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NEW PATENT SELLING TRICK.

The latest trick of pretending patent sellers is to write to the patentee that it will be necessary to send them 180 copies of the new patent in order to effect a sale. If the patentee does not happen to have the 180 copies on hand, they (the sellers) will obligingly obtain them. If not convenient to send the full amount then, the patentee should remit say \$9 in part payment for the copies, on receipt of which amount the sellers pretend they will go ahead and sell the patent. Many patentees are thus duped. They send the money, the sellers put it in their pockets, and that is what they live upon.

TUNNEL RAILWAYS IN NEW YORK.

The franchise for the construction of what is known as the East River tunnel was granted to the New York and Long Island Railroad Company by the New York City authorities on December 10. The general features of the proposed work have been already described in our SUPPLEMENT, No. 755. It is to cross the East River on the line of 42d Street in this city. The starting point on the Long Island side will be a little over a mile from the shore. It will descend at a uniform grade of 66 ft. per mile until it reaches a point near the middle of the river. There a level section a little over 1,000 ft. in length begins, which will carry it to the New York City shore line. Thence by a grade of 63.35 ft. to the mile it will approach the surface, reaching the ground level at 11th Avenue on the Hudson River. This will give a total length of about 20,500 ft. from approach to approach. Most of the excavation will be in gneiss rock. The tunnel is to be 26 ft. wide and 22 ft. 6 in. high, a size which will be ample for two tracks and for the largest cars. There will be several intermediate stations with passenger elevators to the street surface. One station is to be at the Grand Central depot, and the others may be arranged to connect with one or more of the elevated railroads.

The most impressive feature about the tunnel is its great depth and the crossing underground of the entire city.

The tunnel will give direct railroad communication between Brooklyn and the North, South, East, and West. It will bring the seashore of Long Island in direct communication with the interior of the State of New York, so that excursion trains can carry their passengers directly to the Rockaway or Coney Island sea beaches.

The estimated cost of the tunnel is \$1,000,000 per mile. Its deepest point within the city will be at 2d Avenue, where there will be 118 feet, principally of rock, between it and the surface.

This scheme is in accord with the movement of the day in the direction of giving additional facilities for crossing the Hudson and East Rivers.

The problem of ventilation has been disposed of by the introduction of electric motors and of the electric light. A tunnel to-day may be lighted from end to end, and may have an atmosphere uncontaminated by smoke and gas from engines.

The problem of intercommunication between the opposite sides of the Hudson and East Rivers at New York should be attacked from the standpoint of rapid transit. A number of tunnels should be built, corresponding with the principal cross streets of New York. They could be of smaller size than the present North River tunnel, or this projected East River tunnel, as they would be built to accommodate smaller cars and motors. Each tunnel might cross both rivers and the city, with a number of intermediate stations, corresponding to the different thoroughfares running longitudinally. What the city really needs is rapid transit at a number of points between Brooklyn, New York, and the New Jersey shore. Small tunnels of 10 or 11 feet diameter, like the electric underground railway in London, could be cheaply and rapidly constructed. In London, by working on an average on six faces, as much as two miles of tunnel were driven in one year. It was demonstrated in London, as it was in this city twenty years ago, that such work can be prosecuted in the heart of the city without opening or disturbing the surface of the streets.

If new railroads are to be brought into New York by bridges or tunnels, the establishment of track yards becomes necessary. For these there is no room on the island. This is another indication that the rivers should be crossed by rapid transit lines only. It would be far better to let the railroads, as far as possible, adhere to their present terminal stations, on the shores surrounding New York.

In accord with the ideas of intercommunication between the present city and the adjacent shores is the proposed consolidation of New York and its environs. A board of commissioners is now in existence for investigating this plan, and already a report has been received from the president of the commission, Mr. Andrew H. Green. It is proposed to include New York, Brooklyn, and Staten Island and much adjoining territory in the new municipality. Whether the neighboring cities of the State of New Jersey can be absorbed or not remains to be seen, but the plan which would exclude the 200,000 inhabitants of the adjacent parts of the next State would seem incomplete. Mr. Green, in his report, advocated including Jersey City, which might eventually mean much more than its present municipal district.

OPENING OF THE NEW PULITZER BUILDING.

The Pulitzer building, erected as the publishing headquarters of the New York World, was formally opened on the evening of December 10. Numerous invitations had been issued to leading representatives of the press and government and others, and several thousand guests assembled to inspect the building and take part in the ceremonies. The latter included music, supper, and speeches, and the occasion was one of much enjoyment for all. Seldom has there been so large an assemblage of distinguished people from all parts of the country gathered under one roof. Many governors of States were there, senators, congressmen, judges, lawyers, authors, editors, merchants, and prominent persons in every walk of life.

The building, which stands upon the corner of Frankfort Street and Park Row, in this city, is remarkable for its great height. It is the highest office building in the world, and is the highest structure of any kind in the city. The top of Trinity Church steeple is barely on a level with the floor of the lantern on the dome. In the main structure there are 14 full stories above the sidewalk level, and in the dome there are six full stories. Underground there is one full story devoted to the press room. Besides these there are four mezzanine stories. The total number of floors is 26. From sidewalk to the top of the dome or lantern floor is 309 feet, nearly a hundred feet more than the height of the Bunker Hill monument. It contains 2 miles of wrought iron columns, 16 miles of steel beams, and about 5,000,000 pounds of iron and steel, enough metal to lay 29 miles of railway. There are 142,864 square feet, about 3 1/2 acres, of floor space. There is brick enough in the building for 250 ordinary houses. The composing room is on the twelfth floor. There the type is set and the matrices made for stereotyping. The latter work is executed in the basement, so that the type never leaves the composing room floor.

The editorial offices are elegantly furnished, and the building contains every modern appliance for the tenants as well as for the publishers. It contains 79 rooms devoted to the publishing of the paper and 149 rooms for general office purposes. The success of the World is one of the marvels of the day, and is the result of the extraordinary abilities of its enterprising proprietor, Mr. Joseph Pulitzer, who is justly styled the Napoleon of journalism. The World has by far the largest circulation of any daily newspaper on the globe, namely, 300,000 copies, while financially it is most profitable.

The new building, contents, and land represent a cost of about two millions of dollars, and according to the official certificates published in the World there is no mortgage or indebtedness upon the property.

THE ARTIFICIAL PRODUCTION OF RAIN.

The question as to whether rain can be produced by artificial means is to be tested by the United States government. On motion of Senator C. B. Farwell, of Illinois, a clause was added to the Appropriation bill which provides that, under direction of the Forestry division of the Department of Agriculture, \$2,000 shall be expended in experiments having for their object the artificial production of rainfall by the explosion of dynamite.

In a communication from Senator Farwell the following theories are advanced: "My theory in regard to producing rain by explosives is based partly upon the fact that after all the great battles fought during the century heavy rainfalls have occurred. This is historical and undisputed. Senator Stanford, one of the builders of the Central Pacific Railway, informed me lately that he was compelled to do a great deal of blasting through a part of the country where rain had never been known to fall in any useful quantities and where it has never rained since, and that during the period of the blasting, which was nearly a year, it rained every day. I feel almost convinced that rain can be produced in this way. The dynamite could be exploded on the ground or up in the air, and I think I would prefer the latter. The experiment should be made in eastern Iowa, Colorado, or in western Kansas, somewhere along the railway, and my own idea would be to commence early in the morning and explode continuously for seven or eight hours."

The subject of rain production by means of concussion