

## ELECTRIC CANAL BOATS.

The negotiations for the sale of the Erie Canal electric franchise to an English syndicate, as told by the *New York World*, will result in the installation of a complete system of electric traction within a short time.

What has interested English capital in this enterprise is the possibility of shipping grain from the North-West direct to Liverpool by an all-water route and effecting a great saving in time and freight charges. Only one transfer will be required, and that will be in New York harbor, without the necessity of elevator storage. The saving will be not only in high railroad freight charges, if the grain is brought to New York by rail, but on the old water route of elevator charges at Buffalo and slow haulage by mules through the canal, with more elevator charges at this port.

The use of electricity to run canal boats is but a part of the extensive plan to cheapen rates from the West to the East and then to Europe. It contemplates a direct service from Chicago and Duluth by the use of steel canal boats after the type of the six that were built last year in Cleveland and made one trip to this port. With the aid of floating elevators the canal boats can be unloaded into ocean steamers in the harbor without the necessity of storage.

This was the plan that New York capitalists had in mind when they secured as a gift the franchise that Englishmen are to pay \$3,000,000 for. They did not get very far along before they met the all-powerful opposition of the New York Central Railroad and the allied trunk lines that monopolize the traffic into New York, and have been steadily ruining the canal. A few figures tell the story. In 1885 the canal carried 69,000,000 bushels of wheat from Buffalo to New York. Last year it carried only 14,000,000 bushels.

While the Vanderbilts have no direct interest in the Cataract General Electric Company and the Erie Canal Traction Company, they are largely interested in the parent organization, the Niagara Power Company, and the canal boomers were given to understand that too active rivalry would not be advisable. The supplying of electric power to cities for commercial purposes, it was made plain, would be more desirable.

This condition of affairs was the principal reason why so valuable a right was allowed to go to foreign investors. A net profit of \$3,000,000 for less than half of the franchise was considered by the owners to be an opportunity worth seizing.

## KITCHEN TELEPHONES.

A novelty in the extension of the telephone, introduced in San Francisco, may be called a kitchen telephone service. For fifty cents per month the local company will supply an instrument by which orders may be given to the butcher, grocer or other tradesmen, but through which no return answer can be received. A further concession is to allow communication with one other subscriber, but any other communication must be at the rate of five cents per call. The limit upon the service makes it improbable that more than two calls a day will be made, and these can be provided at the low rate. It is inferred that the service is introduced for the purpose of educating the householder as to the advantage and convenience of the telephone, with the expectation that the trial will lead to a demand for the unlimited service at the higher rate.

## MEDAL FOR HIGH-SPEED TELEGRAPHY.

From the Philadelphia Ledger.

By awarding one of its most important prizes to Patrick B. Delany for his system of high-speed telegraphy, the Franklin Institute has given that invention an indorsement that carries confidence with it, for the institute is composed of men of high attainments and scrupulous integrity. It does not bestow its favors lightly, and before awarding such a prize as the Elliott Cresson gold medal, these scientific experts must be satisfied that the invention is practical and useful. It follows, then, that in the judgment of men who ought to know, Mr. Delany has given to the world a method by which from 1,000 to 2,000 words a minute may be telegraphed. Should the Government adopt it, the question of postal telegraphy

would be greatly simplified, if not solved. If, on the other hand, one or all of the great telegraph companies should adopt it and begin transmitting correspondence at a cost low enough to induce the people to use this method largely, the effect on the postal service would be very serious, as it would cut down the only profitable branch of the service, the letter mail.

## MODERN EXPLOSIVES.

A remarkable exhibition of the power of modern explosives occurred recently at Marquette, Mich., in firing an iron range in one of the open pits. The amount of ore brought down from the east side of the pit is estimated at from 10,000 to 13,000 tons. Previous to the blast proper some 300 pounds of "giant powder" were exploded to loosen the ground, doing its work so effectively that some of the cracks in the ore were two inches in width, with, of course, many smaller ones. Immediately back of the larger crack, about forty feet from the end of the hanging, a large hole, thirty-five feet in depth, had been drilled, and in this hole over half a ton of black powder was placed; when the blast went off the ore ahead and forty feet on either side of the hole tumbled over into the huge pit. The latter is of mammoth size, indeed—some 150 feet in depth and more than 500 feet long by 400 feet wide; the entire east side is in solid ore, as is also a portion of the south side.

## CORRESPONDENTS HAD TO BE CAREFUL.

From the London Figaro.

Some strange stories are afloat concerning the way in which certain special correspondents were treated at the coronation of the Czar. The journalists who went to Moscow for the ceremony were supposed to have been treated with the greatest consideration and courtesy, and to have had a good time generally, but as a matter of fact they were as closely watched as if they had been the most desperate criminals, and their lightest words were at once reported to the police authorities.

Several correspondents who in conversation chanced to remark upon the contrast between the barbaric splendor of the coronation festivities and the miserable condition of the Russian peasantry, were handed their passports and given forty-eight hours in which to clear out of the country. Doubtless the representatives of one or two big English papers were treated well enough, but the rank and file of the fourth estate were harassed and badgered by the Moscow police as if they were going about with bombs in their coat-tail pockets seeking the life of the Czar of All the Russias.

## RAPID ADVANCE OF ELECTRIC POWER.

From the Iron Trade Review.

To gauge the progress in the use of electricity, attention should not be directed so much to the fields of electric lighting and electric railways as to that of electric power, a field which is now steadily repaying the arduous pioneering of the past few years. Scarcely a day now passes without the record of some extensive project for the transmission of power, or of the completion of some installation in which the current is used either to supersede steam, or in new places where steam would otherwise have been selected. Mills, mines, factories, machine shops of all kinds, are steadily coming to the use of electric power. The economy and efficiency of electric power is perhaps most forcibly demonstrated by the extent of the orders placed for power apparatus, for it may be confidently asserted that greater engineering talent and closer examination is brought to bear upon electric power apparatus than upon any apparatus of any other order.

The General Electric Co.'s power and mining department presents some figures which illustrate not only the growth in the use of electric power, but also its economy and efficiency. These figures are represented in the unfluctuating horse-power instead of in dollars; the latter would not afford a basis of comparison on account of the fluctuation in prices. The figures take in electric power apparatus only:—

	1892.	1893.	1894.	1895.
Horse-power .....	13,719	18,702	42,379	46,729

In 1896 the missionary work of the previous four years has begun to tell. From January 1

to July 31 the total horse-power of the apparatus amounted to over 48,000. In the same period in 1895 the aggregate orders amounted to 25,737 h.p. From Aug. 1 to Aug. 18 the total amount of power apparatus ordered during 1896 was increased to 62,164 h.p. Such a showing in face of the general dullness in business is remarkable, and perhaps emphasizes the fact that in hard times economy is sought through the use of apparatus which costs least to operate.

## THE NEW TELEPHONE DISCOVERY.

The announcement of a new Russian discovery in long-distance telephoning gives no hint of the method employed. It is probable that the inventor withholds this information until patents can be secured in the different countries which protect foreign inventors.

It is said that by the new process distance is practically abolished, and that by using an ordinary telegraph wire music has been sent nearly a thousand miles with little loss of tone or volume.

This invention and every similar improvement must be a result of principles already familiar to every one. It must have come along the same lines followed by Messrs. Edison and Tesla in their work, but the cable indicates that a long step has been taken beyond anything we have yet accomplished in America.

If ordinary telegraph wires can be used with such success over thousand-mile distances, long-distance telephoning is at once revolutionized. We can telephone a thousand miles now, but the expense necessarily incident to the operation of the long-distance special systems, with their wires of heavy copper, practically prohibits their general use.

If, however, a New York business man can talk to Chicago over an ordinary telegraph wire, the telephone is sure to supplant the telegraph for a very large class of urgent mercantile business. And more than this, it will be a matter of not very long time before we shall be telephoning from New York to London.—*N. Y. World*.

## ONE POUND OF COAL ON A STEAMSHIP.

From the Railroad Gazette.

The value of one pound of coal at different epochs of steamship evolution, as given by Mr. A. J. McGinnis, president of the Liverpool Engineering Society, has been as follows: In 1840 a pound of coal propelled a displacement weight of .578 ton 8 knots; but the earning weight was only one-tenth of this, 90 per cent. of the displacement, representing the hull, machinery, and fuel. In 1850, with iron vessels and the screw propeller, a displacement weight of .6 ton was propelled 9 knots by a pound of coal; but the proportion of cargo had risen to 27 per cent., or .16 ton. In 1860, with higher boiler pressure and the surface condenser, .82 ton displacement was propelled 10 knots, and the cargo was 33 per cent., or .27 ton. In 1870, after the compound engine had come into use, 1.8 tons displacement was propelled 10 knots, and here the cargo formed 50 per cent. of the whole, being .9 ton. In 1885 there were two classes of freight boats; the "tramp" propelled 3.4 tons displacement 8½ knots, with 60 per cent., or two tons of cargo; at the same time, the enormous cargo steamers of the North Atlantic were driving a displacement of 3.14 tons 12 knots, with 55 per cent., or 1.7 tons of cargo. On the modern express passenger steamers the cargo weight is down to .09 ton per pound of coal.

—A telegram of date Saturday last, from Kingsville, Essex county, says that a large pump was placed in the oil well on the Finlay farm lately, struck by the Pelee Gas and Oil Co., Pelee Island, and by an actual test yesterday five barrels of oil per hour, or over 100 barrels per day, was pumped. The oil tests 40 per cent. The well also supplies gas for pumping and lighting purposes, and for running drilling machinery in another well being put down about 400 yards distant. For the present the oil will be taken per boat to Sarnia and transhipped to Petrolia. An artesian flow of pure water comes up outside the pipe free from mineral, and good for drinking purposes. The Standard Gas & Oil Company have a well near completion, and with the best of prospects, twelve hundred yards away from the Finlay well.