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MAKING THE MOULD.

THE BEECHER STATUE

AND HOW IT WAS MADE.

The Beecher statue, erected in front of the Brooklyn City Hall, was unveiled on the 24th of June, by Mr. Beecher's granddaughter, a little girl of seven years. All classes and conditions of people contributed to the fund and all classes were represented at this ceremony.

The statue is of bronze, nine feet in height, the work of Mr. J. Q. A. Ward. It stands upon a pedestal of polished granite ten feet high. This, in turn, rests upon a base of unpolished granite. On the right side of the pedestal is the figure of a kneeling slave girl, clinging to it with one hand, and with the other laying a palm branch at the feet of her great friend, toward whom her face is upturned with awed admiration. On the left side are two barefooted children; one, a boy, sitting on his coat that is flung down carelessly; is holding up a girl, who, with a downward look, is laying a wreath at the feet of the statue. These two figures recall Mr. Beecher's departure from Plymouth church for the last time with his arms about two children, who had strayed into the house to listen to music after the services. The three supplementary figures are of life size.

The statue represents Mr. Beecher in his familiar attitude and attire. His head is uncovered, and his soft felt hat is in his hand. Over his ordinary dress, which includes a straight-buttoned clerical coat, is a heavy overcoat, with cape thrown back over the right shoulder, and the front turned back, exposing the quilted lining. The figure stands firmly, in characteristic poise; the face inclines slightly to the right and the eyes have a far-seeing glance.

On the front of the pedestal are inscribed

Mr. Beecher's name, with the dates of his birth and death, 1813, 1887. On the back is the following inscription: "The grateful gift of multitudes of all classes, creeds and conditions at home and abroad to honor the great apostle of the brotherhood of man." The casting was done in New York last May. The whole cost has been \$35,000.

The statue, says the *Scientific American*, is remarkable as being cast practically in a single piece, the head being of one piece with the body. Originally metallic statues were made in small pieces and were united by rivets or soldering. Some were cast solid. The present practice is to cast them hollow, and as thin as possible. This secures rapid cooling and tends to prevent any separation of the constituents of the alloy. It also economizes in metal.

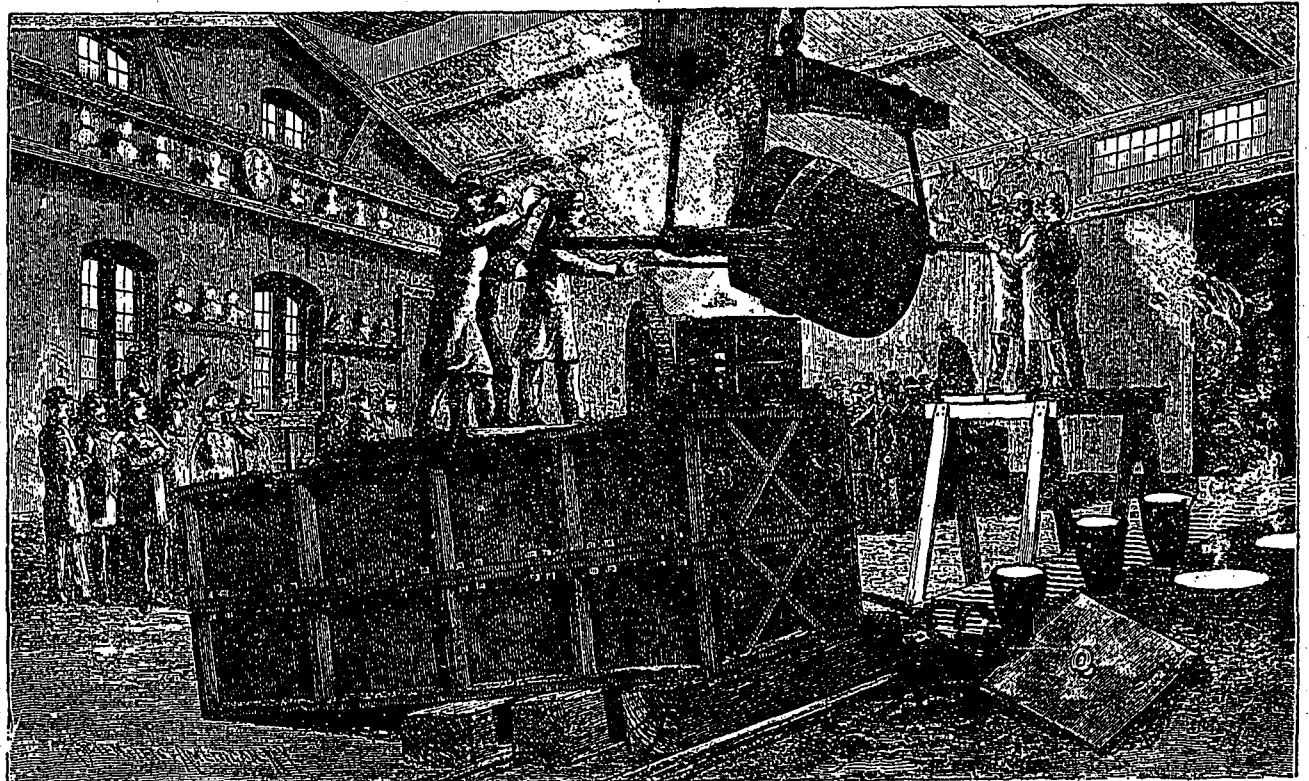
The first step in making a statue is the production of the plaster model. This is

supplied by the artist, and it comes from his studio of the exact size required for the final statue. The original studies in the case of colossal statues such as the present may be very small, but before the artist is done with his work the full sized model is produced.

In the present case the statue was to be about nine feet high. The area of the flask in which the mould was to be made was seven feet four inches wide by thirteen feet six inches long. The model was established upon the lower section of the flask and the work of building up the mould began. The sand used is mined in France. It possesses to a high degree the property of consolidating, yet it is very porous. A famous bed of the material is at Fontenay-aux-Roses, about 16 miles from Paris. This is compacted by wooden mallets and hand rammers of different shapes. As the artist produces his statue without any reference to its capacity for "drawing" from the mould, the bronze founder has to adapt his work to the most exacting conditions of undercutting and complicated outlines. The mould is therefore built up in very numerous sections, some of them extremely small. An exact count was not kept, but in the present statue between one thousand and fifteen hundred pieces were used in the mould. In the first cut, where the operation of moulding the head is shown, the idea of the subdivision of the mould appears. It will be seen that its sec-

tions represent irregularly shaped bricks, all fitting together with the utmost nicety and accuracy. The statue is eventually completely embedded in clay. The mould has now to be opened up, the edifice of over a thousand sections is carefully taken down and the model is lifted from its resting place upon the lowest flask section. The mould is next rebuilt, the inner surface receiving a coating of foundry facing, and the interior is rammed full of clay to form the core. This core need not be solid. Some spaces may be left in it for the gases to collect in. Thus the mould is a second time complete and intact, but is filled with a clay figure instead of a plaster one.

The mould is a second time dismantled and the core is taken in hand. From its entire surface a layer of clay is removed, to average, as nearly as possible, one quarter of an inch in depth. This delicate operation provides the space for the metal to occupy in the casting process. This core, thus reduced in size, is replaced upon the flask and is properly supported. The mould is a second time built up, surrounding in this case the reduced core. A number of channels or gates are worked in the mould to allow the metal to run through to different parts of the figure. These resemble somewhat the trunk and branches of a tree. They start of comparatively large section near the pouring reservoir, and fork and diminish repeatedly, reaching the space between core and mould in many places.



CASTING THE STATUE.

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