

HOW COLONEL ROEBLING WOULD RELIEVE THE STRAIN ON THE BIG BRIDGE.

The Distinguished Engineer Who Built the Brooklyn Bridge Tells the Journal How the Problem of Increasing Traffic over the East River Can Be Solved by a Sister Bridge from the Present Brooklyn Terminal to Chatham Square in New York.

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THE accident to the Brooklyn Bridge on the 29th of last July, when a steel chord twisted and the southern roadway dropped thirteen and a half inches, made a deep impression on the people who cross the bridge almost daily.

Ever since then the necessity of providing better bridge accommodations across the East River has been one of the chief problems of Greater New York.

Francis Collingwood, assistant engineer in the construction of the bridge, has given a warning not to overcrowd the bridge again.

H. G. Pratt, civil engineer and editor of the Railroad Gazette, has repeated the same caution.

W. Hildenbrand, who was an assistant engineer in building the bridge, has lately shown the necessity for strengthening the bridge if it is to carry the ever increasing traffic of trucks, trolleys and cable cars which is being forced upon it.

Colonel Washington A. Roebling, the builder of the Brooklyn Bridge, now gives, through the Journal, a plan of relief. It is to build a new bridge nearly parallel to the present one, as shown in the pictures on this page.

This new bridge should be different in many ways, Colonel Roebling says, from the present bridge. It should be a double-decker, with the upper part devoted exclusively to tracks for trolleys, elevated railroad cars and locomotives, trains of coaches and sleeping cars, if necessary. Six tracks—three for east-bound and three for west-bound traffic of this sort—would be provided for.

The lower deck would be devoted to carriages and light wagons, heavy trucks, bicycle paths and a footway, each with a special division.



those crosswise supports extending from the top of the towers and spreading out like a spider's web, would be done away with. The accident of last July was due to these side stays not acting in unison with the cables. In place of them would be simply the perpendicular supports from the cables.

The cables, trusses and steel work throughout would be stronger than in the old bridge, enabling the new one to carry with perfect ease its double deck load.

The approach to the new bridge could start from the present Brooklyn terminal, which could be enlarged into a union bridge station.

This starting point seems appropriate, because the whole system of that part of Brooklyn's main thoroughfares and street and elevated roads converges at that point.

The New York end of the bridge would be at Chatham Square. The channel of the East River is narrowest between these points. Chatham square is also the meeting place of the Second and Third avenue elevated roads, and half a dozen surface car lines can be brought together there.

Besides the car lines, the foot travel and teaming traffic from the Canal and Grand street districts would come to this point conveniently. It would save the present long detour of traffic to City Hall square, where it meets the crowds which come across from the west side of town and up from the lower Broadway district.

Such a bridge could be built, Mr. Roebling estimates, for \$10,000,000, or two-thirds of the cost of the present Brooklyn Bridge.

An appropriation of \$100,000 is expected to be made by the Board of Aldermen this week for two preliminary surveys for bridges over the East River. It is believed that the location suggested by Colonel Roebling will be selected for one of the surveys.

Colonel Roebling is now in poor health and will not under any consideration under-

This Is How the Twin-Sister of the Brooklyn Bridge Should Be Built.

By Colonel Washington A. Roebling, Builder of the Brooklyn Bridge.

I would not advise the strengthening of the Brooklyn Bridge to make it carry more traffic. Its approaches are already overcrowded, and to add to the capacity of the bridge would only increase the congestion of traffic. The bridge is safe as it stands, if the bridge be not overcrowded as it was last July, and it will do duty for two hundred years to come if properly used.

What is now needed is a new bridge. I believe it should start from a little to the north of the present Brooklyn terminal, and span the East River at an oblique angle to the other bridge, and have its New York terminal at Chatham Square. It would here accommodate a vast traffic from the street cars and elevated railroads, that come together at that point, as well as receive the great teaming traffic from that part of the town which is now obliged to make a long circuit to City Hall Square to reach the approach to the bridge.

To meet the demands of the new conditions of rapid transit I would advise a double deck bridge, with the upper part devoted to trolleys, elevated cars, and standard locomotive trains. The lower part would then be left to roadways for carriages and trucks, bicycle paths and a footway.

A bridge with such a capacity could easily be built. New processes in making cable wire and steel trusses render them much stronger than anything that was manufactured when the other bridge was constructed.

In this new bridge I would suggest that the side stays used on the present bridge be omitted, and instead of the masonry towers, steel towers for holding the cables be employed. Owing to the greatly reduced price of steel this bridge should now be built for about \$10,000,000, instead of \$15,000,000, the cost of the present Brooklyn Bridge.

The necessity for such a new bridge is growing every year. Land values for terminals are increasing, and the sooner the bridge is built the better.

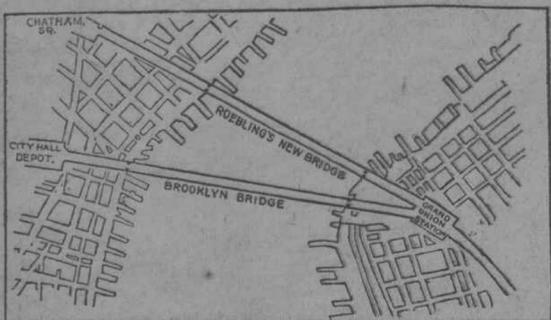


Diagram Showing Relative Positions of the New Bridge and the Present One.

This bridge would have tall steel towers would look almost like double Eiffel towers to support the cables, in place of the masonry towers used in the present bridge. In place of the long curved masonry approach several hundred feet high, they approach on the present bridge, the new

Interesting Reindeer Farm in Alaska.

(See American Woman's Home Journal.)

DR. SHELDON JACKSON, who has just returned from the Yukon, has published the first charge of the introduction of reindeer in Alaska have proved an immense success. In all 600 of the animals have been brought over from Siberia, where they were purchased at a very moderate price from the nomadic tribesmen who obtained a subsistence from their herds. The work was begun in 1892, when the first reindeer were secured, and since then the herds have been fetched across by vessel in small lots. Already the number mentioned has increased to 1850.

There are now 671 of these reindeer at Uasaklik, 120 miles above the mouth of the Yukon.

At Teller Station, named after food to the gold miners of the Klondike, Senator Teller, who has been so ardent an advocate of this enterprise, 180 men. There was never carried out. All of the 144 are are 216 at Cape Prince of Wales, 865 at miles. Also 350 of the Siberian reindeer of Colovin Bay, 284 at Point Barrow, and were driven northward to Point Barrow, 244 at Circle City. This makes no account to succor the crews of the whaling ships of the 144 reindeer which were imported which had been caught in the ice. It was found by the War Department for the purpose of conveying the food they needed, and so the animals were not extra, as had been intended. It was considered judicious to import a number of Laps, native doermen of Lapland, to take care of the reindeer of Alaska, and more than a score of them were brought over for the purpose three years ago—men, women and children. These Laps have taught the Alaskan aborigines how to take care of the deer, regular



Mrs. Anthony Drexel's Jewelled Muff.

BIG, plain muffs, even of the most costly furs, are no longer the fashion. The jewelled muff is now the correct thing.

Mrs. Anthony J. Drexel, Philadelphia's best dressed woman, has made it so. Her new \$500 muff is a distinct novelty. Nothing like it has ever been seen before.

Fashionable women have always spent large sums of money on their muffs. They have carried big, plain muffs and small, fancy muffs, muffs trimmed with lace, with velvet bows and fur tails. But the muff gleaming with jewels has until now been unknown.

Mrs. Drexel's muff is of Russian sable, trimmed with sable tails and point lace frill. In it is set a purse of gold, with a beautiful amethyst for its top. The purse opens with a gate top and is large enough to contain money, a handkerchief and a bonboniere.

The effect of the pinkish purple amethyst in its rim of gold against the dark, glossy fur is wonderfully beautiful.

The muff is lined with purple satin, and the frills of the costly point lace are so arranged that they fall gracefully over the hands when the muff is in use.

This exquisite muff of Mrs. Drexel swings

from a jewelled chain made of amethysts. There are twenty of the delicately colored stones set singly and at regular intervals alternating with gold links. Muff chains have been worn for some time, but now it is the fashion to have the jewels of the chain match the jewels of the purse in the muff.

This is an unusually extravagant for season, for the fur garments this year are not made of fur alone. The newest fur coats have jewelled buttons, and the capes are trimmed with both lace and satin frills. Combining two furs in the same garment is also a feat of the hour. Many of the latest fur collarettes are made of two kinds of fur, besides velvet and lace.

As for the muffs, they are made in great variety. Some look like nothing more than big bunches of fur tails, while others to the casual observer appear to be just dishing velvet bows, with the loops and ends edged with fur.

One particularly odd little muff seen recently was of chinchilla and looked not unlike a fur bag. Imbedded in the fur at the top of this muff was a gold clasp, which when unfastened, disclosed a velvet-lined bag. The bag was fitted with little pockets, containing a tiny mirror, a powder puff and a small comb.

"To the experienced deck hand there are, I believe, 24 'moves' in sea-draughts. Move No. 1 consists in 'spotting'—i. e., in carefully watching—the passengers of the deck or on their come aboard, so as to elect those with liberal, kindly faces and to avoid those who have been too openly taken in on previous voyages.

Move No. 2 is to approach a passenger in need of a match, and, as if on the spur of the moment, to offer him a light. If the smoker be at all free with his money, he is pretty sure to fish out some small reward for this attention. The smoking room steward has special facilities for paying move No. 2. It lies within his power to let the smoking room stock of matches run down and then to dispatch a confederate in search of would-be smokers along the deck. The confederate appears in the nick of time.

Move 22 begins with the sly addition of some chalk, or even paint, to the favorite seat of a liberal passenger. The passenger in question returns to his post, spots, and, all unconsciously, sits down. Suddenly he is aroused by the exclamation of an apparently horrified deck hand: "Lor, sir, you've been out in some paint. Never mind, though; I'll get it off for you. I never comes aboard without some benefit." In the case of chalk a clothes brush is produced with equal readiness.

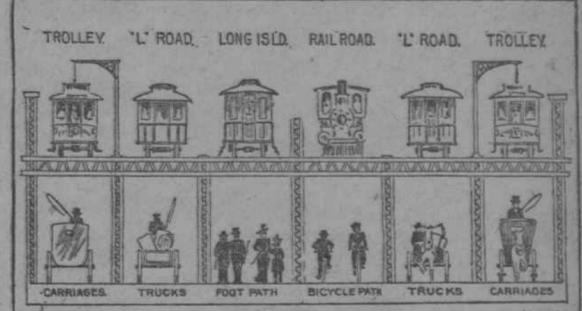
"Let the traveller ponder over 23 past experiences upon the vast deep, and recall whether he has ever picked up his worldly wealth in response to some of the 24 'moves' of 'sea-draughts.'"

How Tips Are Waged on Great Ocean Lines.

THE steamship hands of the ocean liners have a systematic game for drawing tips from the pockets of unsuspecting passengers that rivals anything ever perpetrated by the most expert hotel employees. The game is called "sea-draughts" or "sea-checkers," and consist of a number of clever "moves" well known to every sailor, steward, cabin boy and deck hand.

Those who know these "moves" the best are, however, very reluctant to reveal just how they are practised, and they would still be dark secrets but for the information gathered by Dr. O'Laughlin, senior physician of the White Star Line.

"Sea-draughts," says the doctor, "is, briefly, the game, or rather a game, by which our men add to their wages by robbing money out of our patrons' pockets. It took me years to become acquainted with even the rudiments of the game; and, but for the information received from a smoking room steward whom I treated through a serious illness, I should still be in ignorance on the subject.



Cross Section of the Proposed New Double Deck Bridge.

one would have nearly straight inclined take the building of a new bridge. Its steel spans leading to the towers from the merely suggests this general plan, leaving it for others to draw out the detailed designs and carry out the work.

schools being established with this object in view. Apprentices graduated from the de-schools receive a certain number of deer, representing in each case the nucleus of a herd. Several such herds have been established by Indians who make a very good living by them. Most of Alaska is covered with moss, which furnishes the favorite food of the reindeer, and so there is no reason why these animals should not eventually become as plentiful as cattle in the United States, furnishing a means of subsistence for a population which is otherwise destined to extinction for lack of food. It was feared that the savage native dogs would destroy the deer, but this has not proved to be the case. The dogs soon got used to the animals, and it is only now and then that one of them has to be shot for attacking a deer. Dr. Jackson has brought back with him a number of beautiful photographs of the deer herds and Lapps, some of which will be found in the "American Woman's Home Journal" of today's Journal.



"The man who lets a lady stand, where others push and crowd her, Should have the best and strongest brand, Some *Cleveland's* Baking Powder,—to raise him."

WORTH SENDING FOR, One of the best receipt books for every day use in the kitchen that we have ever seen is that sent free by the Cleveland Baking Powder Company, New York. It is a pamphlet of 78 pages and contains four hundred selected receipts for soup, fish, meats of all kinds, etc. We advise all readers of the Journal to send for a copy. Send address with stamp to Cleveland Baking Powder Co., New York. Please mention the Journal.

Facts About TEA:

SCIENCE teaches us
That of all the popular beverages, properly prepared tea, is the most refreshing and invigorating.—That one pound of tea goes as far as twelve pounds of coffee.

HISTORY informs us
That the soil and climate of

Japan and Formosa
are peculiarly adapted to the growth of the finer grades of tea.—That the Japanese are the most cleanly and expert curers of tea.

STATISTICS show us
That two-thirds of all the teas consumed in the United States and Canada come from Japan and Formosa.

SOLD BY DEALERS EVERYWHERE

The New \$500 Jewelled Muff of Mrs. Anthony J. Drexel.