

(No Model.)

2 Sheets—Sheet 1.

J. C. BARTON.
APPARATUS FOR MAKING RUBBER STAMPS.

No. 480,420.

Patented Aug. 9, 1892.

Fig. 1.

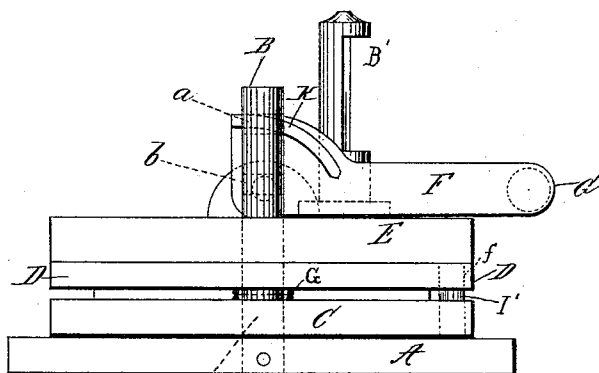


Fig. 2.

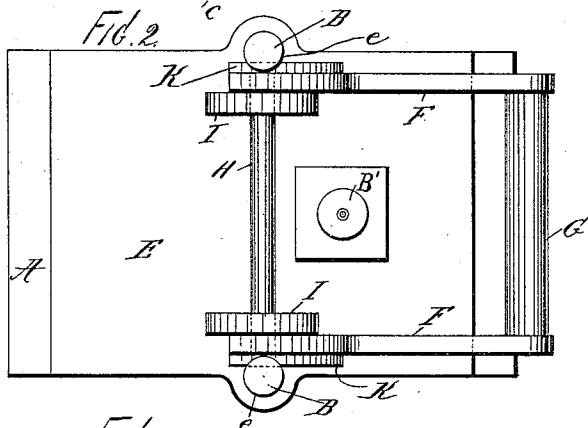
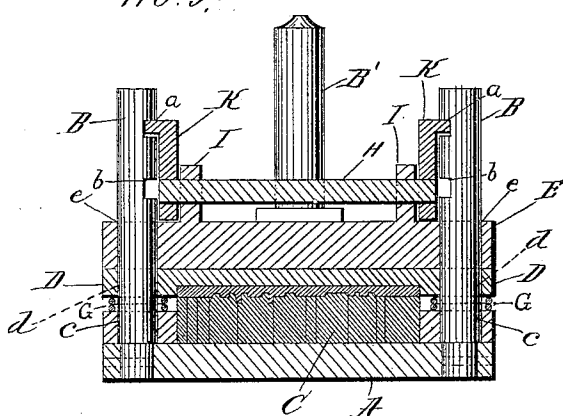


Fig. 3.



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Edward L. Walsh

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(No Model.)

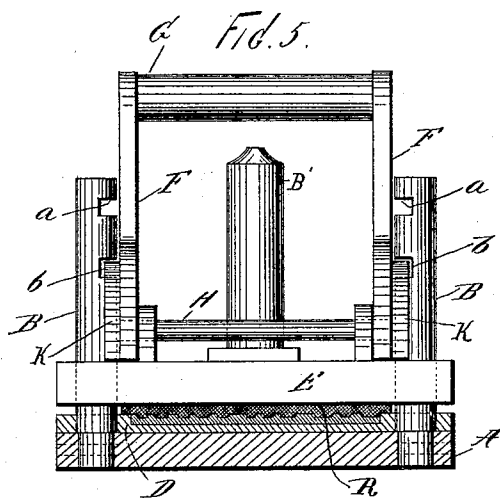
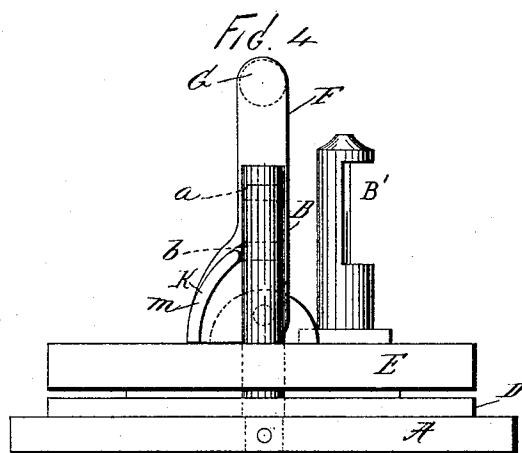
2 Sheets—Sheet 2.

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UNITED STATES PATENT OFFICE.

JOSIAH C. BARTON, OF BROOKLYN, NEW YORK.

APPARATUS FOR MAKING RUBBER STAMPS.

SPECIFICATION forming part of Letters Patent No. 480,420, dated August 9, 1892.

Application filed June 22, 1891. Serial No. 397,010. (No model.)

To all whom it may concern:

Be it known that I, JOSIAH C. BARTON, of Brooklyn, in the county of Kings and State of New York, have invented certain new and useful Improvements in Apparatus for Making Rubber Stamps; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, in which—

Figure 1 is a side view, Fig. 2 a plan view, and Fig. 3 a transverse sectional view, of an apparatus embracing my said invention with the parts arranged as in making the matrix from which the stamping-surface of the rubber stamp is formed. Fig. 4 is a side view, and Fig. 5 is a transverse sectional view, of said apparatus, showing the parts in the relative positions occupied by them during the operation of shaping the stamping-surface of the stamps in said matrix.

Referring first to Figs. 1 to 3, inclusive, A is a flat base, at each side of which is a vertical standard B. Each standard has two shoulders *a b*, one above the other, at its inner side, with said shoulders arranged to receive from below the action of the cams, as hereinafter described. Said shoulders may be most conveniently provided by suitably-shaped notches in the inner sides of the standards.

C is a chase, which has at its opposite sides holes or slots *c c*. This chase has in it, as occasion requires, the type or other surface from which the design of the proposed rubber stamp is to be taken. When said chase is placed upon the base A, as shown in said Figs. 1 to 3, inclusive, the standards pass through the holes or slots *c c*, and thereby retain the chase in proper position upon the base.

D is the cope, which in the position represented in said figures has its face downward. This cope, like the chase C, has holes or openings *d d* at its sides, through which the standards B B extend when the cope is in place, thereby retaining the cope in due relation with the chase below. Above the cope is a follower E. This also has holes or openings, (shown at *e e*,) through which when the follower is in place extend the standards B B, said standards serving to hold the follower in due relation with the parts below and also to serve as guides therefor during the vertical

movement thereof. The follower has at its upper side two levers F, which are pivoted to the follower and which are contiguous to the inner sides of the standards B B. Said levers are connected, as, for example, by a cross-bar, and are most conveniently pivoted to the upper side of the follower by a transverse rod H, which passes through lugs I, preferably made integral with said follower.

Upon the lower or pivoted end of each lever F is provided a cam K. These cams work either against the shoulders *a a* or the shoulders *b b* of the standards, according as the apparatus is used for making the matrix or for shaping the stamping-surface of the rubber stamp, all as hereinafter explained. By turning the levers so as to bring the cams clear of the shoulders in the standards the follower, and therefore the cope and the chase, may be lifted bodily away from the base, and, as hereinafter set forth, when the chase is removed the cope may be reversed—that is to say, turned the other side upward—and the follower made to operate upon and in connection with the said reversed side of said cope when the parts are to be used, as shown in Figs. 4 and 5, for shaping stamps in a previously-formed matrix, as hereinafter described.

In the use and operation of the apparatus for forming the matrix the type or other primary shaping devices are duly provided in the chase. The plastic material, which may be of the usual or any suitable kind, reduced to plastic condition, is placed within the shallow face of the cope and smoothed down to a uniform and level surface by means of a scraper or other suitable device. A layer or thickness of thin cloth or paper is placed upon the type or design in the chase, and above the cloth is placed a layer or thickness of tissue-paper. The cope, with its face downward, is then placed above the chase, and the follower is placed above the cope, whereupon the cams are brought under the shoulders *a* of the standards, and said cams are then actuated by said levers to force downward the follower, which in its turn forces downward the cope upon the chase, thereby causing the type or contents of the latter to indent their surfaces into the plastic material to form the desired matrix.

In practice it is found preferable, to secure

a good impression in the matrix, to lift the follower and after inserting between the under side of the follower and the back of the cope a thin sheet of any suitable material to again depress the follower to deepen and sharpen the impression of the type or contents of the chase upon the plastic material. This may be done as often as is thought necessary or desirable. Since the layers of cloth, paper, or other material need not be used in all cases and form no part of my machine claimed, I do not show them in the drawings. During these reiterated downward movements of the follower the cloth and paper should be removed from the face of the type or contents of the chase. By the operation, therefore, of the apparatus as above described the requisite shape is given to the matrix.

To increase the steadiness of the movement of the cope and the follower when the same are depressed, as described, there is provided at that end of the chase toward which the levers move when depressed a vertical stud or stop I', which extends upward from said chase into the corresponding hole or opening *f* in the adjacent part of the cope and which is of such length as to strike against the under side of the adjacent end of the follower when the latter has been depressed to that degree which affords the most advantageous compression of the plastic material in the cope upon the type or contents of the chase. The matrix having been thus formed, the follower and cope are lifted, both being guided during the lifting operation by the standards, so that the intaglio portions of the matrix are brought directly away from the relief portions of the type or contents of the chase, thereby avoiding any disfigurement of the matrix. The chase is then removed from the base A. The cope is inverted to bring the matrix uppermost and is placed with its back downward upon the base A. The said base is then heated by any suitable means to a temperature proper to dry the matrix. When this is done, the cope is removed and the follower is put in its place, in order that it may be heated to substantially the same temperature as the base. Thereafter the parts are placed in the relation with each other which is represented in Figs. 4 and 5—that is to say, with the cope in its inverted position placed upon the base and the follower placed above the cope, the chase being for the occasion removed from the apparatus. The cams K in this relation of the parts are in position to play under and against the lowermost shoulders *b* of the standards. Preparatory, however, to placing the follower, with its cams K, in the position last described a sheet of prepared rubber R, usually employed in the manufacture of rubber stamps, is laid upon the matrix. The levers are then operated to force downward the follower, which in its turn compresses the sheet of rubber into the cavities of the ma-

trix, thereby causing the rubber to receive the reverse of the shape and configuration which was originally given to the matrix itself by the type or contents of the chase. The follower, being thus snugly brought down upon the rubber and matrix, is there held by the action of the cams against the shoulders *b b*.

It is to be understood that during the operation just described, whereby the rubber is shaped in the matrix, the apparatus itself is maintained at a vulcanizing heat. When the follower has been brought down to its limit to be there retained, as just set forth, the apparatus is removed from the source of heat, which may be a petroleum-stove or any other suitable device, and is slowly allowed to cool, whereupon the shaped stamp is readily removed from the matrix by taking the apparatus apart.

It will be observed that by means of my invention I am able to shape the matrix and thereupon to shape and vulcanize the stamp with one and the same apparatus by simply changing the relative position and arrangement of its parts, as described.

To promote the convenient operation of the movable parts, I provide around each of the standards B a spiral spring G, which presses upward against the superposed part of the device, whether the same be the cope or the follower, and not only tends to facilitate the removal of the parts, but also causes the bearing-surfaces of the cams K to keep in due contact with the shoulders *a*. It is of course to be understood that the springs are used only when the parts are in the relations shown in Figs. 1 to 3, inclusive.

B' indicates a standard attached to the follower and to which a high-grade thermometer and its bulb (not shown) may be attached, the object of such thermometer being to indicate the vulcanizing heat.

What I claim as my invention is—

1. The combination of a base A, standards B, having shoulders *a*, removable chase C, removable cope D, removable follower E, connected levers F, and cams K, substantially as and for the purpose herein set forth.

2. The combination of a base A, standards B, having shoulders *a*, reversible cope D, removable chase C, removable follower E, and levers F, provided with cams K, the whole constructed and arranged for joint use and operation, substantially as and for the purpose herein set forth.

3. The combination of the base A, the standards constructed with shoulders *a b* at different distances from the base A, the removable chase C, removable and reversible cope D, follower E, connected levers F, and cams K, all substantially as and for the purpose herein set forth.

4. The combination of a base A, standards B, having shoulders *a*, springs G, removable chase C, removable cope D, removable fol-

lower E, connected levers F, and cams K, substantially as and for the purpose herein set forth.

5 5. The combination of a base A, standards B, having shoulders *a*, springs G, reversible cope D, removable chase C, and removable follower interchangeable with said cope upon said base and standards and having levers F, provided with cams K, the whole constructed
10 and arranged for joint use and operation, substantially as and for the purpose herein set forth.

6. The combination of the base A, springs G, the standards constructed with shoulders
15 *a b* at different distances from the base A, the removable chase C, removable and reversible

cope D, follower E, connected levers F, and cams K, all substantially as and for the purpose herein set forth.

7. The combination of a base A, standards 20 B, having shoulders *a*, reversible cope D, having opening *f*, removable chase C, having stud-stop I', and removable follower E, having levers F, provided with cams K, the whole constructed and arranged for joint use and
25 operation, substantially as and for the purpose herein set forth.

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Witnesses:

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EDWARD L. WALSH.