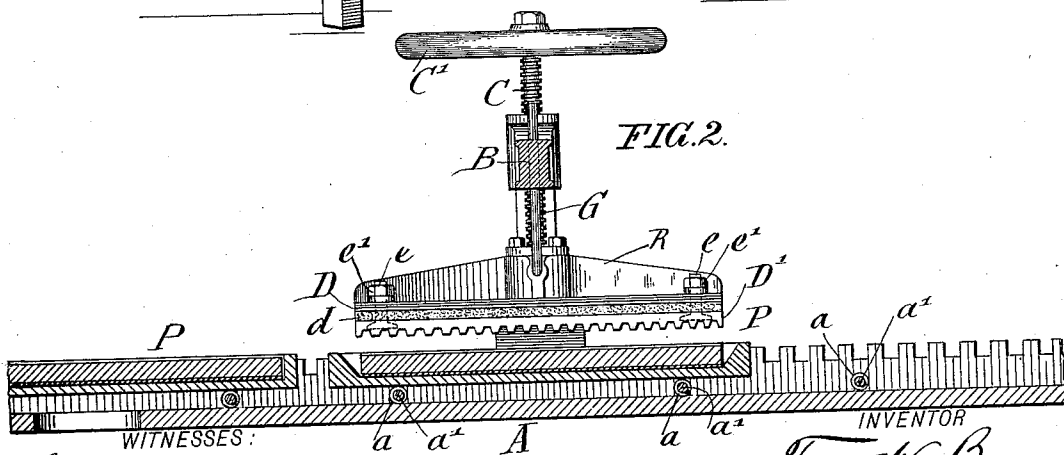
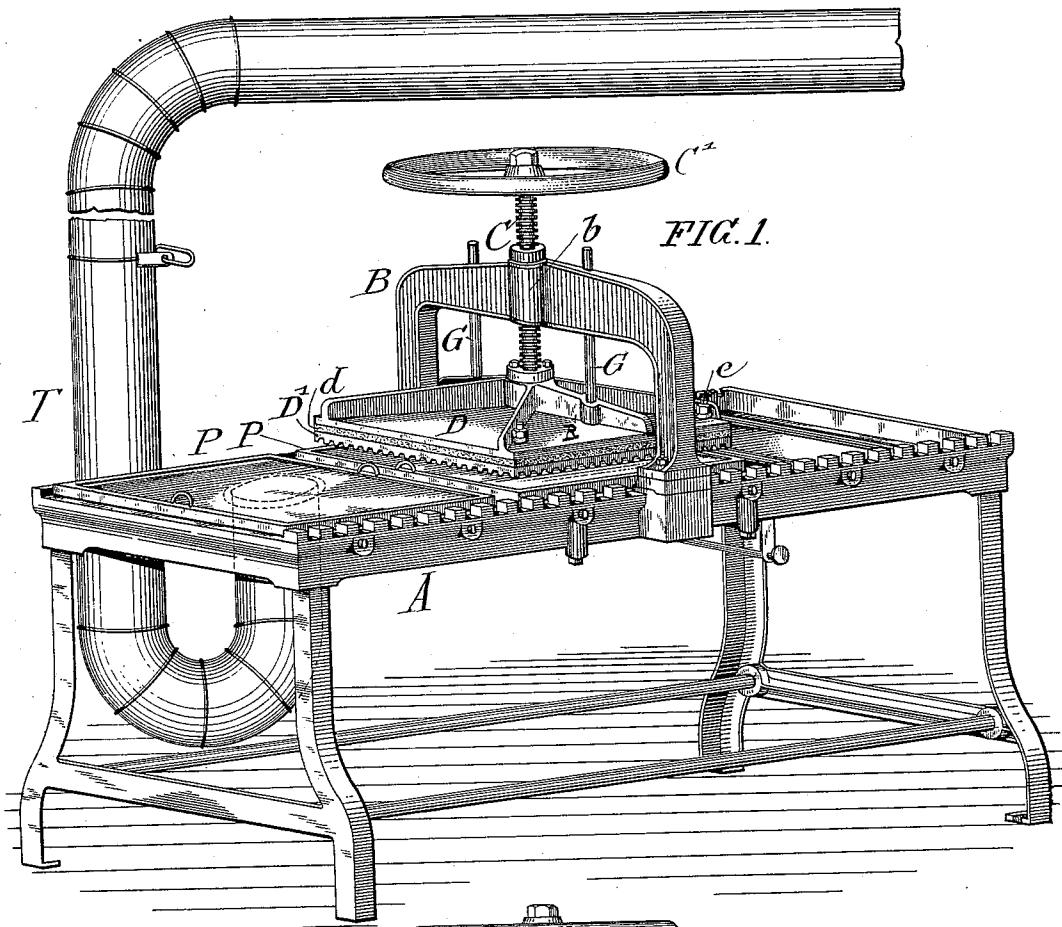


(No Model.)

F. W. BAUM.
BACKING UP PRESS FOR ELECTROTYPES.

No. 579,733.

Patented Mar. 30, 1897.



WITNESSES:
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UNITED STATES PATENT OFFICE.

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BACKING-UP PRESS FOR ELECTROTYPES.

SPECIFICATION forming part of Letters Patent No. 579,733, dated March 30, 1897.

Application filed December 21, 1896. Serial No. 616,471. (No model.)

To all whom it may concern:

Be it known that I, FRANK W. BAUM, a citizen of the United States, residing at Springfield, in the county of Hampden and State of Massachusetts, have invented certain new and useful Improvements in Backing-Up Presses for Electrotypes, of which the following is a specification.

This invention relates to an improved backing-up press for electrotypes by which the electrotype-plates are backed up in the usual manner and at the same time straightened on their faces, so that all unevenness and irregularities in the same are removed, and thereby by the finishing of the plate accomplished quicker and better.

My invention consists of a backing-up press for electrotypes which comprises a bed-frame, a pan for receiving the electrotype-plate, and a vertically-adjustable platen which is provided with a toothed press-plate or so-called "hurdy-gurdy" plate, which is attached to the platen in connection with an intermediate layer of yielding material, as will be herein-
after fully described and then claimed.

In the accompanying drawings, Figure 1 represents a perspective view of my improved backing-up press for electrotypes; and Fig. 2 is a vertical transverse section of the same on line 2 2, Fig. 1.

Similar letters of reference indicate corresponding parts.

Referring to the drawings, A represents the bed-frame of my improved backing-up press for electrotypes, which bed-frame is supported on suitable legs and is made of sufficient length so as to provide room at its middle part for a transverse yoke B for the vertically-adjustable platen of the press, while at one side of the same a space of sufficient size for the backing-pan, in which the electrotype-plate to be backed is placed, is provided. At the other side a sufficient space for moving the pan out with the finished plate is provided, so that another pan can be placed in position at the left-hand end. The transverse yoke B is provided with a central interior-threaded sleeve *b*, that serves for guiding the screw-spindle C of the platen D, which latter is swiveled to the lower end of the spindle

and guided by means of stationary guide-rods G in the yoke, as shown in Fig. 1. The platen D is provided with reinforcing-ribs R, one of which is provided with sockets for receiving the vertical guide-rods that pass through the guide-openings of the yoke B, as is customary in presses of this class.

The bed-frame is provided at its ends with a number of rollers *a*, that turn freely on transverse rods *a'*, which are inserted into the side walls of the bed-frame, said rods serving for conveniently passing the backing-pan from one side of the bed-frame into position below the platen and from there to the other end of the bed-frame. The longitudinal side walls of the bed-frame A are recessed, so as to give free egress to the air which is forced by a cooling-blower through a suitable conducting-tube T into the lower part of the left-hand end of the bed-frame, as shown in Fig. 1.

The platen D is provided at its under side with a layer *d* of yielding material, preferably felt, a quarter of an inch or less in thickness, and with a press-plate D', provided with projections or teats, which plate is known by the name of "hurdy-gurdy" plate, and which is attached with the intermediate layer of flexible material, by means of countersunk bolts *e*, to the follower, said bolts being retained in position by means of nuts and jam-nuts *e'*, as shown in Fig. 2.

When a copper shell of sufficient thickness is deposited on the wax mold in the bath, it is removed from the bath and transferred with its face downward into the backing-pan P, which is then placed in position on the left-hand end of the bed-frame A. It is then filled by a ladle with liquid metal to the required thickness. The supply of air for cooling is then admitted by opening the gate in the cooling-pipe, so that the backing-metal hardens quickly. As soon as the metal is hard the backing-pan is moved over the rollers under the platen of the press, which platen is then lowered by a hand-wheel C', applied to the spindle, so that a tight squeezing is imparted to the electrotype-plate, which has the effect of straightening up its face and bringing all the parts of the same, by the action of the hurdy-gurdy plate, into one plane, re-

moving all unevenness and irregularities from the face of the same. The intermediate layer *d*, being of yielding material, permits the hurdy-gurdy plate to give and adapt or shape itself, as it will not press any harder on the ends or sides of the electrotype than at the intermediate points, for if it did the metal at the sides or ends would be compressed to such extent as that the copper face of the electrotype at those points would be ruined. After the electrotype-plate is thus leveled it is moved with the pan to the farther end of the bed-frame and removed from the pan ready for the finishing operations.

By the leveling of the face of the electrotype-plate a great saving of time is obtained in finishing the plate, for the reason that the straightening up of the face of the plate has already been accomplished in the backing-up press and requires no special work in truing and finishing the same.

Having thus described my invention, I

claim as new and desire to secure by Letters Patent—

1. A backing-up press for electrotypes, consisting of a bed-frame, a backing-pan, and a press, the platen of which is provided with a hurdy-gurdy press-plate, and a yielding layer interposed between said plate and the platen, substantially as set forth.

2. In a backing-up press for electrotypes, the combination of a platen, with the hurdy-gurdy press-plate, an intermediate layer of yielding material, and fastening-bolts by which the press-plate and the intermediate layer are attached to the under side of the platen, substantially as set forth.

In testimony that I claim the foregoing as my invention I have signed my name in presence of two subscribing witnesses.

FRANK W. BAUM.

Witnesses:

PAUL GOEPEL,
GEO. W. JAEKEL.