ELECTRIC BOATS.

USES FOR ELECTRICITY AS IMPORTANT ON WATER AS ON LAND.

Electric Ferryboats, Canal Boats and Ships Likely to Come Into Use—Opinions of a Prominent Electrician.

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"One of the most important, and at the same time least noticed, departments of electric science is that which has to do with aquatics." This statement is made by Thomas Commerford Martin, author of "Electric Boats and Navigation." Mr. Martin has considered the subject from all its standpoints. Hence, he is competent to speak. Thus beginning a conversation with the reporter Mr. Martin continued:

"I think it can be said that we are in the middle of a swift evolution of electric boat building. Thus far the greatest advance in the electric boat building has been made, I suppose, in the line of the launch. Its greatest exemplification was witnessed at the Chicago Exposition, where electric launches were the most popular boats on the lagoon. Some of these boats have since been shipped to Venice, and there are now regular electric passenger boats plying the Grand Canal. John Jacob Astor has several electric boats, notably the cruising launch Progreso, and the smaller Cocyra. The Progreso is the largest electric boat in America. She is forty-six feet long, and can develop a speed of twelve miles an hour. It is understood that Mr. Astor contemplates building a still larger electric boat.

"Aside from pleasure boats, the greatest use to which electric launches can be put is as small boats for our men-of-war. The lines of Mr. Astor's Cocyra were so successful that they were adopted by the American and Russian naval authorities. While the Grand Duke Alexis of Russia was at Rhinebeck, on the Hudson, he was much struck with an electric launch which the United States Government had just completed for the cruiser New York. The Navy Department, out of compliment to the Grand Duke, presented the launch to him, and constructed a duplicate for the New York. It is now a feature of the Russian navy. The British Government owns an electric boat which it uses as a ferryboat on the Medway, between Sheerness and Chatham.

"All these boats get their power from storage batteries which are concealed under the seats. They therefore carry their power with them. The electricity is conveyed to a motor which in its turn works a propeller. The French inventor, Trouvé, has made an ingenious arrangement which is a rudder, propeller, and motor combined. The motor is situated on top of the rudder. The propeller, connected by an endless chain to the motor, is located in a large slot cut through the rudder itself. It will fit any boat. It is only necessary to drop it into the pin sockets and it is ready to take a supply of current.

"It is barely possible that we may yet go down to the sea in ships that are propelled by electricity, electricity which gets its being from the ocean itself. The generating quality of sea water led M. Trouvé to suggest that ships might be worked by primary batteries whose elements will be dipped in the salt water, the water to act as an electrolyte. It would be curious if the ocean water was made to supply the very energy that would propel vessels over its surface. Trouvé designed a raft-battery consisting of copper and zinc couples, grouped so as to obtain the requisite power. He estimated that from a raft 100 metres long and 16 metres wide, he would obtain over 5,000 horse-power.

ELECTRIC SUBMARINE APPLIANCES.

"Perhaps we have learned more of the real character of the ocean bottom since the introduction of submarine boats than ever before. The modern diving bell boat is only possible with electricity. The introduction of the current has opened up a new field, and both in the line of scientific investigation and in the art of war we have much to expect. The diving boat Hovgaard, invented by Lieut. Hovgaard of the Royal Danish navy, is an instance of what has been suggested. This boat is fish-shaped and is propelled when on the surface by steam power and by storage battery current when submerged. Her submergable quality is obtained from a propeller placed in a vertical well going right through the centre of the vessel. She is a torpedo boat, of course, and warfare is her excuse for being. The Waddington, the Peral, the Gymnote, and the Goubet are all types of the electric torpedo boat, with which the public is tolerably well familiar.

"The Baker submarine electric boat, the invention of a Chicagoan, is another of this class, interesting because it is American and because the Navy Department has made tests of its capabilities. The French Government ordered a submarine boat to be built expressly for the purpose of destroying submarine mines. She is remarkable in that she is driven by a motor taking current from a primary battery. I have heard nothing regarding her performances, but it is hard to obtain information of this character any way. Governments do not always care to make public the results of tests. Other Governments would be apt to take advantage. But perhaps the most interesting submarine boat, from a popular standpoint, is the Audace, launched at Foce, Italy, by a Roman company for the recovery of treasure from the ocean bottom. It is said she can descend 600 feet, a remarkable distance for a submarine boat. How she does it is a mystery which her owner proposes shall remain undisclosed. Five men may descend in her, and she has a door fitted to one of her compartments through which divers may pass without admitting a quantity of water. It is also said that her owners will go into the business of repairing bulls, fishing for pearls, and other pursuits of a like nature as well as recovering treasure.

THE TORPEDO AN ELECTRIC BOAT.

"I suppose you might call a torpedo an electric boat. Strictly speaking, it is a projectile, worked by an electric current and controlled in most cases from a ship or from the shore. Torpedoes are too well known to the general public to admit of much discussion. The Sims-Edison, Lay-Haigut, and Nordenfelt are all types. A remarkable one is the Victoria, which, instead of being launched from the shore, is attached to a buoy. The buoy may be located two or more miles off shore, but the torpedo when released starts off and is worked from that point. The buoy, in its turn, is worked by cable from the shore, so that a respectable number of miles may lie between the operator and the ship he is trying to wreck.

"One of the best uses to which the dirigible or shore-controlled torpedo has been put is as a life-saving device. The Hibbard life-saving torpedo is practically an electric float, capable of being propelled and steered from shore. It carries a powerful electric lamp on top, and can be sent out past boiling surf to a distressed vessel, carrying light and succor to the shipwrecked. Something of a similar nature is the electrically lighted life buoy invented by Capt. Meiter of the German navy. It is not always possible to follow the line of "man overboard" with the instant cutting away of a buoy. Hence the man in the water is often unable to perceive at night that a buoy has been thrown; or, supposing he does and reaches it, the resculing boat is often unable to find him when he is too weak to cry out as it approaches. The electric buoy will obviate most of the difficulty by being an illuminated target for both man and boat.

MOORING AND MOVING BOATS BY ELECTRICITY.

"What would you say to mooring a boat by electricity? That is one of the things which will be done by means of the current. Have you ever been on a ferryboat and experienced the agony of waiting while the boatman tried to see how long he could be winding the windlass? Everybody has. Now, by taking advantage of the principles of magnetism, we may do away with all this. It has been suggested that a series of powerful electro-magnets be arranged on a ferry slip, so that a boat having large pieces of iron affixed to the bow will be strongly attracted. Or the wharf itself could have the iron piping placed upon it, and the magnets on the boats receive their energy from the dynamos in the regular lighting equipment. It is feasible.

"Speaking of ferryboats reminds me that these craft will now be worked by electricity. The single machine on board will be a motor connected to the propeller. The electric current will be generated on shore and transmitted to the motor on the boat through a cable dangling along under water after the boat. The cable will just reach across the river, and is wound and unwound by means of a spindle as the boat goes backward and forward. There are ferries worked by electricity obtained from a cable stretched through the air under a bridge. The boat might be called a trolley boat, as its action is identical, electrically, with that of a trolley car. Such a device naturally brings us to that more recent, but much more important, branch of electrical aquatics. I refer to the electric canal boat. No other department has had more discussion than this.

THE ELECTRIC CANAL BOAT.

"The vast influence of the canal from the commercial viewpoint makes a general introduction of electricity on it an important question. There are from 12,000 to 15,000 miles of canals in Europe. There have been 4,468 miles of canals in the United States. More than 2,000 miles are still in use. One canal boat will carry as much as ten to twenty freight cars, and, even allowing for the difference in time consumed, the cost is very much less by canal than by railroad. These figures are important, inasmuch as they represent facts already laid down. The early canal boats were pulled by slaves. Mule power was afterward substituted, and has continued until the present time, when it is proposed to introduce electricity.

"Some people may remember the official trials of the Frank N. Hawley on the Erie Canal. The Hawley was a trolley boat. But, while the trolley boat has some excellent features, it has some drawbacks. Various methods have been devised. One is the use of a false stern, containing a motor and propeller, which can be placed on any canal boat. The current is supplied by a cable along the side of the canal. This cable has a trolley-wheel truck running on it. A flexible wire connects it to the canal boat motor. If current is to be obtained in this manner, however, it is generally conceded that a regular system of tug propellers should be used, each tug carrying along with it a string of boats. Another electric device sucks water through the hull of the boat and projects it out at the stern with such force that the boat is propelled forward. In France there is a system which provides for a cable lying in the canal. The boat has electric machinery which grips the cable tightly, and by means of revolving drums pulls itself along. A movable cable travelling on large drums or pulleys along the canal bank has been used. The canal boatman attaches a hawser to the cable, and the boat, consequently, is pulled along as the cable moves. It has been suggested, also, that we pull the boats in series by means of locomotives running along the canal banks.

"The most ingenious method of all, perhaps, is that which calls for the erection of a double rail along the canal bank. The rail carries a current of electricity and at the same time serves as a track on which runs a small motor. It is merely necessary to run a line from the boat to the motor. The motor runs along of itself and drags the boat after it. This method, or others analogous to it, may be strongly commended, because there is no propeller to cause the water to wash away the canal banks—the great objection to steam canal boats.

"The introduction of electricity on canals has another advantage—the illumination of the towpath; quite an important element in furthering the operation of the canal. I notice that the Baltic Canal is to be equipped with 25,000 incandescent lamps. The Manchester Canal is illuminated, and so will be the proposed ship canal from Mobile to the Gulf of Mexico."

NOTES ON SCIENCE AND INDUSTRY.

After numerous experiments upon alloys of aluminum, it has been found—as reported in *Dingler's Polytechnic Journal*—that one composed of from 92 to 96 per cent. of the latter metal and 4 to 8 per cent. of nickel is particularly valuable, since it possesses greater hardness than the pure metal without being brittle; it is found to be well adapted for the manufacture of small articles of jewelry, &c. These alloys of aluminum, copper, and nickel are remarkable for their beautiful color, the ease with which they may be polished, and their excellent degree of hardness; and in order to restore their metallic aspect, it suffices to simply immerse them for a few seconds in a ten per cent. solution of caustic soda, wash them, and then immerse them in a mixture composed of three parts of nitric acid and two of sulphuric. A solder for use with aluminum or aluminum alloys is also proposed, viz., by mixing silver, nickel, aluminum, tin, and zinc, in the following proportions: Two per cent. silver, five per cent. nickel, nine per cent. aluminum, thirty-four per cent. tin, and fifty per cent. zinc; no flux is necessary, and an ordinary soldering iron or tool can be used.

A well-known Austrian engineer, M. Pfister, is announced as having discovered a remarkable property of the trunks of trees, namely, that of retaining the salt of sea water that has filtered through the trunk in the direction of the fibres. He has consequently constructed an apparatus designed to utilize this property in obtaining potable water for the use of ships' crews. This apparatus consists of a pump, which sucks up the sea water into a reservoir and then forces it it into the filter formed by the tree trunk. As soon as the pressure reaches 1.5 to 2.5 atmospheres the water is seen—at the end of from one to three minutes, according to the kind of wood used—to make its exit from the other extremity of the trunk, at first in drops and then in fine streams, the water thus filtered being potable, freed, in fact, from every particle of the usual saline taste which is such a drawback to water obtained in the ordinary manner.

A unique kind of "wood pile" is described as having been resorted to in one of the Lead City gold mines. It is composed of timbers about the size of railroad ties, which are used in supporting the walls and roofs of the drifts and tunnels of the mines. A narrow gauge railroad brings the logs, which have been sawed flat on two sides, to a point on the mountain slope about six hundred feet above the valley, and they are then thrown into a wooden chute about four feet wide and two feet deep, the inside surface being kept smooth and slippery by a small stream of water. The point considered is that if the logs were allowed to run directly to the ground they would speedily excavate an enormous hole, besides damaging themselves, so the lower end of the chute is curved upward, and the logs leave it at an angle of about sixty degrees with the horizontal, and rise from 150 to 200 feet in the air, turning over and over and finally landing on the enormous pile already there. A useful outcome also accompanies this method, namely, the logs sort themselves in the pile according to their size—that is, the heavier ones, having a greater momentum, are all found at the side furthest away from the chute.

An interesting discussion has for some time been going on as to whether repeated vibrations of iron and steel change the molecular structure and produce rupture of those metals. Some of the most experienced metallurgists are of the opinion that a fracture caused by repeated strains is the result of a change in the structure, and particularly that fibrous wrought iron is transformed into granular under continuous shocks, while others regard such an opinion as entirely erroneous. Numerous experiments instituted by so practical an operator as Badelinger of Munich, in which bars of iron and steel were submitted to repeated shocks, lead him to the conclusion that strains of iron and steel repeated frequently, millions of times, bring about no change of structure. Reference is also made to certain experiments by which a bar of wrought iron made to show in two fractures only a few inches apart two distinct sources of fracture, the one sharply crystalline, the other fibrous, dependent simply upon whether breaking force was a sharp blow or a slowly applied load. Another authority points out that crystalline appearance on the fracture is caused by the manner of breaking; that is, transversely broken fibres show granular crystalline faces, but, when pulled apart longitudinally, the same iron will show a fibrous structure. Again the iron in a bar may be crystalline at one point and fibrous at another.

A singular fact is recorded in the *Moniteur Industriel*, namely, that on the shores of Brittany, between St. Malo and St. Lunaire, in the vicinity of the St. Enogat station, at a place called Port Blanc, the tides have lately displaced a considerable amount of sand, say to a depth of some nine to thirteen feet. Accompanying this remarkable phenomenon is the fact that forests known to have been buried for periods covering some eighteen or twenty centuries have now been brought to light, and a vast forest has, it appears, been discovered in process of transformation into coal; ferns and the trunks and barks of trees are to be seen in an advanced state of decomposition, being already beyond the peat formation, showing, in fact, the films and flakes which are found in coal, and, while some of the trunks are sixteen feet in length and still very distinct, they are becoming rapidly transformed.

In his new process of obtaining products from tar Stringfellow of London claims to insure the best results in a strikingly simplified manner. The tar, say one ton to be treated, is put into a suitable vessel, and about one per cent. of an alkali or other saponifying agent is then added, and the compound well mixed with one ton of water. Before the water has time to separate from the tar, about one-fifth of a ton of petroleum oil of 0.820 specific gravity is added and slowly stirred into the tarry mixture until the free oil becomes of a reddish color. It will then be found that the compound has been separated into three parts, namely, a red, oily extract of light gravity, not mixable in water; a substance of soft unctuous pitch, containing some water and resembling Stockholm pitch in appearance and general characteristics; and a discolored watery liquor. While the separating action is progressing, the light, oily extract and the water can be drawn off, so as to promote the exudation from the pitch which remains in the vessel.

It is found that dry charcoal, when the heat is removed from it, being nearly pure carbon, will absorb oxygen from the air under favorable conditions so rapidly as to produce active combustion, that is, a glow or flame. Now, the process of the origin of a fire from a steam pipe has been thus explained, viz.: The heat from a steam pipe will, in course of time, char or carbonize wood in contact with or close to it, and, when this charring process extends to any depth in the wood it presents a surface full of fissures and cracks, thus exposing a large section to the air, this charring driving the oxygen out of the charred portion and keeping it out while the heat is kept up. When, therefore, the heat is removed, the charcoal reabsorbs oxygen from the air, and if the action is rapid enough in a dry atmosphere combustion follows.

A novel kind of street railroad track has been constructed for one of the lines in San Francisco. Ties, as described in the *Engineer*, are laid after the manner of ordinary work, and earth and fine broken stone rammed in between until flush with their tops; the rail is a Z rail, but inclined inward in the same way as a slot rail, and about every six or eight feet a bar is bolted to the rails to preserve the gauge. Upon the top of the ties and the surface formed by the rammed earth are laid five inches of concrete brought to a smooth, true curve on top, with a crown of about one inch, and upon this is laid an inch of sand, and then the paving blocks are put in, the latter being nearly cubical and soaked in hot coal tar; the blocks on the the inside, next the rail, are shaped to permit the flange of the wheel to travel, and all the blocks are so laid as to present no wide joints, the appearance at a little distance being that of an asphaltum pavement; vehicles can cross the track at any angle without in any degree twisting or wrenching the wheels.

THE SEASON OF MOVING.

NOW THE CRASHING OF CROCKERY AND FURNITURE IS HEARD.

Many Varied Discomforts Incidental to the Process in the City—It's a Bit Worse in the Country—The Bachelor's Moving.

This is the season when the mighty van rumbles through the city streets, and sidewalks are piled high with household goods; when the sign "Flat to rent" flaunts in the face of the public from every other building; when the sound of shattering furniture and crashing crockery is heard abroad in the land, and the ordinarily respectable citizen goes to his office three hours late, with his clothes full of holes, his hands full of splinters, and his heart full of wild, fierce oaths. All this because the season of moving has come.

Undoubtedly, even in this busy and crowded city, there are people who can break up housekeeping in one place and take it up in another with comparative comfort and despatch. Once in a blue moon you see them; he with a few bundles in his arms, but still properly clothed and in his right mind; she with her pets, that may not be intrusted to alien care, watching with the consciousness of difficulties well surmounted the big wagon that is transferring their lares and penates to a new shrine. But this kind is rare. To the average couple breaking up housekeeping consists in breaking up all of the articles used in housekeeping and then endeavoring to make use of the pieces in the new house. The misery is about equally divided between wife and husband, he, perhaps, getting a

TO PASTURES NEW.

little the worse of it, because he suffers more from the tyranny of the moving-van men. Not that she escapes entirely. When the last Saratoga is filled several inches above the brim the burly destroyer of households comes up to strap the trunk.

"You'll have to shift some o' them things, mum," he declares. "They ain't room fer 'em all in that trunk."

"All the other trunks have gone," she replies despairingly; "we must get this one closed in some way. Now, I'll stand on it and you pull the strap."

Thereupon she mounts upon the trunk and goes through a performance suggestive of the actions of the jumping beans in shop windows, with a view of reducing that trunk to submission by virtue of mere avoirdupois.

"You ain't doin' no good by them fancy steps, on'y smashing your trunk," is all the comfort she gets from the man.

Then, just to show the dire effects resultant upon disregarding his admonitions, he seizes the strap, gives it a mighty pull, and the trunk slowly goes shut to the sound of a series of heart-rending scrunches, presaging weeping, and wailing, and gnashing of teeth when it shall be opened.

Meantime the head of the household is being instructed by a young man with an imported countenance who has him anchored to one end of a chest.

"Kape to yure right, will yez. Yez haven't missed bunkin' into a corner sence we started wid this. Can't yez hold yure end up? Av yez can't lift wan end av a bit av a box, wait till Tim comes down from above wid the help fer me."

This last is given with such biting sarcasm that the unfortunate head of the house sticks to the job just one point beyond the limit of endurance and presently gives way as to his knees. Then the mover makes remarks of contemptuous surprise, and the cook, who has just entered to protest against the performances going on in the kitchen, elevates her nose in disdain at the unholy remarks of her employer.

ACTING AS AVOIRDUPOIS.

Undoubtedly the cook's protest, which comes after the storm has subsided, itself profanely into silence, is not without good grounds. It is bad enough, as she observes, for a lady to have her kitchen table turned upside down by a smudge-faced man, and filled with everything said man can lay his hands on, preparatory to being carried away, but when the aforementioned lady discovers the wreck of her spring bonnet among the ruins, and furthermore gets poked in the eye with a leg of the table by reason of the bearer turning precipitately upon hearing her shriek of despair, and no wonder, for that bonnet cost all of $3.37 at Duffy's bargain counter around the corner, barring a bit of a feather bought extra to give it a distinguished appearance, it is high time she gave warning, and that is the reason of her appearance. That is another of the delights of moving.

By the time the couple, with the aid of the movers, have smashed everything breakable, and crushed everything else out of shape in trunks and boxes, to be subsequently mal treated in the van, they are utterly exhausted

ONE WAY OF USING A TABLE.

and glad to stagger to the sidewalk to get a breath of air amid the remains of their goods strewn about with the picturesque effect that attaches to all ruins. There the head of the household sees in front of the new, house, Brownsmith, his neighbor, and Mrs. Brownsmith surrounded with bundles. Brownsmith being a man of quick perceptions and deep penetration, casts a comprehensive glance over his fellow-unfortunate's chattels and asks in surprise:

"Ah, old man, not moving, are you?"

"No," replies the head of the household; "oh, no. I just brought these few articles out here for the sake of the exercise. I'm going to take 'em back in again presently. From your general appearance, and the fact that you've got that devil-bird of yours under one arm and lot sixteen, consisting of three curtain poles and a bird seed a spring overcoat, as the auctioneer says, I am led, following your process of deduction, that you are either going fishing or have been suddenly called to the bedside of a dying relative."

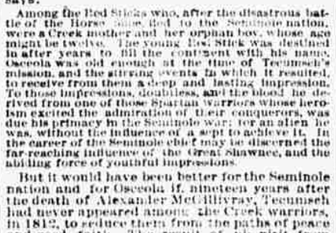
That makes Brownsmith mad, and they exchange unpleasant remarks, verging into veiled threats, while their wives endeavor to restrain them. Moving isn't good for the temper.

While city moving is excitement enough for the ordinary individual, it lacks some of the elements of adventure that attach to leaving the city for a suburban home. It always rains

THE SIDEWALKS OF NEW YORK.

when people move to the suburbs, and the carriages are never on time. Finally the unfortunates start to walk to the new home, and wait there all day for the vans, which are always delayed. Then they return to the city to try it again next day. Result, asthma for pater familias, grip for mater familias, sore throat and croup distributed among the children, and a week's warning from the cook. It is cheaper not to move than to pay doctors' bills.

Quietest, if not cheapest of all, is the bachelor's moving. It is in three parts. Part I. consists in tearing up all the carpets and tearing down all the pictures and hangings and jamming them, along with all the small articles and bric-a-brac available, into trunks, jumping energetically upon them as a means of compression. Part II. is the jumbling together of all the furniture and leaving it in a picturesque pyramid to the tender mercies of the movers. Part III. is hiring the men to transfer the articles. Then



THE LAST OF IT.

the bachelor, having done all this in about one day, stands on the sidewalk looking after his departing goods, weary but full of self-approval at a good day's work done, until there comes to him with a shock the sudden realization of the fact that his last collar, and nobody to iron it for him, he had carefully left out of the trunks, have been caught up in the shuffle and are being borne away in the moving van now turning the corner.

OSCEOLA.

A Visit to the Lonely Grave of the Great Seminole Chief.

On Sullivan's Island, within the sandy enclosure of Fort Moultrie, in Charleston harbor, guarded by Castle Pinckney on the one hand and Fort Sumter on the other, sleeps Osceola, one of the fiercest children of a fierce race. The March winds whistled a dirge and the sea fowls screamed as I stood beside the tomb of the great Seminole and gazed upon the endless blue of waters and of horizon, with my arm resting upon a dismantled gun whose voice once shook the deeps. Now it was as silent and as harmless as Osceola.

What a life of romance this strange man lived! And he was as true to his education and his nature as the needle to the pole. He could not have been other than he was. Campbell, in his "Historical Sketches of Colonial Florida," says:

Among the Red Sticks who, after the disastrous battle of the Horse Shoe, fled to the Seminole nation, were a Creek mother and her orphan boy, whose age might be two or three years. The Red Stick was destined in after years to fill the continent with his name. Osceola was old enough at the time of Tecumseh's mission, and the stirring events in which it resulted, to receive from them a vivid and lasting impression. To those impressions, doubtless, and the blood he derived from one of those Spartan warriors whose heroism excited the admiration of their conquerors, was due his primacy in the Seminole war; for an alien he was, without the influence of a sept to achieve it. In the career of the Seminole chief may be discerned the far-reaching influence of the great Shawnee, and the abiding force of youthful impressions.

But it would have been better for the Seminole nation and for Osceola if, nineteen years after the death of Alexander McGillivray, Tecumseh had never appeared among the Creek warriors, in 1812, to reduce them from the paths of peace and gain faith. The result of his visit from Detroit, instigated by Tecumseh, was the massacre of Fort Mims by the Red Sticks, who were so called to distinguish them from those warriors who were for peace, in August, 1813, which sealed the fate of the Creek nation, and its offshoot, the Seminole nation. The peaceful conquests of McGillivray were more glorious than the disastrous campaigns of Osceola, the greatest of the Red Sticks.

Osceola was born in Georgia, in 1804. His father was an English trader named Powell, and his mother was the daughter of an Indian chief. He went to Florida with his mother when he was about four years old and settled near Fort King. He was of medium size, being about 5 feet 8 inches in height. His bearing was resolute and manly, and his countenance was frank and engaging. He soon became a favorite with the tribe and exercised a commanding influence. In 1835, while on a visit to Fort King, Osceola's wife was claimed and seized as a slave and carried off as such. Because of the strong manner in which he resented this and other injuries he had received, Gen. Thompson had Osceola arrested, put in irons, and imprisoned. He was not kept long in confinement, however. He determined to have revenge, and waited patiently for his opportunity. It came Dec. 28, 1835, when, finding Gen. Thompson outside of the fort, he fired upon him and his escort, killing and scalping the General and four other white men. This was the beginning of the second Seminole war. The Fort Dade massacre took place on the same day. Major Dade commanded a force of 110 soldiers, of whom only seven were slaughtered and scalped. Osceola was to have led the Indians in this attack, but the affair of Gen. Thompson prevented. He, however, took command of the red and black men who had several shot the massacre. On Dec. 31 Osceola, with 500 men, encountered Gen. Clinch with 800 soldiers, at the crossing of the Withlacoochee River. The engagement, which lasted an hour, was stubbornly contested, when Osceola drew off.

For upward of a year Osceola prosecuted the war under the direct disadvantage. At no time did he have more than 2,500 warriors in the field, covering a wide stretch of country, while the American force was fully 10,000, commanded from time to time during the year by at least eight distinguished Generals. These were Gens. Jesup, Hernandez, Nelson, Eustis, Gaines, Scott, Taylor, and Call. If the forces and equipment had been equal the war might have had a different result.

Osceola had gone into the war because of injuries which no brave man would tolerate. His capture was reprehensible to the last degree; while holding a conference with Gen. Jesup, under a flag of truce near St. Augustine, Oct. 31, 1837, Osceola was seized with several of his followers and sent to Fort Moultrie, where he became dejected and died in a few weeks in the thirty-third year of his age.

The last of the Seminoles are hastening to the happy grounds. Only here and there can one be seen in south Florida. The forests have been felled, and the violet and the rose now bloom where noxious weeds once choked up the way. Even the Everglades are being drained and reclaimed to the higher uses of man, while the solitary descendant of Osceola's race passes by like a shadow and will soon be seen no more forever.

T. THOMAS FORTUNE.

ON THE STAGE 58 YEARS.

C. W. COULDOCK'S REMINISCENCES OF HIS LONG CAREER.

The Warehousemen Who Helped Him to Become an Actor—Hardships of the Early Days—His Best Characters and the Famous Actors with Whom He Has Played—Opinions of the Drama To-day.

Fifty-eight years on the stage is the record of Charles W. Couldock, and, with one exception, he is the oldest actor in the English-speaking theatrical world. There is a member of Henry Irving' company, Henry Howe, who was born in 1812 and is three years older than Mr. Couldock, but here in the United States there is no player who can equal the long active service of Mr. Couldock, or the eighty years he reached on March 26 last. A talk with him seems to link one with every period that has been notable in the dramatic annals of this country and recalls events which seem too remote to have been participated in by so hearty a person as Mr. Couldock is to-day. His associates in England were Charles Kean, Mme. Vestris, Vandenhoff, and Mme. Celeste, but before he came into the sphere of people so famous he had acted in barns and walked between the

C. W. COULDOCK.

small towns in which he played. His career in this country began in 1849, when he acted with Charlotte Cushman in "The Stranger." That was forty-six years ago, and ever since Mr. Couldock has been continuously on the stage. He appeared here last in October in "New Blood" at Palmer's Theatre."

Barring a slight deafness which has deprived him of the pleasure of going to the theatre, the is old actor still vigorous and his memory is remarkable for its power of recalling details. Incidents of the beginning of his career are still as fresh in his mind as though he were only commencing his stage life instead of drawing near its close. It is a pleasure, too, when he speaks of the stage to-day to hear the generous, optimistic views he expresses. There is none of that captious faultfinding which often comes from the old timers. He finds the stage generally improved, and he is glad to acknowledge the fact and explain what to him seem the reasons for it.

Most of the younger generation of theatregoers made the acquaintance of Mr. Couldock when he was playing the father, *Dunstan Kirke*, in "Hazel Kirke," at the Madison Square Theatre in 1880. But that was the beginning of the end of his career. The actor was born in Long Acre, London, in April, 1815. He was educated by his aunt, and when he was 13 years old he was placed in a warehouse and supposedly began a commercial career. He went occasionally to the theatre, but it was not until he had seen Macready in Lord Byron's "Werner" that he determined to become an actor himself. The announcement of this intention horrified his aunt, and he remained at business, but spent as much of his time and money at the theatre as he could spare. He said no more about his aunt about going on the stage, but joined the Aldersgate Institute.

"The students used to recite before each other two or three times a month," said Mr. Couldock, "and mighty good exercise it was for us. There was a secretary who would call a meeting to order and announce the boys who were to recite at that meeting. Then the speaker would recite, and when he had finished he would take a seat on the stage, while the boys would rise in their seats and give their opinion of his performance. They were never shy about speaking their minds, and the exercise was very instructive even if the criticism was likely to be a little outspoken. I spoke a good deal, and had made quite a reputation among the members of the institute, who were mainly young warehousemen like myself.

"On my twenty-first birthday my aunt died, and I decided that as there was nobody left who objected to my becoming an actor, I would go on the stage. A friend who worked in the same warehouse with me knew a man who in turn knew an actor named Burton who used to play second old man parts at the Sadler's Wells Theatre. This actor was about to have what was then called a ticket night, which meant that he got half the money taken in for tickets. We got a letter of introduction to Burton, and when I agreed to take £10 worth of tickets for his benefit, he allowed me to perpetrate 'Othello.' He told me to select whatever role I wanted, and as I had been trying *Othello* on the boys at the institute, I chose that role. I must have made a dreadful performance, but the house was crowded and the enthusiasm something I had never seen excelled. All the warehousemen in the city were there, and they applauded whatever happened. I had only to open my mouth and the applause would begin. It was that enthusiasm, though, that kept me on the stage. After the performance, I found the greater part of my audience waiting for me at the stage door. They marched me to a tavern in the neighborhood where we had speeches and ale, and finally a committee was formed which it was decided should look after my artistic future. It did raise for me a purse of £50, so I gave up my situation in the warehouse and began to look about for one on the stage.

"It was hard work, and the agents always reported that nothing could be found for me. At last I had only £2 left, and taking that to an agent named Stone he told him he could have everything if he would get me an engagement immediately. The next morning I heard from him, and by night I was a member of the Rogen company, which was to commence at Farnham, in Surrey. I was promised a salary of fifteen shillings a week, which I never got. I was lucky when I got one or two shillings. We played the old comedies, 'Speed the Plough' and the like, and for four months I stayed with Rogen, acting in whatever kind of part I was cast for. Then I joined Jackman's, which was a very good battery company, and played with them for a year. We would stay in a town from one to three weeks, depending entirely on the amount of success we had. We played everything, from Shakespeare to farce."

There is an unauthenticated anecdote of this period of Mr. Couldock's career, which concerns him in the role of *Othello* and a young lady who watched him from a stage box. Both she and the actor, if the anecdote is true, became very fond of each other. The young lady's parents told Mr. Couldock that she should never, with their permission, marry an actor, and that he must leave the stage if he hoped ever to become their son-in-law. The actor did for a time retire from the stage, and went to London, where he acted in amateur performances with a society called the Shakespeareans. Bernard Gregory, editor of the Sacrist, was the leading member of the society, and he and Mr. Couldock played the principal Shakespearean roles. While he was on amateur, acting with the Shakespeareans, he was also a member of a club called the Jerry, which included among its members John Oxenford, the critic; Buckstone, the comedian; Douglas Jerrold, the wit; Lyman Blanchard, and Kenny Meadows, the artist. But his love for the stage grew too strong, and, leaving the office, as well as the young lady, he became an actor again.

"I then went to Bath, which was just losing its popularity as a fashionable resort," Mr. Couldock said after he had refused to deny or affirm the anecdote of the young lady, "and acted with John Vandenhoff, one of the greatest actors that ever lived. In 1843 Lester Wallack and I met in Southampton, and the next year we both joined the company at the Edinburgh Theatre. William Davidge was in the company at the same time. Two years later I went to Birmingham as leading man at the Royal Theatre. The theatre at Liverpool was under the same management, and for four years I played in these two houses, supporting Macready, who had first inspired me to become an actor; Miss Vestris, Charles Kean, and finally Charlotte Cushman, who made me an offer to come with her to America. Macready had already asked me to go with him to the Princess Theatre for a season of three years, but I wanted to come to the United States, and sailed on the Cunard steamer America on Sept. 15, 1849.

"We made our first appearance here together in 'The Stranger,' and I played the *Stranger* to Miss Cushman's *Mrs. Haller*. After that we travelled through the principal cities, and when Miss Cushman returned to London I had decided that I liked America enough to stay here. I often think of the work I had in those days compared to the lot of our actors to-day. Miss Cushman at her benefits always played 'Macbeth' and 'The Honeymoon.' Think of two plays like that in one evening! I had to dress after the fight in 'Macbeth' and be ready as the *Duke* to speak the first line in 'The Honeymoon.' I was usually exhausted, but no amount of argument could persuade Miss Cushman to change that programme. Her other benefit bill was 'Henry VIII.' and 'Simpson & Co.,' and was easier for the actors.

"It was in Philadelphia, where I acted at the Walnut Street Theatre after Miss Cushman went to Europe, that I got hold of a part in which I made probably the greatest success in my career. I opened there as *Jaques* in 'As You Like It,' and shortly after that Mme. Celeste came to play an engagement at the theatre, bringing with her a new play called 'The Willow Copse.' I had the role of *Luke Fielding*, and when I brought Mme. Celeste before the curtain she refused to accept the applause for herself and introduced me to the audience as the most successful actor in the piece. As we left the stage she said to me:

"'After your acting as *Luke Fielding* this play ought to belong to you. You shall have a copy of it and the right to produce it wherever you want to.'

"I took a copy of the play and made my first attempt as a star in it. I remember that it had a run of three nights in Pittsburgh on my first tour, and that was regarded as something phenomenal for that town in those days. For twenty years *Luke Fielding* was one of my most popular parts, but even it was not proof against the depression in theatrical affairs that followed the panic of '57. There was no money in starring, so I came back to New York and joined Laura Keene's company at the old Olympic.

"In the company were Joseph Jefferson, William Rufus Blake, Sothern, and Milnes Levick. While we were there James Barrett, our stage manager, one day read a new five-act play called 'Our American Cousin' to the company. After the reading he asked me whether I would play the part of *Coole*, the lawyer, or his clerk, *Abel Murcott*. I declined to play either part, on the ground that the piece was nothing more than a five-act Yankee farce, a kind of play familiar enough in one act as an afterpiece. Sothern, who was cast for *Lord Dundreary*, deemed to act in the piece for the same reason. But Miss Keene finally prevailed on both of us, and Sothern's part made his fame and *Abel Murcott* was considered one of my best parts."

A season with John Owens in New Orleans in 1859, followed by years of acting through the country, brought Mr. Couldock down to "Hazel Kirke" and the Madison Square Theatre. This period covers twenty years, the usual term of an actor's work, but only about one-third of the time that Mr. Couldock has been acting. For five years he played *Dunstan Kirke*.

"I think that the stage has improved very much in my time," the actor says. "The class of men that go on the stage to-day is higher than it used to be. The condition of the profession has improved, and there is one instance in which I notice it particularly. There is nothing now while the intemperance that formerly existed among actors. It used to be an exception in the old days when there was not some one of the actors in a play under the influence of liquor. In the society plays of to-day the acting is very much better than it was formerly, although in the classic dramas it is not so good. But this comes, of course, from the little practice that our actors have in those plays. Formerly when a young man went on the stage it was his ambition to act *Othello*, or *Hamlet*, or *Jaques*, and he waited until the opportunity came. The system of long runs has the disadvantage of keeping a young actor in a certain part, so that it is often a long time before it is discovered what he really is best fitted for. But it enables him to play a part better than we did it, the old times, when, for instance, he would give *Macbeth* once and then change the bill the next night. If a star came, the actor who usually played *Macbeth* had to do *Macduff*, and probably it would be months before he would be called upon to play that part again. So there was less opportunity to develop the character.

"The work involved on the actor's part was something to which I look back even now with terror. I've sat up many a time all night studying the lines of my next part, and the result of so much changing was that there were always a number of the actors who were very shaky in their lines. But it was the old drama that brought forth such giants as Macready, Kean, Charlotte Cushman, and Edwin Booth. We have fine stage managers to-day, but we have no such actors as these. I believe that the taste for the classic drama will revive, and perhaps the actors will come back with it.

"Am I leaving the stage? That question always carries me back to what Macready said to me when I acted with him in Liverpool after his return from the United States. I had heard that he was going to retire and asked him if it were true.

"'No,' he said, 'I'm not going to leave the stage. But I am already afraid that the stage is beginning to leave me.'"

WHISKEY IN KHAMA'S COUNTRY.

He Can Keep His Own People Sober, but the Whites Give Him Trouble.

King Khama of the Bamangwatos, South Africa, has long been known for his antipathy to liquor dealers. Perhaps there is no other country where liquor is so rigorously excluded. Khama makes all his own laws, and he endeavors to have the punishment fit the crime; and as the drink habit, in his opinion, is a crime little less heinous than murder, it goes hard with the unfortunate subject who is seen to be unsteady on his legs or is caught with a surreptitious whiskey bottle. Of late years, however, the King has been having a great deal of trouble with the white men who flock into his country, and insist that interference with their potations is an infringement of their rights.

A short time ago Khama, who is getting well along in life, paid a visit to Cape Town and made his first acquaintance with a railroad, a steamship, the sea, and other wonderful things. While in the capital he received a deputation from the various temperance societies,