

THE EIGHTH AVENUE PLAZA AT THE ENTRANCE TO CENTRAL PARK.

Some weeks ago we presented our readers with a characteristic scene on lower Broadway, in this city. It was a reproduction of a photograph taken during a fire, and showed the great thoroughfare with the traffic in part suspended, while the fire engines were stationed on it. We now show another view in New York. The reader must transport himself some four miles to the north and west of the former place, to the plaza at the corner of 8th Avenue and 59th Street. Here the southwestern entrance of Central Park is situated; from the plaza the continuation of 8th Avenue, Central Park West as it is called, extends to the Harlem River, while to its west the Boulevard opens, and extends in an irregular course to the north.

In the foreground of the cut is seen the rostral column erected by the Italian residents of the United States in honor of Columbus. The beautiful granite column, with projecting bows of galleys and anchors to mark it as a naval trophy, has on its base bronze reliefs of the scenes of Columbus' life. Above one of the bronzes is a marble group of a winged youth or genius with a globe, symbolizing the discoverer's faith in his work, while the noble figure cut from Carrara marble, and representing the great discoverer, overlooks from

the architect has departed from the old brown stone front of the packing box type, and has produced street after street of really beautiful and picturesque city dwellings. In this district, to the west of the Boulevard, is Riverside Drive, winding along the banks of the Hudson River many feet above its waters. To its east, far uptown, is beautiful Morningside Park, overlooking the plain of Harlem. These are among the most picturesque features of the city. On the high ground to the east of the Boulevard, above 110th Street, and between the Boulevard and Morningside Park, is the site for the new Columbia College and other institutions, and for the new Episcopal cathedral.

It is the gateway to this characteristic region that is guarded by the beautiful Columbus monument erected on occasion of the quadri-centennial of the discovery of America.

Laboratory and Science Notes.

Drying Mercury.—When mercury has been used in physical experiments or in gas analysis, it often becomes dirty and wet. If it becomes contaminated with zinc or lead, prolonged treatment with dilute nitric acid may be required to purify it. Washing with water has to be resorted to in such cases as these to remove all soluble impurities. Often in experimental work it

phite is a well-known basis for a silver-plating bath. The hypo bath of the photographer after it has been used for fixing will act as a plating bath. It is enough to put into it the article to be plated with a bit of zinc resting on it, when a coating of silver will soon make its appearance. Medals and coins can be quite prettily plated in this way. Where wire tongs are used for handling negatives, the ends of the tongs will often become quite thickly plated by their repeated immersions in the liquid in the hypo. tray.

The Convertibility of the Dynamo.—Electric fans, such as are constructed for use on the direct current, may be made to give a very simple illustration of the intra-convertibility of the dynamo and motor. If the fan is placed in a window through which a strong draught of air passes, the fan will act as a windmill and will rapidly rotate. If a galvanometer is connected to the ends of the wires, quite a difference of potential will be observed. On connecting the same wires to a source of current, the apparatus again becomes a motor.

History of the Locomotive Whistle.

Messrs. R. Stephenson & Co., in August, 1832, commenced the construction of two locomotives for the Leicester and Swannington Railway Company;



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its summit the metropolis of the land which he found.

The view shown is that of one looking uptown to the north and west. On the right appears Central Park, the city's great pleasure ground, a region which is within the memory of many New Yorkers as a dismal wilderness of rocks and shanties; but which now is one of the most beautiful of pleasure grounds, and what is more to the purpose, one which is thoroughly utilized by the citizens. Along the Park runs the continuation of Eighth Avenue or Central Park West, from whose western side many stately buildings look down upon the foliage and lawns of the great pleasure ground. Running a little more to the west, in a slight diagonal from Central Park, is seen the Boulevard, the successor of the old Bloomingdale Road. This impressive street is very wide, providing two parallel roads. Much of its surface is now paved with asphalt, and through its center runs a series of grass plats, with a double row of elms therein. Along the sides are two other rows of elms, the four series of trees shading and marking the course of a picturesque and unique roadway. It runs through one of the most beautiful residential portions of the city, a region comprising the Riverside Drive and the streets contiguous to it. Many of the streets are paved with asphalt, and they are characterized by one of the most varied and picturesque arrays of dwelling houses that have ever been erected in New York. In this region

gets wet with pure water. The drying of mercury in such cases is quite troublesome, unless time can be given to it. Where time is at the experimenter's disposal, the use of porous battery cups is highly to be recommended. The wet mercury is poured into one of these and is shaken about a little and left standing. The porous cup absorbs the water by capillarity, and it evaporates. In a few hours the mercury is perfectly dry. If no porous cup is at hand, the wet mercury may be poured into a tumbler and one or two pieces of thick blotting paper are thrust down between the mercury and the glass, so that several inches project above its surface. These act as described, absorbing by capillarity the water. This evaporates from the paper above the mercury. The meniscus of the metal tends to cause the water to settle down against the sides of the porous cup or against the paper, when it is at once absorbed.

Caps for Acid Bottles.—When strong acids or liquid chemicals are carried about in glass-stoppered reagent bottles, there is constant danger of the stoppers coming out, and of the contents escaping. For such bottles India rubber finger caps, such as are sold in the rubber stores, form admirable covers. These are sprung on over the stoppers and flange of the neck. They not only secure the stoppers from coming out, but even if a stopper loosens or leaks, nothing can escape.

Hypo. Slops for Silver Plating.—Sodium hyposul-

these had cylinders 14 inches in diameter, 18 inches stroke, and four coupled wheels of 4 feet 6 inches diameter. The wheel base was 4 feet 9 inches and the total length of the frame 17 feet. The first of these engines was named Samson, the second Goliath.

One of the first events in the history of the Samson was that it ran into a horse and cart crossing the line at Thornton, the cart being loaded with butter and eggs for the Leicester market. The engine driver had but the usual "horn," and could not attract attention. Mr. Ashlen Bagster, the manager of the railway, went the same day to Alton Grange to report the circumstance to Mr. George Stephenson, who was one of the directors and the largest shareholder. After various ideas had been considered, Mr. Bagster remarked: "Is it not possible to have a whistle fitted on the engine which steam can blow?" George Stephenson replied: "A very good thought. Go and have one made;" and such an appliance was at once constructed by a local musical instrument maker. It was put on in ten days, and tried in the presence of the board of directors, who ordered other trumpets to be made for the other engines which the company possessed. The accident at Thornton was, therefore, the origin of the steam whistle; and the bell whistle, as we now have it, is simply an improvement upon the steam trumpet.