

2.00 PER YEAR

land of St. Pierre, not far from Placentia Bay, Newfoundland, where there is to be a station; and from there, the line is to be carried south, past Nova Scotia, Cape Breton and Cape Sable, to its destination. Early in April, special steamers are to leave France, to make careful soundings along the whole line of route. The entire length of the cable will be nearly double that of either of the present Atlantic cables, or 3,341 nautical miles. The cable of 1865 is 1890 miles while that of 1860 is 1851 miles.

In construction, the new French cable will resemble those now existing. The conductor is now formed of six strands of seven copper wires, and weighs three hundred pounds to the mile. The French conductor will weigh four hundred pounds to the mile. Round this conductor are four folds of gutta percha, and four coatings of insulating compound, and covering all are ten galvanized iron wires, done up in strands of Manila hemp. If the French cable the buoy is saturated with tar, for its preservation. The shore ends will weigh twenty tons to the mile, twenty miles of which tremendous wire will be laid on each side of the Atlantic. These ends gradually taper, and will be joined by seventy miles on each side of intermediate cable, similarly constructed in the middle, and differing only in the covering, which is made stronger, to guard against chafing on rocks. At the end of these intermediate portions, if deep sea cables is laid through the remaining distance.

Every submarine cable that has so far been laid has, in some respects, been superior to that which preceded it, and the French cable will probably excel all others.

The value of a cable is judged by its power of resistance to the passage of the electric current through the conductor. Bad materials which absorb the current, or furnish hidden leakage allow it to escape, give rise to a low rate of resistance, which is but another name for a bad cable. The amount of resistance is now measured by units—

The Persian Gulf Cable had a standard of fifty million units, the Atlantic Cable to 1863 had one hundred millions. In the decade of 1866 it was raised to a hundred millions, and now in this French cable the contract standard is two hundred million units. The two Atlantic cables have gained so much since their completion, that at times last year they gave

Already about 1600-miles of the French Atlantic cable have been made, and six hundred miles are now on board the Great Eastern. The rope is made at the rate of 200 miles per week, and is expected to be completed by June. Three large cable tanks, of wrought iron, have been built on the ship, and bolted to its side, with every precaution for safety. Three ships are to accompany her, and two or three French frigates also, the whole expedition forming a small flotilla. Every new line that is thus successfully laid will involve a greater certainty of communication, and will by increasing competition, reduce the rates.

WOMEN AS DESIGNERS.—The great increase in the number of illustrated books and papers at the present time, is opening a new field for the skill and industry of women. Several of the English magazines owe their choicest illustrations to the genius and culture of young women who have learned to draw on wood. Many of the designs in *London Society* and *Belgravia* are furnished from this source; and some of the most amusing, sporting pictures in *Punch* are from the pencil of a young lady who can draw and write with equal dexterity and freedom. Many of the finest illustrations to the *Riviera Magazine* are from the pencil of Miss Lucy Gibbons; while drawings, as ready as words, by Miss

finely refined sentiment and great fertility of invention. Miss Mary H. Stone also draws for the *Riverside*, and is now engaged on a series of illustrations for a book to be published this Fall. The illustration entitled "Threading my Fingers through my hair" in the *Galaxy* for August is from the pencil of Miss Mary Hall, a young artist whose compositions combine promptness of no ordinary kind. Miss C. M. Conquest is also giving attention to drawing on wood, and some of her compositions show great taste and culture. In the kindred art of wood engraving, women have also shown a decided capacity. Miss S. B. Fuller has contributed many valuable specimens of

fruit and novelties to the Horticultural and her work is very highly prized. A number of the pupils of the Cooper Art School have been very successful, both artistically and pecuniarily in this specialty. —*Home Journal.*

tion for there will be an open square. The entrance on Fourth avenue will have a two-story portion of about fifty feet in width. The first floor is to be rented for stores. It is proposed to place the property in the hands of trustees who shall manage it in the interests of working for the Board will be furnished to them by the city, and the accommodations will be excellent. A quarter of a million of dollars has already been expended, and it is expected that the entire work will cost about two million dollars.

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