman of the division on the origin and classification of coal at the International Coal Conference held in 1931 in Pittsburgh, Pa. Hulett was the author or co-author of more than eighty articles published in the scientific journals of this country and Europe. Among these were "Preparation of Materials for Standard Cells and Their Construction" (with H. S. Cahart, *Trans. Amer. Electrochem. Soc.*, 1904), "The Solubility of Gypsum as Affected by Size of Particles and by Different Crystallographic Surfaces" (*Jour. Amer. Chem. Soc.*, 1905), "The Cadmium Standard Cell" (*Phys. Rev.*, 1906), "Method for Preparing Standard Hydrochloric Acid Solutions" (with W. D. Bonner, *Jour. Amer. Chem. Soc.*, 1908), "A Reduction of Ferric Sulphate in Acid Solution by Means of Cadmium Amalgam for Titration of Iron and Free Sulphuric Acid" (*Jour. Phys. Chem.*, 1913), "Studies on the Silver Voltmeter" (with G. W. Vinal, *ibid.*, 1913), "Some Properties of Graphite" (with R. M. Burns, *Jour. Amer. Chem. Soc.*, 1923); and "The Role of Finely Divided Mercury in the Depolarizer of the Standard Cell" (with R. B. Elliott, *Jour. Phys. Chem.*, 1933). He also served as associate editor of the *Journal of Physical Chemistry* from 1923 to 1927. Hulett was a member of the American Chemical Society, American Electrochemical Society, American Physical Society, American Philosophical Society, the National Academy of Sciences, the Chemists Club of New York city, the Nassau Club of