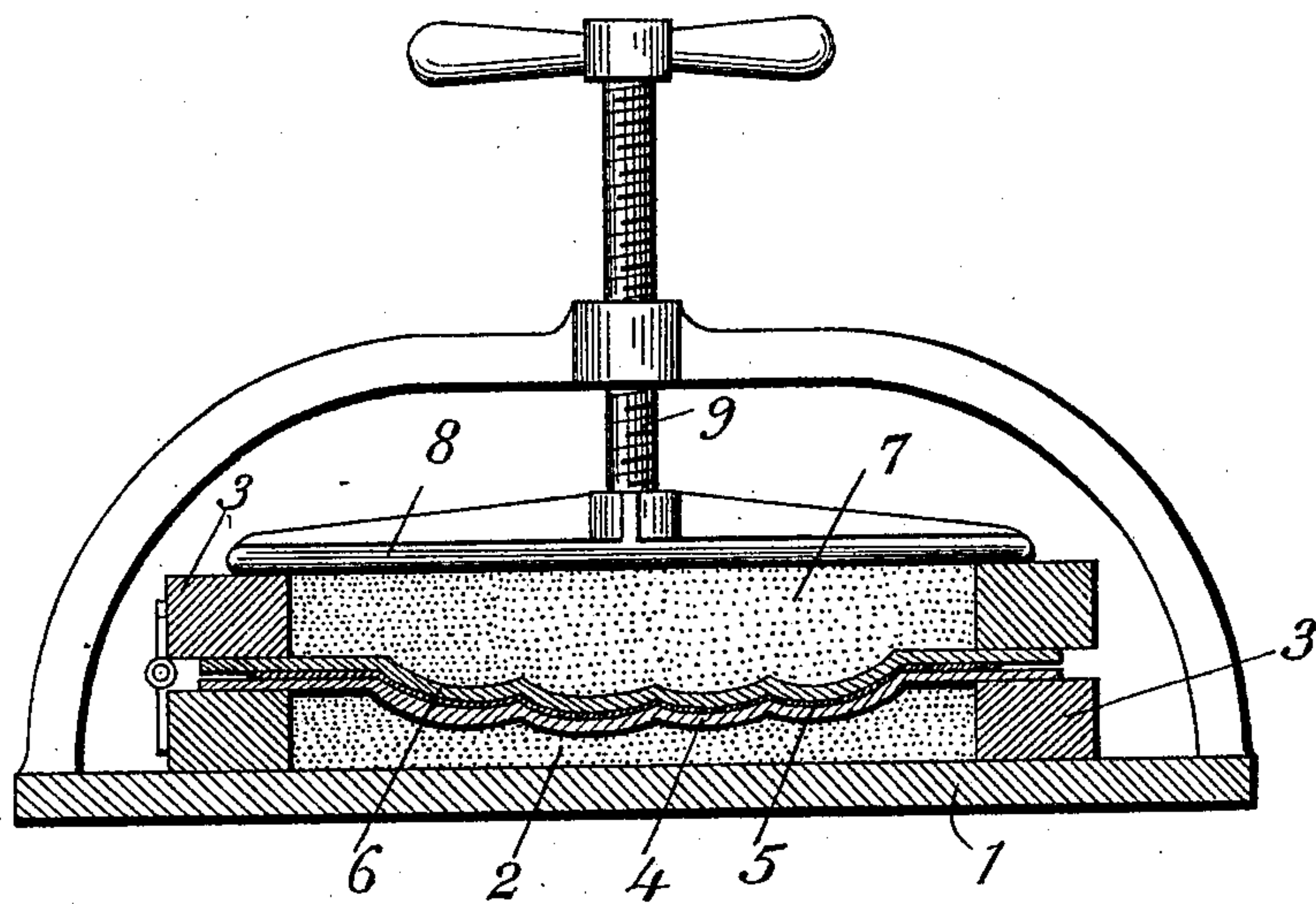


(No Model.)

D. F. HULBERT.  
EMBOSSING PHOTOGRAPHS.

No. 589,260.

Patented Aug. 31, 1897.



*Attest*  
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# UNITED STATES PATENT OFFICE.

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## EMBOSSING PHOTOGRAPHS.

SPECIFICATION forming part of Letters Patent No. 589,260, dated August 31, 1897.

Application filed April 26, 1897. Serial No. 634,03. (No model.)

*To all whom it may concern:*

Be it known that I, DURAN F. HULBERT, of the city of St. Louis, State of Missouri, have invented certain new and useful Improvements in the Art of Embossing, of which the following is a full, clear, and exact description, reference being had to the accompanying drawing, forming a part hereof.

My invention relates to improvements in the art of embossing; and it consists of the novel methods or processes hereinafter illustrated, described, and claimed, and of the novel construction, combination, and arrangement of parts hereinafter shown, described, and claimed.

The figure is a vertical sectional view through an ordinary letter-press, together with the male and female embossing forms or dies, the frame or chase, the male and female patterns, and the photographic print, all arranged as required to carry out the principles of my invention.

Referring by numerals to the drawing, 1 is the bed of the letter-press; 2, the female embossing form or die; 3, the frame or chase; 4, the female pattern; 5, the photographic print; 6, the male pattern; 7, the male embossing form or die; 8, the platen of the press, and 9 the screw for operating the platen.

In carrying out the principles of my invention I take a malleable-metal plate—such as a sheet of lead, or an alloy of lead and tin, or a sheet of any similar malleable material, cut to the desired size and shape—and I paste a photographic print upon said malleable-metal plate, or I sensitize said malleable-metal plate and photograph a picture thereon, or I print a picture on said malleable plate from a printing-form, or I draw or paint a picture or design upon said malleable-metal plate. Then I clamp the edges of said malleable-metal plate in the open frame 3, as required, to hold said edges firmly. Then I take embossing-tools and press upwardly from below or downwardly from above, as required, to emboss the picture as desired, and thus I produce the female pattern 4. I then fill the space within the frame and above the pattern with plaster-of-paris or other suitable plastic material, which will harden when cold or dry, and thus I make the female embossing form

or die 2. After the female die or form has become sufficiently hardened, I turn the frame bottom upward and open it up and place a second malleable-metal plate upon the pattern 4 and depress portions of said second plate into the indentations of the pattern 4, thus forming the male pattern 6, which exactly matches the female pattern 4. I then fill the space above the pattern 6 and within the frame with plaster-of-paris or other suitable plastic material which will harden when cold or dry, and thus I make the male embossing form or die 7. The patterns 4 and 6 may or may not be removed. I prefer not to remove them, as they form a substantial face for the forms or dies, making the dies resemble electrotype-plates. I then open the frame on its hinges, place a copy of the picture or design which I used in making the pattern 4 in position above the form 2, then close the frame, thus bringing the copy between the forms, then place the frame upon the bed of the press and depress the platen, thus pressing the forms tightly together and embossing the copy. After the copies have been embossed the depressions upon the backs of the copies may be filled with any suitable plastic material which will harden when cold or dry, or said copies may be stiffened by applying coats of shellac, or in any suitable way, as desired, or the copies may be made or pasted upon sheets of stiff paper or cardboard, or upon a malleable-metal mount before being embossed, or they may be pasted upon a suitable mount after having been embossed.

The frame 3 may be removed from the forms 2 and 7, and said forms may be locked in chases and placed upon an embossing-press and operated in the usual way, said forms being in effect embossing-dies, which embossing-dies may be used in the ordinary way of embossing.

I claim—

1. The improvement in the art of embossing, which consists of taking a malleable-metal plate having a picture or design upon one of its sides, embossing said picture or design with embossing-tools and thus producing a pattern, placing plastic material against one side of said pattern and allowing said material to harden thus producing a form or



die, placing a second malleable-metal plate against the first plate and pressing said plate firmly into the indentations of the first plate thus producing a second pattern, placing  
5 plastic material against one side of said second pattern and allowing said material to harden thus producing a second form or die, placing the copy to be embossed between said forms or dies and pressing said forms firmly  
10 together, substantially as specified.

2. In an apparatus or device for embossing photographs and the like, an embossing die or form consisting of a malleable-metal plate having a picture or design upon one of its  
15 sides, said plate being embossed to form a

pattern, said pattern being outlined or indicated by said picture or design and said plate being backed by a mass of hardened plastic material, and an embossing die or form consisting of a malleable-metal plate adapted to  
20 be pressed firmly against the first-mentioned malleable-metal plate and backed by a mass of hardened plastic material, substantially as specified.

In testimony whereof I affix my signature 25  
in presence of two witnesses.

DURAN F. HULBERT.

Witnesses:

S. G. WELLS,

EDWARD E. LONGAN.