

E. D. CONKLIN.
FINGER KEY FOR TYPE WRITING AND SIMILAR MACHINES.
APPLICATION FILED SEPT. 29, 1909.

956,485.

Patented Apr. 26, 1910.

Fig. 1.

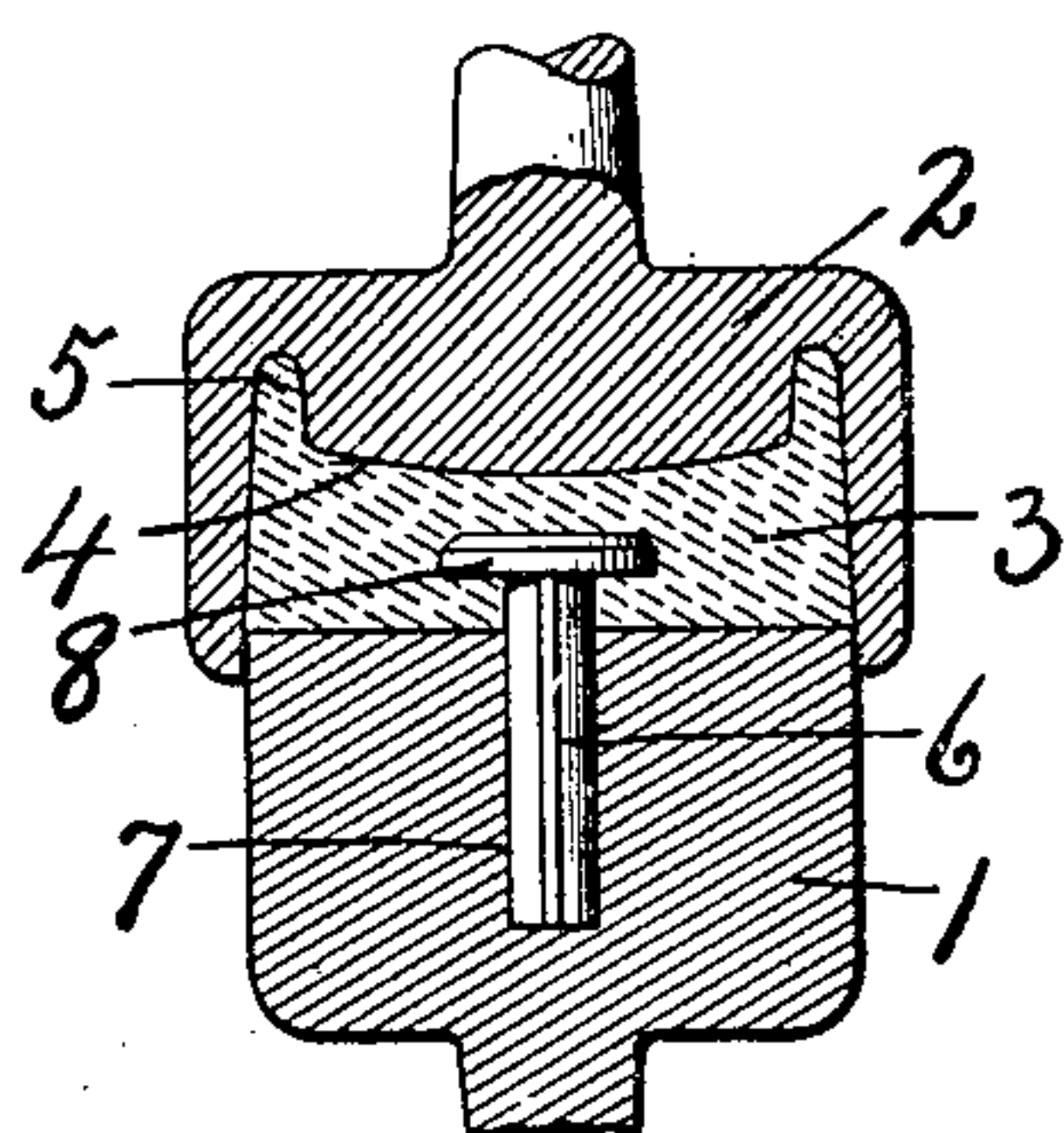


Fig. 2.

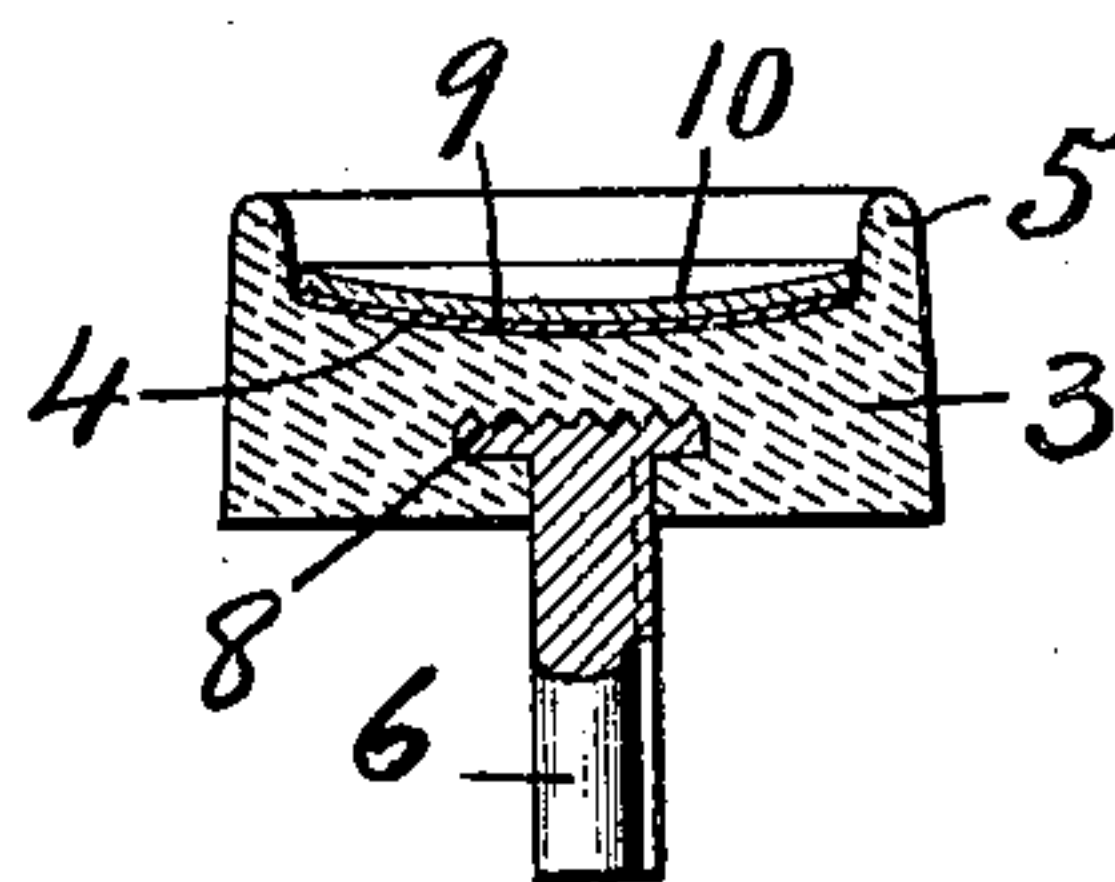


Fig. 3.

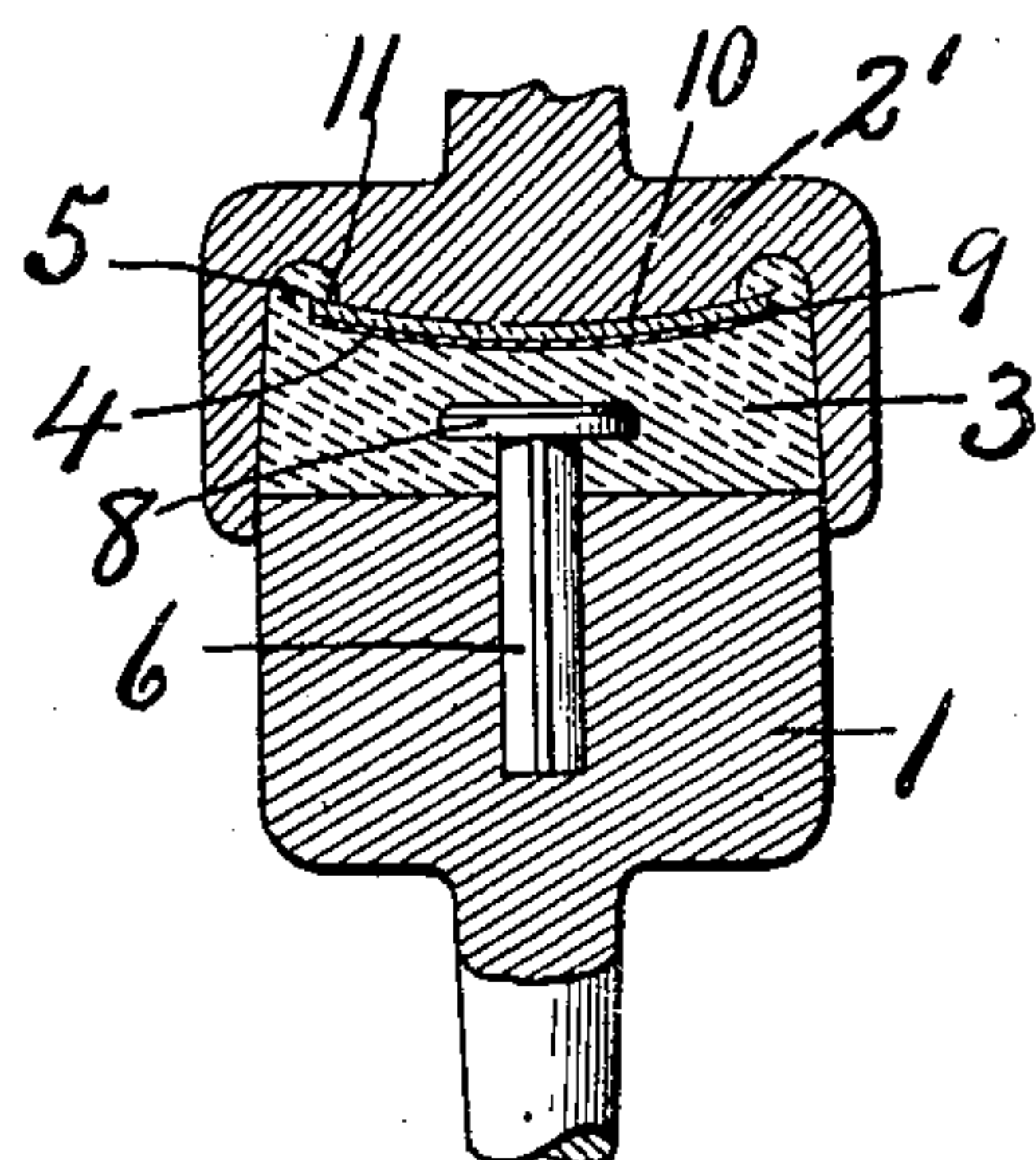


Fig. 4.

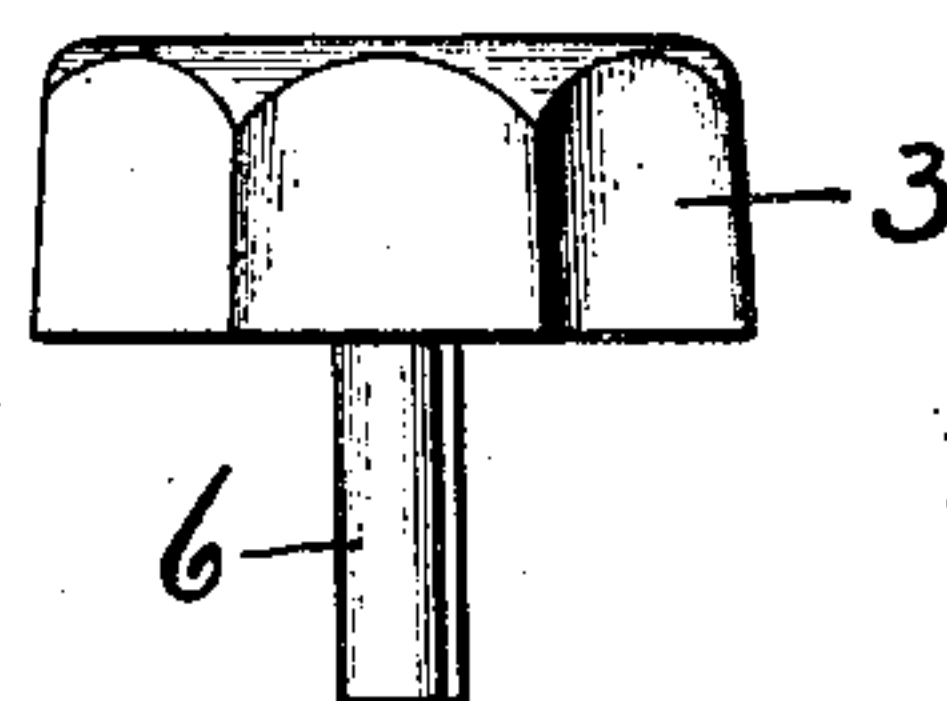
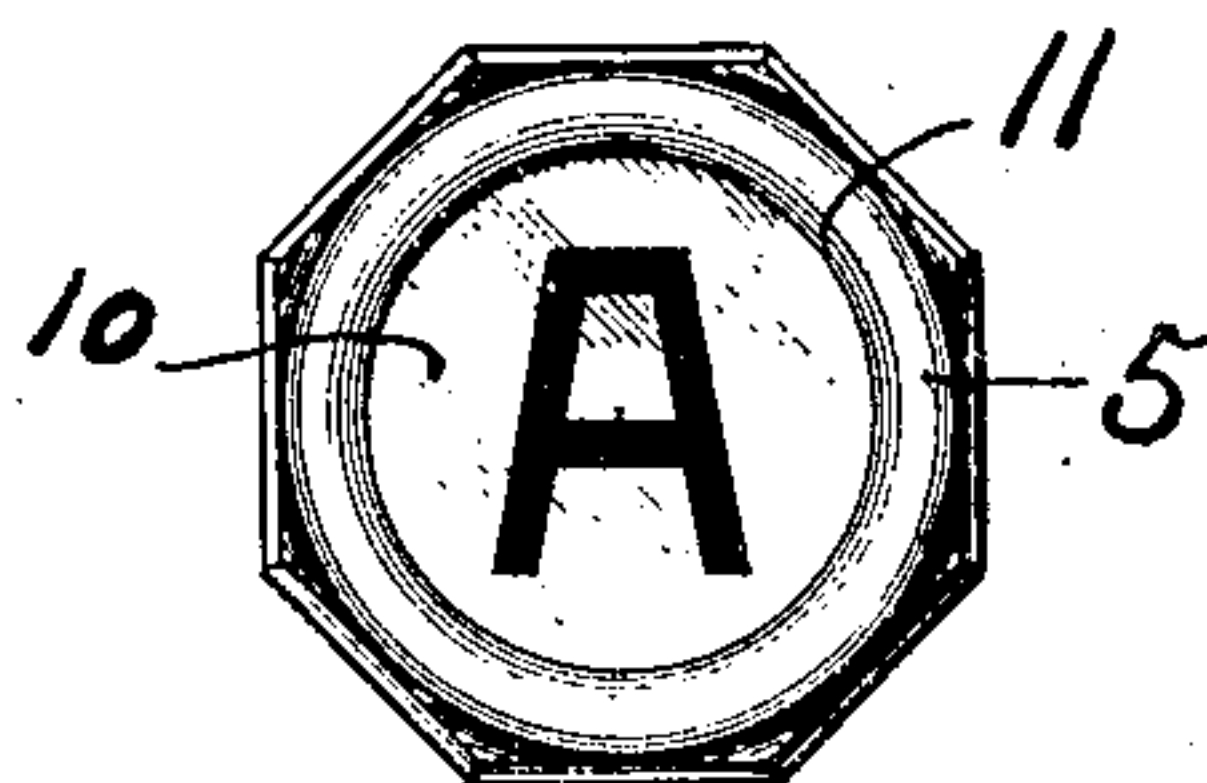


Fig. 5.



Witnesses.

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UNITED STATES PATENT OFFICE.

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FINGER-KEY FOR TYPE-WRITING AND SIMILAR MACHINES.

956,485.

Specification of Letters Patent.

Patented Apr. 26, 1910.

Application filed September 29, 1909. Serial No. 520,174.

To all whom it may concern:

Be it known that I, EDWARD D. CONKLIN, of Newark, in the county of Essex, in the State of New Jersey, have invented new and useful Improvements in Finger-Keys for Type-Writing and Similar Machines, of which the following, taken in connection with the accompanying drawings, is a full, clear, and exact description.

This invention relates to certain improvements in finger keys and the method of making the same and refers more particularly to the keys for typewriting machines and similar key board instruments. These keys usually constitute a separate article of manufacture from the levers or other parts to which they are attached and involve the use of suitable characters such as capital and small letters, numerals and other symbols which are used in this class of printing and other key board machines. It is desirable to place these characters upon the keys in such manner that they may be readily visible and at the same time protected from obliteration in the use of such keys, and for this purpose they are preferably printed on disks of paper or other suitable material and protected by a coating or layer of some inexpensive transparent substance such as celluloid.

The primary object is to produce a comparatively inexpensive non-metallic key in which the character disk with the transparent coating or layer thereon is permanently incorporated.

Another object is to permanently incorporate in the same key a suitable attaching element by which it may be fastened to one of the operating members, such as the plunger or key lever of a typewriting machine.

The process, briefly described, consists in pressing a body of suitable plastic material into the form desired for the key and simultaneously forming therein a recess of substantially the same area as the character disk which is to be inserted therein, leaving a marginal flange surrounding the recess then placing such disk in the recess and pressing the marginal flange over and upon the marginal edges of the disk for retaining the disk in place.

Another part of the process consists in embedding an attaching element in the main body while under pressure.

In the drawings: Figure 1 is a sectional

view of a pair of dies or molds in operative position for pressing the main body of the key into form for receiving the disk, the attaching element being shown as embedded in said body under the pressure of the dies. Fig. 2 is a sectional view of the key as it is taken from the mold shown in Fig. 1, showing the character disk as placed in the recess. Fig. 3 is a sectional view of the key and disk, shown in Fig. 2, together with the molds for pressing or crimping the marginal flange of the main body over and upon the edges of the disk. Figs. 4 and 5 are, respectively, a side elevation and a top plan of the completed key.

In carrying out the objects stated, a suitable body of non-metallic plastic material, such as rubber, fiber or some less expensive composition material, in which tar or pitch and a suitable bond of asbestos or equivalent material constitute the essential ingredients, is placed between suitable dies or molds —1— and —2—, capable of pressing the plastic material to the desired contour for the main body, as —3—, of the key and at the same time forming one side of said body with a recess —4— and marginal flange —5—.

When an attaching element, such as a stud on spindle —6—, is to be fastened to the main body of the key, it is supported in a socket —7— centrally in the lower die —1—, in such manner that one end having a head —8— is allowed to protrude a short distance beyond the end of the die —1—, sufficient to allow the plastic body —3— mounted thereon to be pressed around the head —8— and adjacent portion of the shank or stud —6—, so as to embed the protruding portion of said attaching element —6— in the plastic body —3—. The body of plastic material is inclosed by an upper die having an off-set portion, so that after applying pressure to said upper die, the head 8 will be embedded in the material and the upper face of the material will be formed with a recess by the off-set portion of the upper die. The upper die is then removed. It is evident, however, that other forms of attaching elements may have portions thereof similarly embedded in said body and therefore the invention is not limited to the use of any particular form of attaching element. After this operation of forming the main body of the key with the

recess —4— therein, the dies are separated and the key with the attaching element therein is withdrawn from the lower die —1—.

5 A paper or equivalent disk —9—, upon which is printed the desired letter or other character, is provided with a coating or a layer —10— of transparent celluloid or similar flexible material and is fitted or placed
10 within the recess —4— so as to rest against the base thereof, whereupon the entire assemblage, as shown in Fig. 2, is placed in and upon the same or a similar die —1—, while the main body —3— is still in a pliable condition and is again operated upon
15 by a die —2'— of such construction as to press or overturn the flange —5— upon the marginal edges of the character disk or plate to hold the latter in operative position
20 upon the main body —3— and within the plane of the outer end thereof.

The overturned edge of the flange —5—, forms a marginal retaining bead —11, as best seen in Fig. 3, said bead serving to lap
25 upon a narrow portion of the character disk, so as to leave the greater portion of the center thereof exposed to view, which enables the character on the paper disk —9— to be readily seen through the transparent coating
30 or layer —10—, the latter serving to protect the printed matter on the disk —9—, against obliteration.

What I claim is: .

The herein described method of manufacturing finger keys for typewriting and other machines consisting in mounting a headed key attaching element in a lower supporting die so that the head of the element will be positioned at a point removed from the top face of the die, placing a body of plastic material upon the head of the attaching element, then inclosing said body of material by an upper die having an offset portion, then applying pressure to said upper die whereby said head will be embedded in said material and the upper face of said material will be formed with a recess by the offset portion of the upper die, then removing said upper die, then placing a character bearing disk in said recess, then mounting a second upper die upon the material, and then applying pressure to said second upper die whereby the wall of said recess will be forced over the marginal portion of said disk to connect it to said material and further provide the upper face of the material with a bead.

In witness whereof I have hereunto set my hand this 23rd day of September 1909.

EDWARD D. CONKLIN.

Witnesses:

WM. A. JONES,
M. H. SADLER.