J. B. STAMOUR.

Mold for Casting Temple-Roller.

No. 208,997. Patented Oct. 15, 1878.

Fig. 1.

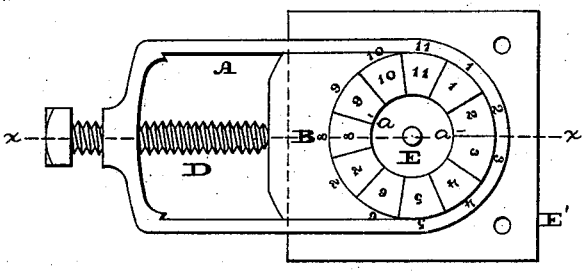


Fig. 2.

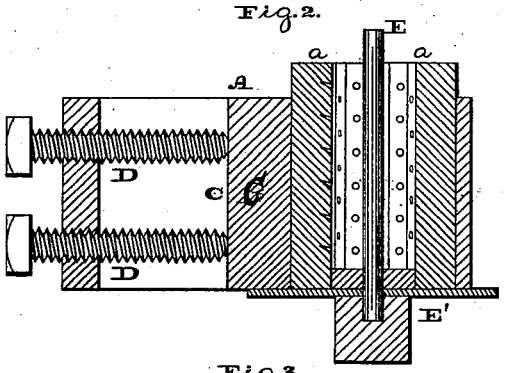


Fig. 3.

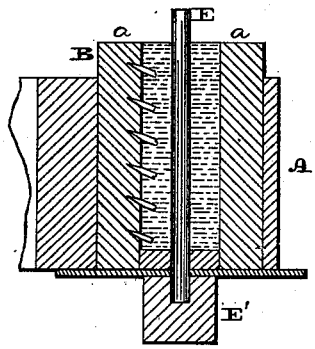
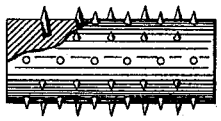


Fig. 4.



Witnesses:

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UNITED STATES PATENT OFFICE.

JOHN B. STAMOUR, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR OF ONE-HALF HIS RIGHT TO JAMES SMITH & CO., OF SAME PLACE.

IMPROVEMENT IN MOLDS FOR CASTING TEMPLE-ROLLERS.

Specification forming part of Letters Patent No. **208,997**, dated October 15, 1878; application filed August 9, 1878.

To all whom it may concern:

Be it known that I, JOHN B. STAMOUR, of the city and county of Philadelphia, and State of Pennsylvania, have invented a new and useful Improvement in Molding and Casting Temple and other Toothed Rollers, which improvement is fully set forth in the following specification and accompanying drawings, in which—

Figure 1 is a top or plan view of the mold, flask, and core employed. Fig. 2 is a longitudinal section thereof in line *x x*, Fig. 1. Fig. 3 is a section, showing the casting. Fig. 4 is a side elevation, partly sectional, of the roller produced.

Similar letters of reference indicate corresponding parts in the several figures.

My invention consists in forming a roller of molten material, with teeth or pins inserted therein in the process of casting.

I employ a cylindrical mold in sections, with perforations on the inner faces of the sections for the reception of the points of the teeth or pins, the remaining lengths whereof project into the space of the mold, so that when the molten material is poured into the mold it closes around the projecting lengths of the teeth, and when cool it holds the teeth securely in place, whereby a toothed roller may be produced with rapidity and at small expense, and other advantages are presented, as will be hereinafter set forth.

Referring to the drawings, A represents the flask, which in the present case has the inner face of one end of semi-cylindrical form.

B represents the mold, which is formed of metal, of sections *a* of a cylinder, the sections producing a perfect cylinder, which is placed against the semi-cylindrical end of the flask A, and a clamp, C, fitted against the mold on the side opposite to said end, for securely holding the sectional mold to the flask, one or more screws, D, passing through the relative end of the flask and pressing against the clamp for tightening purposes.

The inner faces of the sections *a* are perforated, the perforations being spaced relatively to the number and location of the teeth desired for the roller, and adapted to receive the points of said teeth prior to casting.

A core-pin, E, is employed for forming the central opening in the roller for the passage of the shaft or journals of the roller; but said opening may be bored or drilled subsequent to casting.

The operation is as follows: The sections *a* are studded with the teeth, as stated, arranged in proper order in the flask to form the cylindrical mold, and firmly clamped to the flask. It will be noticed that while the points of the teeth are covered or inclosed by the walls of the openings in the sections, the remaining lengths of the teeth project into the space of the mold. The core-pin E projects centrally through the mold, and the plate E′, from which the pin rises, constitutes the bottom of the mold. The molten material is poured into the mold so as to fill the same, and it closes around the projecting portion of the teeth. When the material is cold the clamp C is loosened, and the sections *a* are separated, or the mold carefully broken up, whereby the toothed roller is accessible; and it will be found that the shanks or main lengths of the teeth are firmly embedded in the material of the roller, and consequently securely held to the roller.

By this invention I am enabled to produce toothed rollers in large numbers with ease, rapidity, and uniformity; and as the teeth are not driven into the roller, they remain intact during the manufacture of the rollers.

Another advantage is, that the securing of the teeth is accomplished at the operation of casting the roller, so that the cost of the product is greatly reduced.

Moreover, by the operations stated, I am enabled to secure steel teeth in rollers of soft or hard metal.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The mold consisting of a cylinder formed of a series of metallic sections with perforations on their inner faces, substantially as and for the purpose set forth.

2. The series of sections *a*, forming a cylindrical mold, B, and clamped to the flask, substantially as and for the purpose set forth.

3. The flask A, sectional mold B, clamp C, and core-pin E, combined and operating substantially as and for the purpose set forth.

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Witnesses:

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