(No Model.)

E. BRESLAUER.

APPARATUS FOR MAKING SAND MOLDS FOR CASTING METAL.

No. 315,116. Patented Apr. 7, 1885.

Fig. 1.

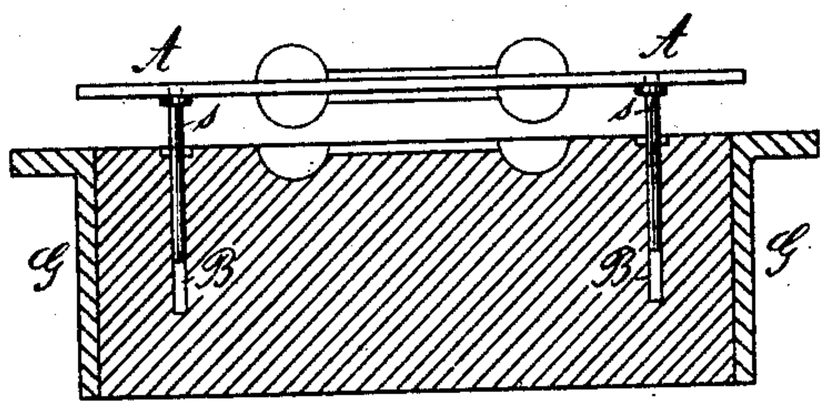


Fig. 2.

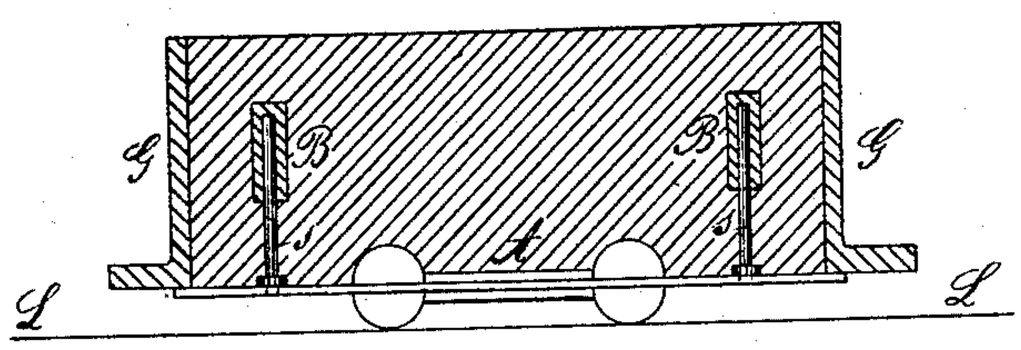


Fig. 3.

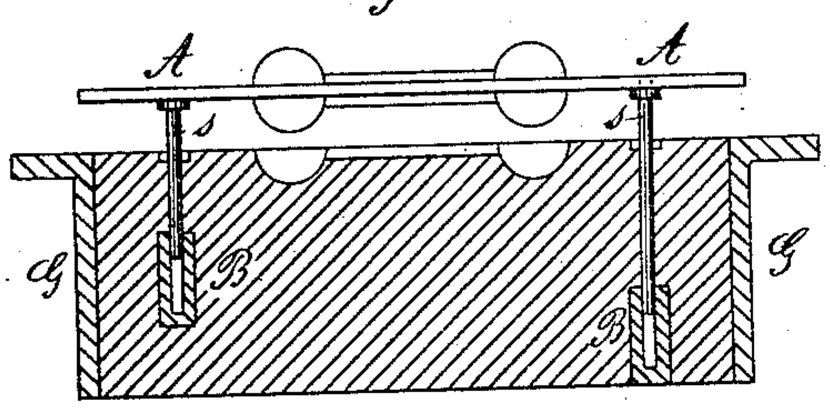


Fig. 4.

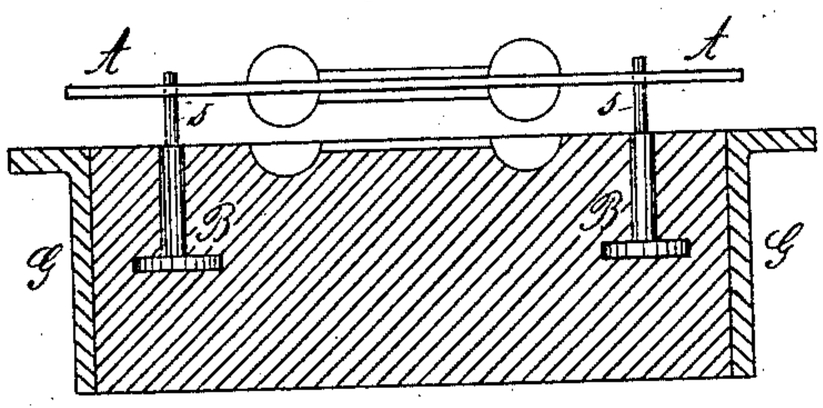
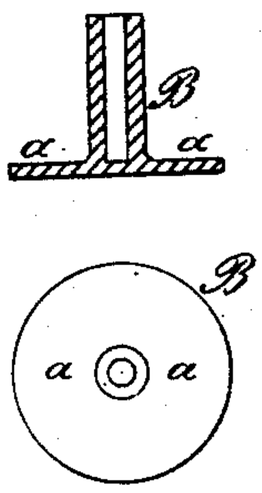


Fig. 5.



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Witnesses:

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UNITED STATES PATENT OFFICE.

EDWARD BRESLAUER, OF BERLIN, GERMANY, ASSIGNOR TO THEODORE ROLLE, OF SAME PLACE.

APPARATUS FOR MAKING SAND MOLDS FOR CASTING METAL.

SPECIFICATION forming part of Letters Patent No. 315,116, dated April 7, 1885.

Application filed December 27, 1884. (No model.)

To all whom it may concern:

Be it known that I, EDWARD BRESLAUER, a subject of the Kingdom of Prussia, and resident of the city of Berlin, Prussia, have invented a new and useful Improvement in Molding, of which the following is a specification.

My invention relates to an improvement in the preparation of sand molds; and the object of my improvement is to facilitate the withdrawal of the pattern from the sand without disturbing the mold, so as to enable an unskilled workingman to perform the work of a skilled molding-hand. I attain this object by the arrangement illustrated in the accompanying drawings, in which—

Figure 1 shows a vertical section of the lower part of a flask, G. The pattern or pattern-plate A, having the pattern rigidly attached thereto, is shown lifted a little out of the sand, and has attached to it two or more pins or "guides," *s*, at suitable places, the holes B in the sand guiding the pins when the pattern or pattern-plate A is being withdrawn, thus preventing the same from being lifted in the wrong direction, whereby the mold would be partly or altogether destroyed. The guides *s* may have a round, square, or cross-section, or any other suitable shape.

Figs. 2 and 3 show another arrangement of the same object. The pattern or pattern-plate A has attached pins *s*, which are guided in special guiding-pieces B, embedded in the sand, from which they may be removed before or after casting the mold. In the first place the guiding-pieces B must be placed at the bottom of the lower part of the flask G, as shown on the right-hand side of Fig. 3, so that when the flask is lifted the guiding-pieces B would drop out by their own weight.

The way in which the mold is formed in this arrangement is as follows: After laying the pattern or pattern-plate A, Fig. 2, on a board, table, &c., which is indicated by the line L L, the guiding-pieces B are placed on the pins *s* and the flask G over the plate. The sand is then rammed in in the usual way. The flask is now turned over, the upper part of the flask put on the mold and finished in the usual way.

The guiding-pieces B may be cylindrical, as in Fig. 2, or have the shape shown in Fig. 5, the sand pressing on the horizontal projection *a* of the guiding-pieces B, and thus preventing the same from being pulled out of the sand when the pattern or pattern-plate is being withdrawn.

The guiding-pieces B may also be lined with metal to procure better sliding surface; but I desire to be clearly understood that the shapes of the guiding-pieces, as shown, are but two of the many that may be used.

The arrangement may also be reversed, as shown in Fig. 4, the pattern or pattern-plate A having holes *b*, through which the pins *s* secured to the supports B pass.

I claim—

1. The combination of a pattern or pattern-plate having the pattern rigidly attached thereto, a flask, guides, and devices for maintaining the guides in a vertical position, such devices being molded in the sand and unattached to the flask or its appliances, substantially as described, and for the purpose set forth.

2. The combination of the flask G, the pattern or pattern-plate A, the guides *s*, and the guiding-pieces B, substantially as described, and for the purpose set forth.

3. The combination of the flask G, the pattern or pattern-plate A, and guides *s* with supports B, substantially as described, and for the purpose set forth.

In testimony that I claim this as my own I have hereunto set my name in the presence of two subscribing witnesses.

EDWARD BRESLAUER.

Witnesses:
B. ROI,
JOHN R. ROSLYN.