G. A. SMITH.

COPYING-PRESS.

No. 192,299. Patented June 19, 1877.

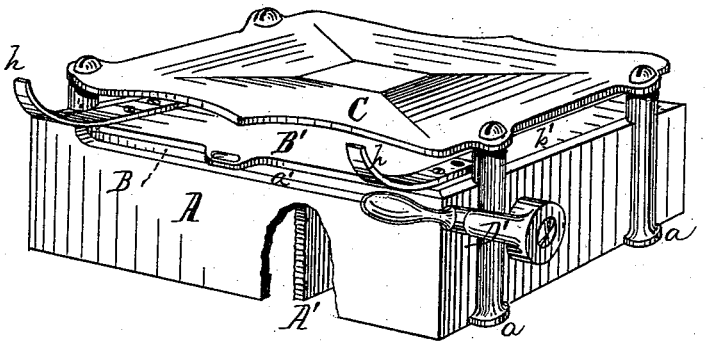

FIGURE 1

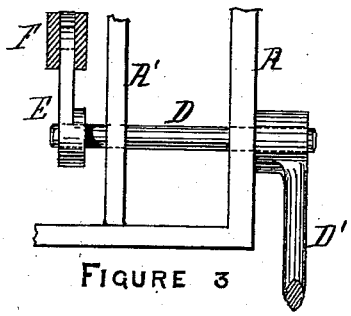

FIGURE 3

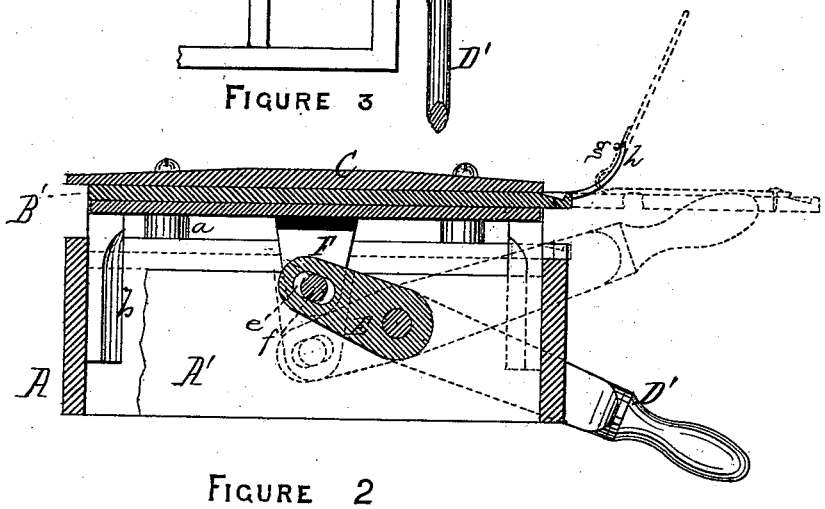

FIGURE 2

WITNESSES

Alexander Mahon

John G. Center

INVENTOR

George A. Smith

by A. L. Smith

Attorney

UNITED STATES PATENT OFFICE.

GEORGE A. SMITH, OF BOSTON, MASSACHUSETTS.

IMPROVEMENT IN COPYING-PRESSES.

Specification forming part of Letters Patent No. **192,299**, dated June 19, 1877; application filed June 13, 1877.

To all whom it may concern:

Be it known that I, GEORGE A. SMITH, of Boston, county of Suffolk, State of Massachusetts, have invented a new and useful Improvement in Copying-Presses for Papyrographic and other Purposes, of which the following is a full, clear, and exact description, reference being had to the accompanying drawing making part of this specification, in which—

Figure 1 is a perspective view of my improved press. Fig. 2 represents a vertical section through the same in line with the arm or crank which actuates the movable bed-plate or follower; and Fig. 3 is a plan view of the devices which actuate the movable bed-plate or follower.

Similar letters of reference denote corresponding parts wherever used.

My invention relates to a novel construction of copying-presses with a view to facilitating the process of duplicating copies or impressions, more particularly designed for use in papyrographic copying, but applicable also to ordinary letter-press copying; and it consists in the employment, in combination with the reciprocating bed-plate or follower, of a slide upon which the book or portfolio in which the copies are to be taken rests, and to which, in papyrographic copying, the lower portion of the book with the inking-pad and the papyrographic stencil may be secured; said slide adapting the book or stencil and its accompaniments to be readily and quickly withdrawn and replaced, as will be explained. It further consists in certain details of construction and arrangement hereinafter fully described.

In the accompanying drawings, A represents an open rectangular frame, of metal or other suitable material, provided at its sides or ends and at or near the corners with uprights *a a*, which extend above the frame and have the stationary presser-plate or platform C rigidly secured to their upper ends. Within the open frame A is located the reciprocating platen or follower B, provided, by preference, at its corners with pendent lugs or arms *b b*, which fit within the angles of the bed-frame A, and serve to guide and steady the movements of the platen B.

Other means for steadying and guiding the platen B may, however, be employed.

The platen B is recessed or cut away on its upper face to adapt it to receive a slide, B′, covering the face of the platen, except a narrow portion or rib *b′*, at each end, the slide moving back and forth between these ribs *b′*, and being held engaged therewith by a dovetail or other equivalent form.

The bed-plate or follower B when depressed is about flush on its upper face with the upper edge of the open rectangular frame A, except in front where the upper edge of the frame is cut away, as shown at *a′*, Fig. 1, to permit the movements of the slide B′, which is designed to receive and facilitate the insertion of the copying-book in and its withdrawal from the press.

D is a rock-shaft mounted in suitable bearings in one of the ends of the frame A, and in a plate or bar, A′, intermediate between the ends, as shown in Fig. 1.

The outer end of this shaft has an arm or lever, D′, rigidly attached to it for operating it, and the inner end, at a point about midway of the length of and underneath the bed-plate B, is provided with an arm or lever, E, which at its outer end has a slot formed in it at *e*, adapting it to engage with a pin, *f*, on a pendent lug or ear, F, formed upon or rigidly connected with the lower face of the bed-plate B at or near its center, as shown in Fig. 2.

By this method of attachment the bed-plate is permitted to move up and down vertically, operated by an arm vibrating in the arc of a circle.

The operation of the parts above described will be readily understood.

In papyrographic copying, the lower lid or cover of the portfolio will be rigidly fastened to the slide B′ by screws or other suitable fastening devices, in such manner that the portfolio will always move with the slide, and the upper lid or cover is provided at its ends near the back with small metallic clips or ears *g*, which, when the slide B′ is drawn out from under the stationary upper plate C, are caused to ride upon short inclines *h* attached to the forward ends of the ribs *b′* or to the front bar of frame A, as preferred, and the cover is thus automatically lifted into position to facilitate

the removal of the copy or impression taken and the insertion of the sheet for a new copy or impression, the cover automatically closing upon the latter as the slide is again pushed or drawn back into place. The inking-pad and the papyrographic stencil, with the sheet on which the copy is to be taken, will be placed on the lower fixed cover, in the usual manner, and will be moved back and forth by the slide B′. The latter may have a spring or springs or a cord or chain running back over a pulley, and having a weight attached connected with it for retracting it or drawing it back into place when it is released by the operator, or, if preferred, the cord or chain may be connected with a treadle and operated by the foot of the attendant. The rock-shaft D, also, instead of being operated by hand, may have its actuating-arm connected by a rod with a suitably-arranged treadle, and operated thereby, if preferred; and in presses for heavy work said actuating-arm may be shortened and provided with a toothed segment gearing with a second segment, to which the power may be applied, or other suitable form of gearing may be employed for increasing the leverage, if desired.

Instead of the inclines for lifting the cover, a chain may be employed having one end attached to the cover and the other to an upright on the platen C, for accomplishing the same purpose.

Having now described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The combination of the slide with the lower vertically-reciprocating platen, substantially as and for the purpose set forth.

2. The slide on the reciprocating lower platen B, in combination with the copying-portfolio, secured to and moving with said slide, substantially as described.

3. The slide B′ on the movable platen B, in combination with the inclines *h* or their equivalents, and ears *g* on the portfolio, for the purpose set forth.

In testimony whereof I have hereunto set my hand this 9th day of June, A. D. 1877.

GEORGE A. SMITH.

Witnesses:
ROSCOE P. OWEN,
J. WALTER WELLS.