

(No Model.)

O. J. MAIGNE.
PRINTER'S ROLLER MOLD.

No. 466,568.

Patented Jan. 5, 1892.

Fig: 1.

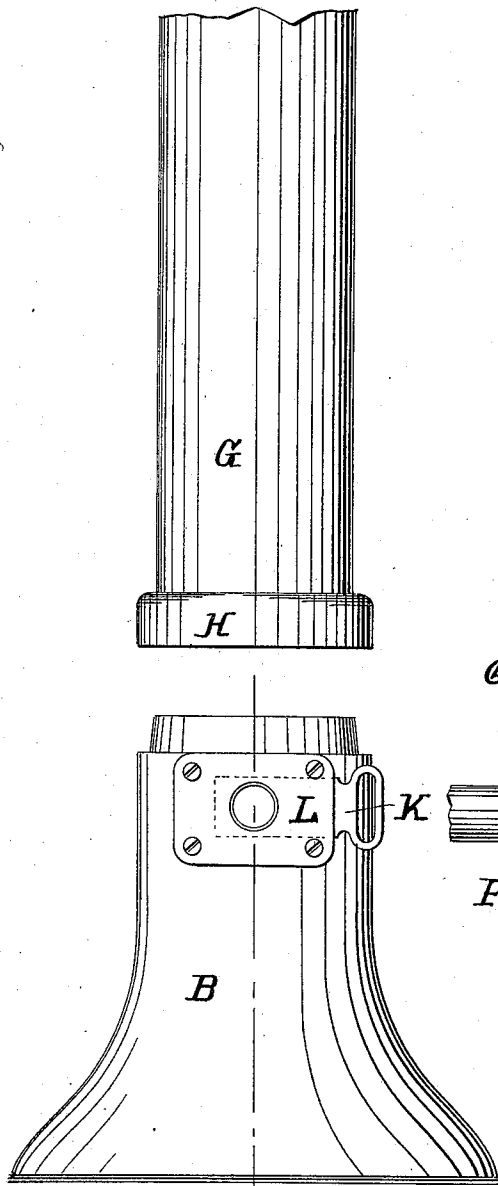
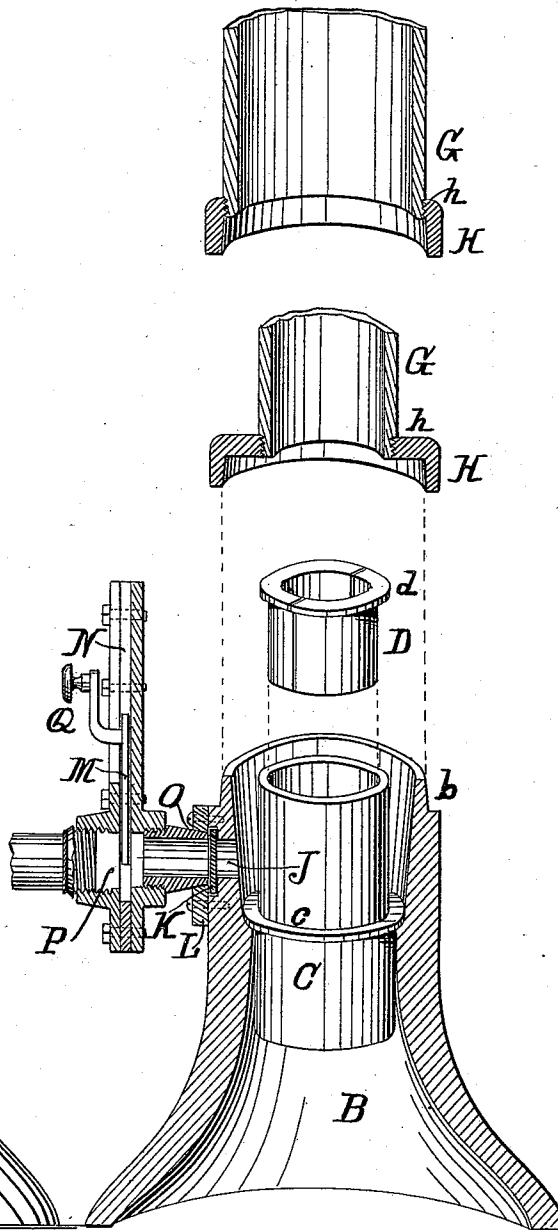


Fig: 2.



WITNESSES:

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PRINTER'S ROLLER-MOLD.

SPECIFICATION forming part of Letters Patent No. 466,568, dated January 5, 1892.

Application filed April 18, 1891. Serial No. 389,477. (No model.)

To all whom it may concern:

Be it known that I, OSCAR J. MAIGNE, a citizen of the United States, and a resident of New York city, in the county and State of New York, have invented a new and useful Improvement in Printers' Roller-Molds, of which the following is a specification, reference being taken to the accompanying drawings, forming part of this specification.

My invention relates, particularly, to bases or bungs fitting to and used with various sizes of interchangeable-mold tubes, and to bushings, valves, and other co-operating parts, and has for its purpose an improvement of such apparatus, whereby greater reliability and simplicity of operation and a reduction of the expense and labor incident to the construction and use of such apparatus are attained.

To these ends it consists in the apparatus and its several parts, constructed, arranged, combined, and used substantially in the manner hereinafter described, illustrated, and claimed.

In the accompanying drawings, Figure 1 is a front elevation of one form of my base or bung and one tube or mold adapted for use therewith; and Fig. 2 is a view, partly in section, of my apparatus, showing its several parts, and two different-sized mold-tubes adapted to be used therein.

In the figures like letters of reference indicate like parts.

The base or bung of my apparatus is shown at B, and is provided with the central vertical orifice, as shown in the drawings. This central orifice, at a suitable height, is cut away to receive and support a bushing C, preferably formed with a collar *c* to afford means for such support. This bushing C is of such internal size that it will fit around the largest-sized gudgeon that it is intended to use with the bung. When such sized gudgeon is in use, it snugly fits the bushing and supports the roller-stock in a vertical position. When smaller sizes are to be used, I place a secondary or supplemental bushing D, preferably split, as shown in the drawings, and fitting within the first-named bushing C, within which it may be supported by the collar or flange *d*. The internal diameter of this secondary bushing is adapted to fit around a

smaller-sized gudgeon, and thus enable me to use such smaller-sized gudgeon and the roller-stock to which it belongs with the same bung or base B. For various-sized gudgeons between the one fitting the bushing C and the smallest size I may desire to use in this base, I provide various secondary bushings D, fitted to the various sizes of gudgeons.

To enable me to use various-sized mold-tubes G, I provide collars H, surrounding the lower ends of the mold-tubes, and preferably screwed thereto, as at *h*. These collars H are made of a size sufficient to fit around the conical bearing-surface *b* at the top of the bung B. For this purpose they are, after being secured to the mold-tubes, carefully turned down or reamed out internally to conform to and to fit the conical bearing-surface *b*. I am thus enabled to use interchangeable mold-tubes of various sizes with the same base or bung, and as my bushings fit various-sized gudgeon, I am enabled to adapt my apparatus to the widely-varying requirements of different length and diameter of rollers and of their gudgeons and stocks.

In the drawings are shown my roller-molds broken away from their upper ends, and I do not therefore show the means for centering the upper ends of the stocks. Such means are well known and need not be described.

It will be seen from the foregoing descriptions and the drawings that there is a circular space or channel surrounding the upper part of the bushing C. This channel serves to assist in distributing the roller composition, which I admit through the inlet J, opening into this channel from the outside of the base or bung B. This inlet may be closed by a sliding valve or gate K, working in a suitable way in the surface of the base B and held in position by the plate L. This composition-inlet is continued through this plate L, in which it forms the conical aperture for receiving and snugly fitting around the connection to the composition-kettle. The valve for this kettle connection may be of any of the well-known forms; but for ease of operation, for convenience, and for reliability I use the form shown in the drawings. This consists of a slide-valve M, working in a suitable guide-way N, formed between two or more metallic plates. At one side this apparatus is pro-

vided with the conical mouth O, adapted to fit to the plate L, and on the other side it may be screwed or otherwise secured to the pipe from the composition-kettle. The valve M is adapted to move into and close the connection or opening P, which connects the kettle-pipe with the mouth O. For the operation of the valve I provide the handle Q, extending through a slot to a position convenient for manipulation.

I have now fully described one form of my apparatus. When it is to be used, a base B, adapted to the roller to be cast, is first selected. It must be understood that two or three sizes of the bases are sufficient to answer requirements of all sizes and shapes of rollers. After this I measure with calipers the gudgeons of the stock upon which the roller is to be cast. Usually this is such as to require the use of a secondary bushing D, and if so I select a bushing that is stamped with the size required, as, to facilitate the operation of my apparatus, I have the bushings stamped according to their internal diameters. In many cases, however, the bushing C will fit the gudgeon without the use of the intermediate or secondary bushing, and if it be desired I may have various sizes of the bushings C. These bushings being arranged, I place the gudgeon in position and then select a mold-tube of the desired size, which is placed around the stock that forms the continuation of the gudgeon and tightly fitted to the bearing-surface *b* of the base. It will be understood, as above indicated, that the upper end of the roller-stock may be centered in any of the well-known ways. These various parts being now in position, I take a slide-valve K and insert it in position, thereby closing the valveway under the plate L, but not the inlet J. The nozzle or mouth of the kettle connection may then be fitted to the plate L, and the composition admitted by raising or opening the valve M. When the composition has risen to the desired level, both valves M and K may be closed and the kettle and bung or base disconnected between O and L. The kettle may then be used in a similar manner for other bases and tubes, and the base and mold-tube just filled removed to be cooled, after which they may be taken apart and the roller removed and trimmed. I have not described any means of heating the apparatus or of cooling it, since this may be done in suitable chambers or in any other

manner, and since it does not materially concern my invention.

I have now fully set forth one form of my apparatus and the manner in which it may be used, and I therefore, without detailing the many minor modifications that readily suggest themselves, claim, and desire to secure by Letters Patent of the United States, the following:

1. In combination, in an apparatus for casting printers' rollers, a base provided with a central orifice and a composition-inlet, a valve K and plate L therefor, provided with a conical bearing-surface for fitting around the nozzle of the kettle connection, a bushing for supporting and centering the roller-stocks, fitting in the said central orifice, one or more supplemental split bushings fitting in the said supporting bushing and adapted to snugly fit the various sizes of roller-gudgeons, and a roller-mold tube provided with a flanged collar fitting the said base, but removable therefrom, whereby the said tube may be removed and like tubes of varying sizes substituted, substantially as and for the purposes set forth.

2. In combination, in an apparatus for casting printers' rollers, a base provided with a central orifice and a composition-inlet, a valve therefor, a bushing fitting and supported in the said central orifice, one or more supplemental bushings fitting and supported in the first said bushing and adapted to snugly fit around one or more sizes of roller-gudgeons, and a roller-mold tube provided with a flanged collar fitting the said base, but removable therefrom, whereby the said tube may be removed and like tubes of varying sizes substituted, substantially as and for the purposes set forth.

3. In combination, in an apparatus for casting printers' rollers, a base provided with a central orifice and a composition-inlet, one or more central bushings fitting and supported in the said central orifice, and a roller-mold tube provided with a flanged collar fitting the said base, but removable therefrom, whereby the said tube may be removed and like tubes of varying sizes substituted, substantially as and for the purposes set forth.

In testimony of the foregoing I have hereunto set my hand this 13th day of April, 1891.

OSCAR J. MAIGNE.

Witnesses:

G. M. PLYMPTON,
HAROLD BURNLEY.