

DOWN THE MISSISSIPPI

DID you ever make the trip in a big steamer plying between St. Louis and New Orleans? The height of the season of 1897 has seen the usual pilgrimage of tourists, and the belles and beaux of many a river town have crowded the decks and staterooms of the soft-moving boats that float out from some city wharf, and drop anchor only after many days,



THE CAPTAIN.

1,250 miles away. At the very outset it is interesting to watch the roustabouts, tumbling over each other in the haste engendered by the hoarse voice of the mate, loading merchandise found for Southern ports. They are a curious study—these roustabouts—with their half-clad, powerful figures, their song-song cry of "heave-ho-o!" their jogg-trot shamble, and the reckless abandon with which their work is done. They have no cares. If they have any ambition it is to get the big steamer out of port, lie lazily on the lower decks, or play "craps," or sit and watch the white foam of the river as the boat plunges forward on its way.

When the last barrel, box and trunk is bestowed the big bell gives three taps, the captain, from the hurricane deck, shouts "Let her go, there!" the gangplanks are pulled in, the prow of the great steamer swings out and with a wide turn starts on its delightful pilgrimage. The captain is the patriarch and hero of the expedition. You can hear his big voice at all hours of the night, sometimes over your head, where he stands sentinel to see that all goes well; sometimes from the lower deck, where his vigorous and secular Anglo-Saxon arouses the mate and his roustabouts to duties engendered by new conditions; and oftener on the promenade deck, where he talks politics with the men and relates the history of each point of interest, a history which he has come to believe is faithful by reason of its repetition. Nobody knows

grand and bewildering vistas of field and flood and verdure-clad hills, in which the beauties of the Hudson are duplicated, reproduced and excelled with enough scenic luxuriance to create a score of Hudson Rivers, cannot be expressed or indicated upon a newspaper page. It is altogether unique, and most of the people in this great, bustling country will never be able to enjoy the sensation in proper person.

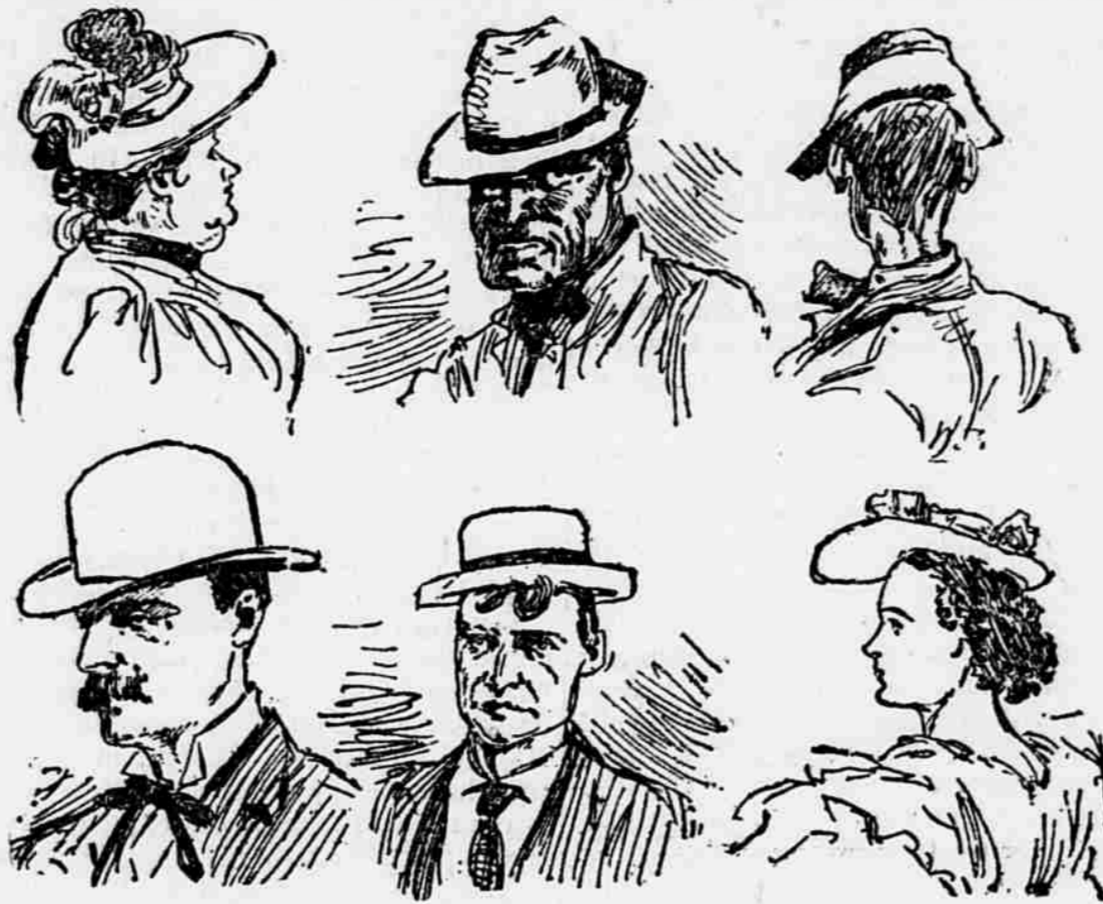
The rafting industry is exclusive. It is not carried on before a grand stand or in the presence of a multitude. Its secrets are all its own, and one of these days the material exhausted, this industry will disappear with all of its traditions and romances, and with it will vanish from view the river types, the sturdy logger, the peculiarly northern roustabout or "rooster" as he is familiarly known, and the rugged captains who embody all the river lore and are walking encyclopedias of everything that belongs to the history of this great stream since the first Canadian voyagers and hardy French woodsmen penetrated these wilds.

One of these rafting steamers is a sight to see. It keeps its bows against the rear end of a mighty fabric of logs, in a position to push it down stream. A second steamer, smaller in size, is fastened transversely across the front end or bow of the raft, and is pushed along,

revolutions of its wheel pushes the front end of the raft away from a dangerous bank, and by backing water the head of the raft is dragged back into the channel away from threatening shoals.

The difficulties of turning and twisting an invertebrate mass of logs in narrow and tortuous channels will be better appreciated when the actual size

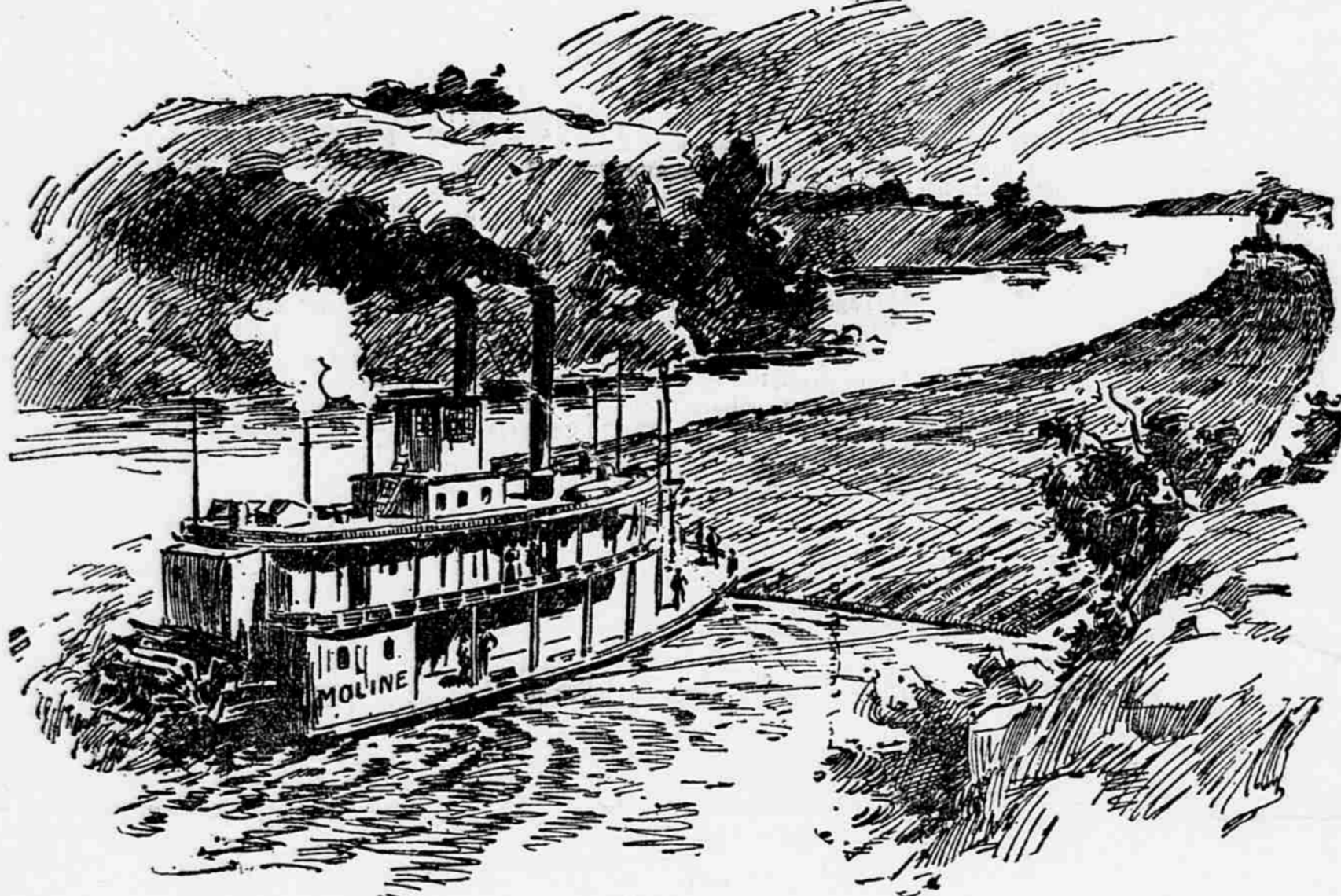
ly, great trouble in finding a furnace suitable for burning it. It is now blown by steam into a special furnace, on the principle of the Lucigen light, and used without difficulty. It is 40 or 50 per cent. cheaper than coal, and is 20 per cent. better as a heat raiser. Steam can be got up quicker and kept at a higher pressure and more work be done by the machinery. From a



TYPES ON A MISSISSIPPI RIVER EXCURSION.

of the raft is understood. In length it is 1,200 feet, and thus equal to several average city blocks, and its width is almost 300 feet. More than half the raft is double decked, meaning that it is composed of two layers of logs, and it is estimated that not less than 10,000 logs are included within its booms, a

naval point of view these are vitally important facts. No sign of a ship under full steam will be shown in the sky, for masut is a smokeless fuel. Russia and Italy are using it in their navies, and Germany has lately made some valuable experiments. At Kiel, Wilhelmshaven and Danzig are tanks



RAFTING ON THE MISSISSIPPI.

quiet and unresisting, with its wheel motionless, as a sort of cut water for the unwieldy expanse of logs. But this is not its mission. A telephone connection is established between the two steamers by means of wires stretched across the raft, and as the rear steamer

number sufficient to yield more than 2,000,000 feet of lumber. Scores of freight trains would be required to transport the members of this inarticulate leviathan, whose weight is almost beyond computation.

The passenger on a Mississippi River steamer is expected to spend most of the day in good weather on the promenade deck, with field or opera glass in hand, viewing the delightful scenery.

About the third day one begins to take interest in the landings. You want to know how long the boat will stop at the next town, and whether you can run up into the city and "stretch your legs." You try it once or twice, only to find that the Captain has hurried your return by a vigorous pull on the bell. This is one of the Captain's little jokes. He doesn't mean it, and as you wipe the perspiration from your brow he tells you how many points of interest you might have seen if only you had not foolishly run back to the boat.

The old days of the passenger steamer industry are a vivid memory with every river veteran—the high gambling days, those when every inch of steam was put to the danger point in a race between two stately flowing palaces. There is still lingering reminiscence here and there, suggestions of those brilliant, exciting hours, when life was a reckless whirl for the deck hand, and a thrilling experience for the passenger on a typical steamer. The gamblers, the grotesque dancers, the singing roustabouts, are nearly all gone, but the odd characters who have furnished themes for many a captivating story still haunt the landing places that one passes in a trip down the Mississippi River.

Immigration Figures.

The highest immigration record, excluding the arrivals of aliens not so classified, is that of 1882, when the prodigious number of 788,992 came, following the previous year's 669,431, till then unprecedented. In 1883 there was a heavy falling off to 603,322, and the decrease went on until 334,203 was reached in 1886. Then the tide again turned, and with some variations another climax was reached in 1892, when the figures were 623,084, the third highest mark, and not far behind that of 1881. But then began another ebb, with 502,917 in 1893, followed by 314,467, then 279,498, then by 343,267, and now this year by an astonishing reduction to 230,832, as shown by a special bulletin of the Treasury Department.

Substitute for Coal.

In the future we may be importing masut instead of exporting coal. Masut is a by-product in the distillation of raw petroleum. It is also manufactured from a cheap, brown coal found in Saxony. There has been, until recent-

ly, great trouble in finding a furnace suitable for burning it. It is now blown by steam into a special furnace, on the principle of the Lucigen light, and used without difficulty. It is 40 or 50 per cent. cheaper than coal, and is 20 per cent. better as a heat raiser. Steam can be got up quicker and kept at a higher pressure and more work be done by the machinery. From a

Perfume from Living Plants.

Capt. Smees has discovered a method of gathering the scent of flowers as the plant is growing. He takes a glass funnel and heats the thin end over a spirit lamp. He then draws out the stem to a fine point. This accomplished, the funnel is filled with ice and placed on a retort stand, the pointed end being placed in a small glass bottle, without touching it. After this, the stand and the funnel are placed in a greenhouse, among the flowers whose odors it is desired to collect. Gradually the vapor rises from the flowers, and, in meeting the colder surface of the funnel, condenses into drops on the outside of the glass. From the point of condensation it trickles down until it drops into the bottle. In a surprisingly short time a large amount of perfume is collected, and it is claimed that 90 per cent. of the contents of the bottle is perfume; the rest is water. Strange to say, this essence of the flower needs to be adulterated with sprits of wine. Otherwise it would become sour and useless.—American Cultivator.

It Has Cost Millions.

The most expensive book ever published in the world is the official history of the war of the rebellion, which is now being issued by the United States Government at a cost up to date of \$2,300,000. Of this amount nearly one-half has been paid for printing and binding, the remainder to be accounted for in salaries, rent, stationery and miscellaneous expenses, including the purchase of records from private individuals. In all probability it will take three years to complete the work, and an appropriation of \$500,000 has been asked, making a total cost of nearly \$3,000,000. The work will consist of 112 volumes.

Ferguson—It says here that no foreigner is allowed to be forty-eight hours on Turkish territory without a pass. Nixon—It must be tough on the railroads that have to issue them.—Boston Transcript.

A man gets very little credit for what he does in this world, but he gets lots of blame for what he doesn't.

A woman has to purse up her lips in order to carry car fare in her mouth.

CHINA AWAKENING.

The Follows the Example of Her Civilized Sisters.
Says the San Francisco Argonaut: Though industrial expositions have become thus general throughout the world, the latest announcement comes in the nature of a surprise. China, which for uncounted centuries has shut herself within her walls, self-satisfied and confident of the superiority of her civilization, is about to hold an international industrial exposition, and has invited the heretofore despised outside nations to exhibit their wares. It is not, of course, intended to be an exposition on the lavish and extensive scale of those of the Western nations, but it is to show to the Chinese at their own doors the labor-saving mechanical contrivances by which America and Europe have made such rapid strides in material development.

The surprise with which the announcement is at first received is natural, yet this move is in keeping with the more modern tendency of China. It is barely ten years since willingness to accept outside ideas or to allow communication between the natives and outsiders, beyond what was absolutely necessary and forced upon China, has developed, yet in that brief period much progress has been made. The difficulties to be overcome in introducing these innovations are enormous—how much so it is difficult for those unfamiliar with the conditions to appreciate. The Government is overburdened with a complicated and corrupt bureaucracy, which is necessarily conservative, since change may curtail the illicit revenue of the officeholders; the people are fanatically suspicious of foreign influences; and the cohesion of the different parts of the empire is so weak that revolutions are almost continuous. The building of railways encounters these obstacles, and there are, besides, the engineering difficulty of constructing bridges over great rivers and viaducts over networks of canals; the economic difficulty arising from the fact that the new method of transportation will compete seriously with the business of the large proportion of the natives engaged in water transportation, and will reduce the revenue of the mandarins from tolls on the canals and roads; and the even more serious ethnic difficulty resulting from the worship of ancestors, which holds it as sacrilege to disturb or remove the graves which dot the whole face of the land.

Despite these obstacles, some railways have lately been built and others are in contemplation. The first line constructed was in 1876, connecting Shanghai and Woosung, its port. The next year, however, in deference to popular prejudice, it was purchased by the Government and torn up. A short railroad from the Kaiping mines to the Peking River had been in operation for some years for the transportation of coal. In 1888 it was continued down the river to Taku, and thence up the Peiho River to Tientsin, giving a total length of eighty-five miles, and in October of that year it was opened to general traffic. During the next few years this road was continued north along the Gulf of Pechili, until now it has a total length of about 200 miles. It is being pushed along the same line, and is intended ultimately to join with the Chinese extension of the Trans-Caspian Railway. Another road is projected south along the coast to Shanghai. In 1880 a royal edict was issued sanctioning a railroad from Peking to Hankow, a distance of about 800 miles, but annual difficulties have, as yet, delayed its construction.

The progress in railways has been significant of the inclination of those in authority rather than on account of what has been accomplished. The progress with the telegraph system has been more marked. The difficulty experienced in communicating with the distant parts of the empire in 1880, during the Russian war scare, opened the eyes of the Chinese and gave an impetus to telegraph construction. The system of lines now connecting Peking with the seaports and all the principal cities of the interior joins with the Russian system at its Amoor termination, and with the British system at Port Arthur, in Burmah, and British India. It has a network of 10,000 miles. In other directions, too, the adoption of Western methods is seen. Chinese capitalists are learning and following the methods of Western finance as applied to industry; joint-stock companies have been organized for the manufacture of such articles as silk, cotton, wool, glass and iron; two large and well-equipped steel plants on the Bessemer and Siemens-Martin methods have been established at Hankow; and the first bonded warehouse was opened at Shanghai in 1888.

The convention recently entered into with Russia, granting railway and even military privileges to that country on Chinese territory and making mutual concessions intended to extend the trade relations between the two countries, offers further evidence of this general awakening, and a treaty with France, entered into a few years earlier, grants similar though not so extensive privileges in the southeast. Much of this work had been done before the war with Japan, but the experiences of that conflict will increase rather than curb the tendency.

Something He Forgot.

When Mr. Jenkins went to his bedroom at half past 1, it was with the determination of going to sleep, and with another determination that he would not be interviewed by Mrs. Jenkins. So, as soon as he had entered the door, and deposited his lamp upon the dressing table, he commenced his speech: "I locked the front door. I put the chain on. I pulled the key out a little bit. The dog is inside. I put the kitten out. I emptied the drip pan of the refrigerator. The cook took the silver to bed with her. I put a cane under the knob of the back hall door. I put the fastenings over the bath-room windows. The parlor fire has coal on.

"I put the cake box back in the closet. I did not drink all the milk. It is not going to rain. Nobody gave me any message for you. I posted your letter as soon as I got to town. Your mother did not call at the office. Nobody died that we are interested in. Did not hear of a marriage or engagement. I was very busy at the office making out bills. I have hung my clothes over chair-backs. I want a new laid egg for breakfast. I think that is all, and I will now put out the light."

Mr. Jenkins felt that he had hedged against all inquiry, and a triumphant smile was upon his face as he took hold of the gas tap, and sighted a line for the bed, when he was earthquaked by the query from Mrs. Jenkins: "Why didn't you take off your hat?"

Gold Is Not Everything.

His poor, work-aloused hands were despairingly entwined; his emaciated form was bowed down with woe, and the hollows in his careworn cheeks were slowly filling up with tears that ran down from dull, tired eyes. He was a young man whose early life had been spent amid careful home surroundings under the influence of Christian teachings, and now in this hour of dark despair and deep dejection, when reason tottered on her throne and fierce pain pangs assailed his flesh, the habits of his youth were strong upon him. With weary footsteps he crossed the floor, and from an oldskin pouch drew a Bible.

"The last gift of my mother," he muttered; "before I came to this accursed place."

As he looked at it in his hand he noticed a certain bulkiness about it and felt a heaviness he had never felt before. A thousand wild conjectures flashed through his mind and many instances of where fond mothers had secreted treasures in the Bible presented to their departing son came to him at memory's beck.

"Dear mother," he murmured; "a big fat bunch of currency, I suppose!" and with a half-smile he opened the bulging Bible.

An hour afterward he recovered consciousness.

"Thank heaven," he cried. "Joy does not kill! Mother, dear old mother—by what divine inspiration did she gaze into the future and see my hour of bitterest need. I'll just send her a million dollars by the next mail."

And with a ravenous, running gulp the young Klondike miner devoured one of the three apple fritters he had found in the Bible.—San Francisco Examiner.

Typical of Grant.

A story is told of Gen. Grant which is illustrative of his tender and gentle nature. On the day of a great review he was argued with by some of his officers, from the sight of "his old troops," saying, "I don't believe I can stand it! I don't believe I can stand it!" In the same spirit is the following souvenir:

The parade of the Grand Army, which was part of the centennial celebration, was an occasion of wild excitement to us. We were not far from the balcony where Gen. Grant reviewed the troops and therefore saw all that could be seen—a seemingly endless procession of soldiers, cannon and brass bands.

And how the people cheered! But it puzzled us why the cheers were loudest and longest for the most forlorn, stained and tattered old flags until we understood that the flags, too, were veterans.

By and by the great show was over, and Gen. Grant was going away. He did not seem at all gay. I wondered why.

"Don't you enjoy it? Wasn't it nice to see all your old soldiers again?" I asked.

"But they were not all there," he answered gravely.

I realized what it meant to him to review his old army. Those tattered flags had been carried by men who went to death at his command. Those dark stains had been the life-blood of men who died obeying him. To others it had been a day of jubilee, while his great heart had ached as he thought of the price of his victories.—"A Child's Recollections of Grant," in Current Literature.

Two Images Through One Glass.

A certain wonderful mineral found in Iceland possesses the strange property of producing two images of a single object. On looking through it at a pencil, for instance, you will see two pencils, both of which will be clearly defined. The mineral is translucent and crystal-like and goes by the name of Iceland spar. The mine in which it is found is located on the eastern coast of Iceland and is controlled by the Danish Government. The spar is exceedingly valuable, owing to its many uses in the sciences, particularly for the manufacture of optical instruments and for experiments in polarization. It brings about \$27 a pound in the market, and even at that price the dealers cannot supply the demand.

Disparity.

"You're not going to the Klondike region, are you?" said the impetuous man's friend.

"No."

"Don't like the climate?" "It isn't the climate. It's the surface conditions. There are too many mountain passes and no railway passes."—Washington Star.

A Woman's Example.

"You say your next door neighbor has nerve?" "That isn't the word for it. He woke me up at 4 o'clock in the morning and insisted upon borrowing my lawnmower."—Detroit Free Press.



DANCE ON AN EXCURSION STEAMER.

when or where the captain sleeps. The cheerful buzz of his voice reaches your stateroom in the still night, and you drop off to sleep wondering if the captain ever does retire. When you wake in the morning there is the captain again, freshly-shaven, clean, bright and cheerful as ever, with an appetite for breakfast that only equals your own.

While the Nile has been rolling along for ages in the same channel, the Mississippi has been roaming all over its valley, twisting hither and thither, building up banks and then cutting through them and suddenly abandoning the old channel for a new one. It is doing the same thing to-day. The vast length of the Mississippi and its tributaries, measuring 8,000 miles of navigable waters and draining an area of 1,244,000 square miles, must account in a large part for the great quantity of matter it cuts away, but even when these facts are considered the estimate must still appear enormous. It is stated by experts that the dirt carried down by the Mississippi in a single year amounts to a solid mass one mile square and 163 feet deep. This sediment is being constantly deposited along the shores and upon the bars and islands that abound in this remarkable stream.

The atmosphere of lazy floating days, on board a steamer, crammed full of unusual scenes, flashes of excitement,

or pushes the entire mass slowly and majestically down stream it soon becomes evident what the function of the bow steamer is. The tortuous course of the river requires a constant shifting



UNBECOMING HILARITY.

in the head of the raft to keep it from going ashore or into cross currents, and this is the duty of the assisting steamer. Lying transversely across the river and attached firmly to the raft a few