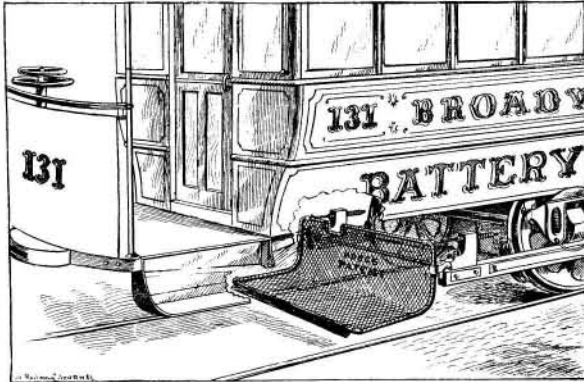


THE FIFTH AVENUE THEATER, NEW YORK.

This beautiful structure, of which Mr. Francis H. Kimball is the architect, represents one of the most carefully elaborated plans of a substantially built, conveniently arranged, and artistically decorated building, devoted to amusement, of any of which New York City can boast. Considering the location of the theater and the circumstances under which it was built, the shape of the lot, and the surrounding structures, it would be difficult to suggest improvement. The columns of the portico and the iron structure of the first story back are the same as they were in the former building, which was destroyed by fire, but the cornice and balustrade are parts of the new work. Above the first story all the ornamental features and cornices are wrought in white terra cotta. This exterior, so elaborate, on account of the employment of this medium of terra cotta, while maintaining in a good degree the delicate and graceful characteristics of the period of the Italian Renaissance, expresses in its constructive details the continuity of an idea in harmony with the purpose of the building. It embodies in itself suggestions of the uses of the interior, the grand divisions or principal parts of a theater, namely, the auditorium and the stage, being illustrated most effectively in the architectural composition. The richness and elaboration that such a treatment is susceptible of in clay are very apparent in this illustration, and the architect has availed himself of his opportunities with judgment and a fertility of invention. He has been worthily sustained in this by the skillful and successful mechanical execution of his decorative scheme. These beautiful forms in terra cotta take the shape of theatrical emblems, and abound in the ornamental part of the 28th Street facade. The panels of the large pilasters between the windows of the balcony foyer are rich in these emblems—the grand portico, the large window of the balcony and gallery foyer, and the exit doors from the grand foyer, on the parquet floor, forming the composition of the exterior of the auditorium.

On either side of the central feature of the balcony foyer are windows, with ornamental terra cotta panels between, the one denoting Comedy, the other Tragedy. Again, the mullions of the windows of the gallery foyer are in the form of caryatides supporting the main cornice, and in the panels of the larger piers are bas-reliefs representing dancing and singing figures, all these being of terra cotta. Although the leading

architectural lines of the 28th Street side of the theater are carried throughout the entire front there, the stage portion is less elaborate than that of the auditorium just described, calling for but little decoration comparatively in terra cotta; but sufficient of that material is used in the more important division last mentioned to prove not only the adaptability of clay for fine effects in architectural composition, but to exemplify, also, the progress of the manufacture of terra cotta work in this country, where it was never used until 1853, when Mr. James S. Renwick, the well-known architect of the



HOGG'S CAR FENDER.

Fifth Avenue Cathedral, made an attempt to introduce it as a building material and as a substitute for cut stone work here in New York City.

We are indebted to the Architects and Builders Edition of the SCIENTIFIC AMERICAN for the use of the cut and article.

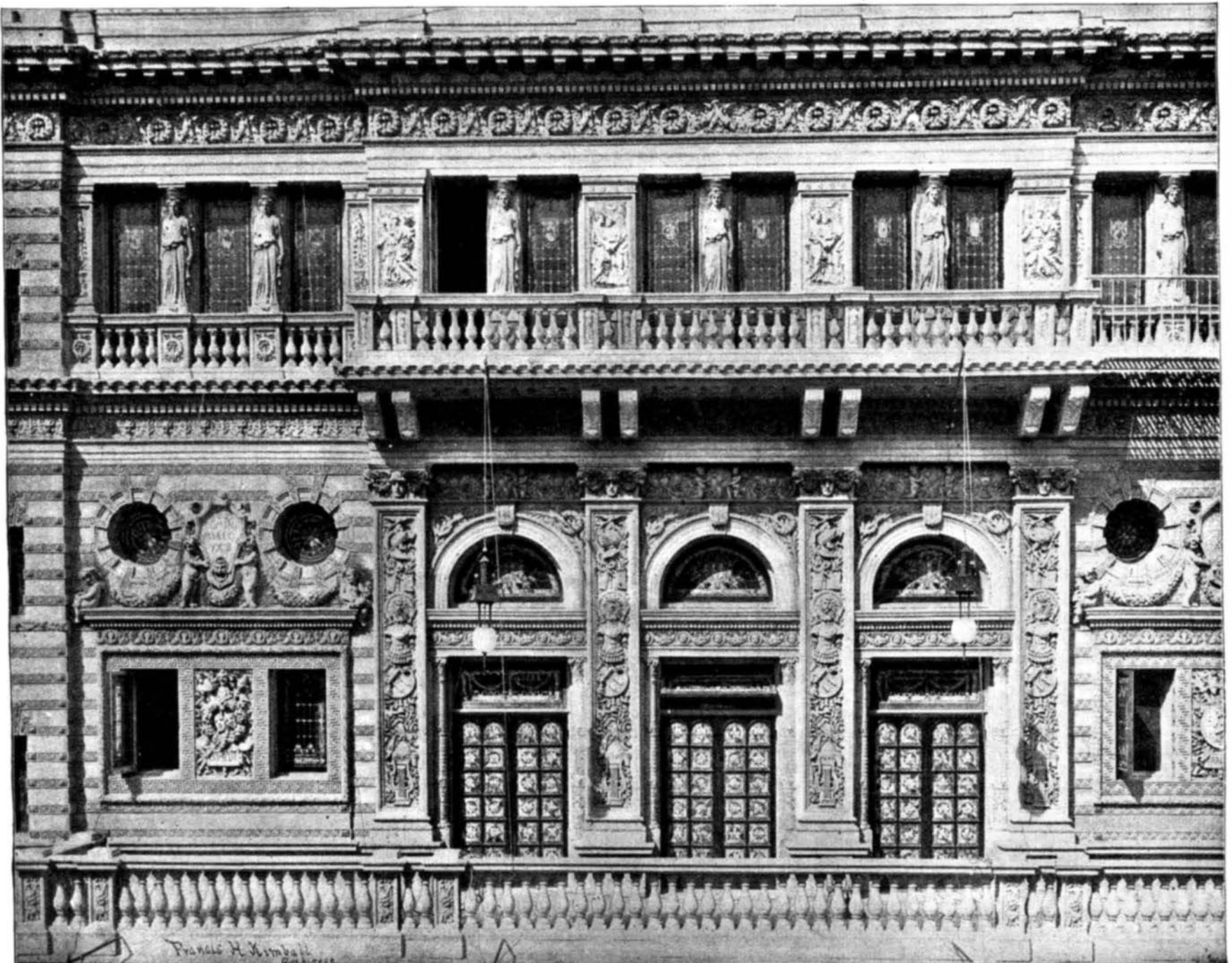
AN IMPROVED CAR FENDER.

This fender is of light, strong, and simple construction, and is designed to be attached to the running gear of a car under one of the end platforms, as shown in the illustration. It has been practically tried for some months on the Broadway cable road, New York City. The improvement has been patented by Mr. Franklyn S. Hogg, of No. 152 East Forty-ninth Street, New York. The fender is of skeleton construction, its frame carrying a bed preferably of woven wire, and it is attached to the car by means of brackets, one on each side of the car truck, to which the brackets are

secured by bolts. On the vertical portion of the fender frame, at each side, are rearwardly extending lugs, pivotally connected with ears of the brackets by a cross shaft, whose ends are threaded and have lock nuts, affording more or less frictional engagement with the ears. To hold the fender in normal position, a screw rod is pivotally connected with an upward extension of the frame at each side, and these rods pass through standards of the brackets, a lock nut on each rod engaging the forward face of the standard, while at its rear a spring is coiled around each rod, to bear against the rear of each standard and against lock and jam nuts near the ends of the rods. According to the tension of the springs and the setting of the nuts the horizontal member of the fender may be held at a given distance from the ground, and the distance it will drop under a load may thereby be regulated.

The Invention of the Screw Propeller.

The introduction of the screw propeller into use was accomplished simultaneously by Smith in England and Ericsson in the United States. Both were men of great ability. Each considered himself the inventor of the screw propeller. Each took out patents in England in 1836 and in the United States two or three years afterward. Each patent differed radically from the other. Neither patent, for the general application of the screw propeller, was sustained either here or abroad, and neither Smith nor Ericsson patented additional improvements on the screw propeller. Each built small screw vessels in England that were successfully tried in 1837, Smith's being of six tons burden, with a wooden screw, driven by a six horse power engine, and Ericsson's, named the Francis B. Ogden, having about double the tonnage and power. Each built larger screw vessels that were successfully tried in England in 1839. Smith's vessel, the Archimedes, being upward of 200 tons burden, and driven by engines designed by Rennie, of 90 horse power, circumnavigated the island of Great Britain in May, 1840. Ericsson's vessel, the Robert F. Stockton, smaller and with less power, was tried in England under steam, and then, in April, 1839, crossed the Atlantic under sail. Each introduced the screw propeller on merchant vessels in 1840. Each introduced the screw propeller on war vessels in 1843, Ericsson on the Princeton and Smith on the Rattler.—*E. B. Stevens, in Cassier's Magazine.*



THE FIFTH AVENUE THEATER, NEW YORK—FRANCIS H. KIMBALL, ARCHITECT.