

No. 681,826.

Patented Sept. 3, 1901.

A. HOWARD.
COPYING PRESS.

(Application filed Sept. 10, 1898.)

(No Model.)

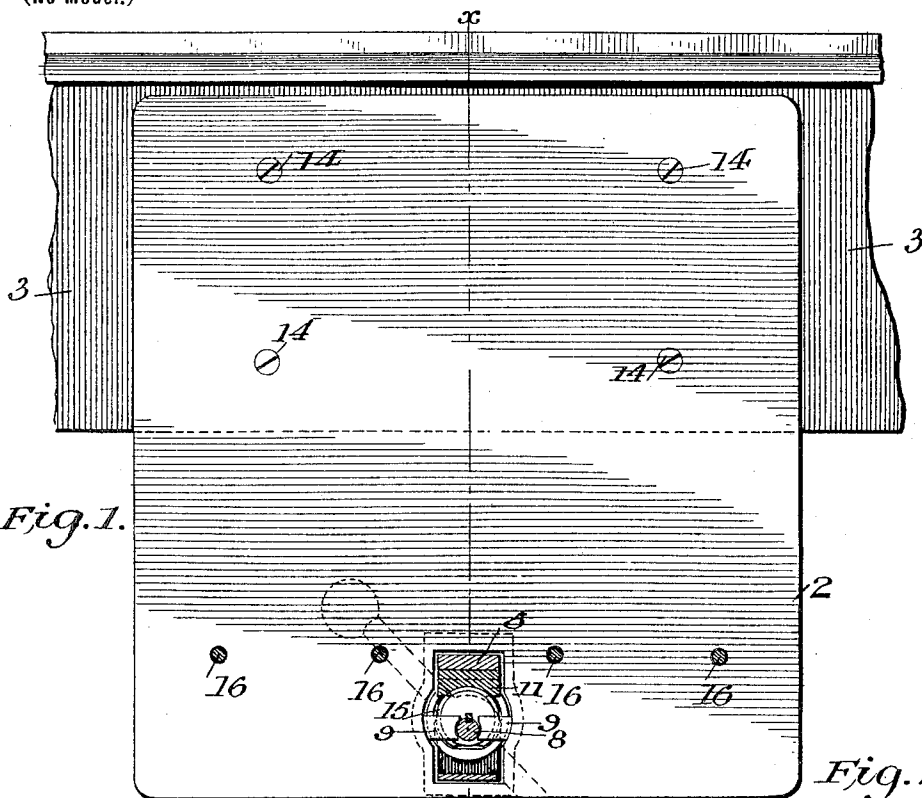


Fig. 1.

Fig. 2.

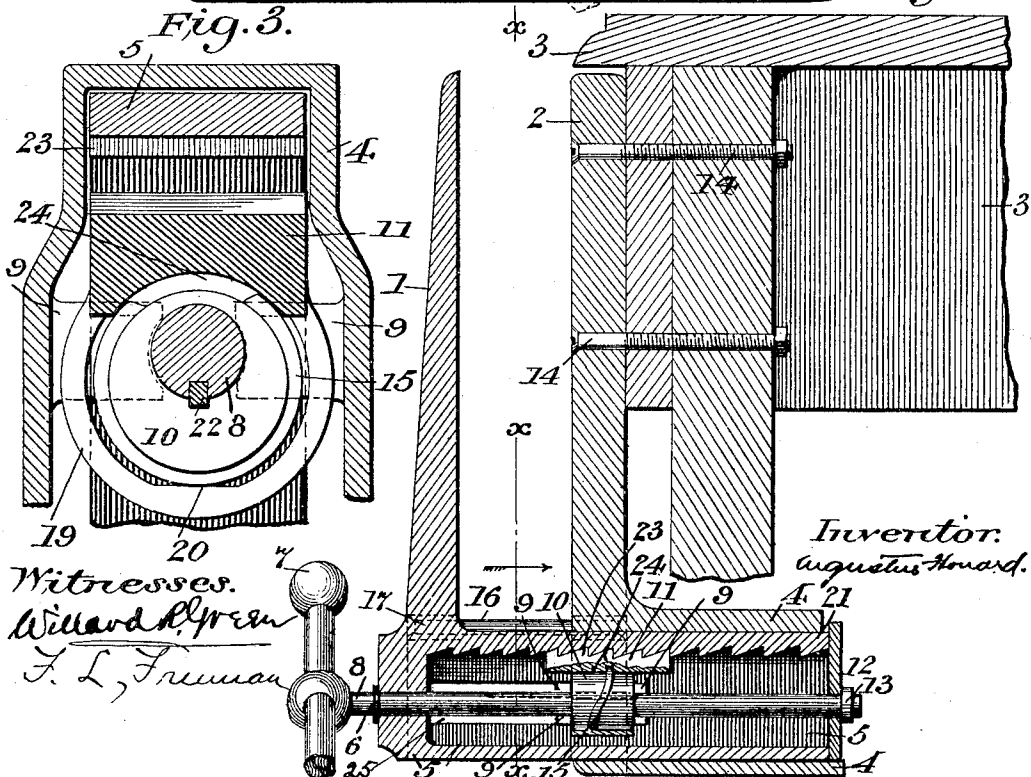


Fig. 3.

Witnesses.
Willard H. Green
F. L. Freeman

Inventor.
Augustus Howard.

UNITED STATES PATENT OFFICE.

AUGUSTUS HOWARD, OF SAN FRANCISCO, CALIFORNIA.

COPYING-PRESS.

SPECIFICATION forming part of Letters Patent No. 681,826, dated September 3, 1901.

Application filed September 10, 1898. Serial No. 690,670. (No model.)

To all whom it may concern:

Be it known that I, AUGUSTUS HOWARD, R. N., a subject of the Queen of Great Britain, temporarily residing at San Francisco, in the county of San Francisco and State of California, and whose post-office address is 1025 Pine street, San Francisco, California, have invented certain new and useful Improvements in Copying-Presses, of which the following is a full, clear, and exact specification.

My invention relates to presses, and more particularly to the variety of presses usually called "copying-presses" employed in offices for the purpose of clamping and pressing letters, books, and other papers.

The objects of the invention are to provide a press of this variety which is adapted to be used in positions more convenient and less in the way of other objects and to occupy less room or space than those in ordinary use, and, further, to provide a press adapted to be placed upon the side or edge of an article of furniture, as a table, desk, or other article, without impairing or obstructing the usefulness of such article for other purposes and at the same time to be efficient and convenient as a copying-press.

To these ends my invention consists in a press embodying the general features of construction and adapted to be used in connection with other articles of furniture, substantially as hereinafter more particularly described.

In the accompanying drawings, forming a part of this specification, Figure 1 is an elevation of one embodiment of my invention, showing a press mounted upon the side of a table. Fig. 2 is a sectional view of the same on the line *xx* of Fig. 2, showing one form of mechanism for the operation of a press adapted for use in the manner mentioned; and Fig. 3 is an enlarged detailed view of a portion of Fig. 2, taken on the line *xx*, showing said mechanism.

One of the main objects of my invention is to provide a press of this general character adapted to be attached to the side or edge of an article of furniture or to the wall of a room, so as to utilize as little space as possible and be conveniently located for use, and for this general purpose the press is made of a form or construction adapted to receive and sus-

tain the book, papers, or other article in a vertical position. In the embodiment of my invention illustrated herein I have shown a copying-press in which the bed-plate and platen are arranged vertically, so that the press can be readily attached to the side or edge of a desk or similar article and the book or papers received between the bed and platen from a position above the press or from the sides of the press and be properly supported while the press is being operated.

Referring to the drawings, 3 represents the side, end, or some vertical portion of a desk, table, wall, or other article to which the press is to be attached, and 1 and 2 are respectively the vertical platen and bed-plate of the press, the latter of which is conveniently provided with some means of attaching it to the desk or other article, as the screw-bolts 14. This press as thus arranged has three open portions, as the two sides and top, through either of which the book or papers may be introduced into the press, while it is provided with means at the bottom for supporting the book or papers in position between the vertical bed and platen. The platen 1 is also provided with some suitable means by which it may be moved to and from the bed-plate to secure the desired pressure, and while my invention broadly considered may embody any suitable means for accomplishing this result I have shown in the annexed drawings one preferred construction which is well adapted for the purposes intended. In a press of this character where the bed and platen are vertical it is desirable that the operating devices for securing the requisite pressure should be arranged at one edge of the bed or platen, or more properly at the bottom, so as to leave the greatest extent of the contiguous surfaces of the bed and platen free to receive the book or papers to be operated on, and the construction illustrated well accomplishes this object. The vertical bed 2 is provided with a hollow extension 4, adapted to receive the cooperating sliding part of the vertical platen 1. In the present instance the vertical platen 1 is provided with an extension 5, adapted to fit the extension 4 and slide therein, and means are provided for fixing the position of the extensions with relation to each other and for clamping the book or papers between them.

While various devices may be used for this purpose, those illustrated in the drawings are satisfactory, and the inner face of the extension 5 is shown as provided with projections in the form of a rack 21, although any other equivalent construction may be used. Passing through the extension and having bearings in the ends thereof is a rod 8, provided with means, as 7, for turning or rotating the same, and the rod is provided with suitable bearings 6 and 13 at opposite ends. Mounted to slide freely on the rod 8 is a cam or eccentric 10, and this cam is arranged to rotate with the rod by suitable means, such as the key 22. This cam 10 is provided with a diagonal or convolute thread 15, passing around the surface of the cam at any desired pitch, and of any suitable length or thickness. Mounted to rest in loose contact with the cam is a block 11, provided in its lower surface adjacent the cam with a groove 24, adapted to receive and cooperate with the thread 15. This block 11 is provided with projections adapted to engage the projection 5, and in the present instance they are shown in the form of teeth 23 upon the upper side thereof. In order to insure the block retaining the proper position, it is preferably provided with a casing or side 19, loosely engaging or surrounding the cam 10, and having sufficient space between the cam to permit the rotation or passage of the long radius of the cam within all parts of its sides except a portion, as 20, of the side of said casing opposite the block 11, which side is at such a distance from the center of said cam as to be engaged by the long radius of the cam when turned to contact therewith and to thereby positively cause the block 11 to be moved out of contact with the teeth or projections 21 on the extension 5. The extension 5 is provided with slots 25 in its sides, through which project the lugs or arms 9, fixed on the extension 4 of the vertical bed-plate 2, and these lugs or arms 9 are arranged to embrace the cam 10 and form abutments therefor, and the longitudinal movement of the cam is prevented, although it is permitted to be rotated. In order to aid in maintaining the relations between the bed and platen and also to furnish a further support for the books or papers, suitable guides or rests 16, shown in the present instance as rods arranged to play loosely into and through the bed and platen, are provided. Such being the construction illustrated and being the preferred construction, although, as before stated, my invention is not limited to any of these details, the operation of the device will be readily understood. The press being attached to the edge or side of a table, desk, or similar article or to the wall is, as before stated, in a most convenient position for use and still does not interfere with the ordinary use of the desk or table. When, however, it is used as a copying-press, the book or other article to be pressed is placed between the bed and platen 1 2, resting on

the guides 16, and the platen is firmly pressed by hand against the object, the extension 5 sliding freely in the extension 4 of the bed. The rod 8 is then rotated, whereupon the cam 10 is turned and its long radius is brought into contact with the block 11, raising the same into engagement with the projections 21 on the extension-plate. The thread 15 by the same movement and at the same time engages the groove 24 in the block 11, giving said block and the platen 1, connected thereto, a final inward movement, compressing the article between the bed and platen or toward each other with a pressure depending upon the angle or pitch of the thread and the extent of rotation of said rod, thereby obtaining any pressure desired within the limits of the screw. To disengage the parts from their fixed or clamping position and permit the release from pressure, the rod 8 is rotated, so that the long radius of the cam 10 is brought into contact with the flat surface 20 upon the side of the casing 19, and the block is positively removed from contact and disengaged from the projections on the extension, and the platen 1 is drawn forward away from the bed-plate 2 to any desired degree and the object removed. It will be seen that a press of this character is well adapted for use in operating upon articles of different thicknesses, as the platen can be moved freely to and from the article and an initial pressure obtained thereby, and then by a partial rotation of the rod 8 the extensions of the bed and platen are locked together by the block 11, and a partial rotation of the rod 8, and consequently of the cam 10, will further draw the bed and platen together, producing the necessary pressure. This operation is simple, quick, and effective, and the mechanism is simple and not liable to get out of order. Moreover, when the press is not in use the platen 1 can be easily and quickly brought into contact with the bed 2, so that the press occupies little space, and owing to its position on the side or edge of the desk it is not in the way and does not interfere with other operations. It is evident that this construction can be variously modified without departing from the general spirit of the invention—as, for instance, the position of the thread 15 and groove 24 may be reversed without altering their relative action and the block 11 could be omitted and the cam or the thread 15 thereon engage directly the projections on the extension.

What I claim, and desire to secure by Letters Patent, is—

1. In a copying-press, the combination with a bed having an extension at one edge, of a platen having an extension sliding in the extension of the bed, a rod mounted in said extension of the platen, a cam sliding on and operated by said rod, and an engaging means between the cam and the extension whereby the extensions are engaged and also positively moved to a limited extent with relation to each

other after engagement, substantially as described.

2. In a copying-press, the bed-plate 2, with an extension 4, platen 1 with an extension 5 thereon adapted to slide with the extension 4, the rod 8, the cam 10 upon said rod turning with said rod and sliding freely longitudinally thereon, and the spiral thread 15 upon said cam operatively engaging a resistance 10 rigidly fixed to the plate 2, whereby the platen

1 and plate 2 are positively moved toward each other and held while an intervening object is compressed, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of 15 two subscribing witnesses.

AUGUSTUS HOWARD.

Witnesses:

W. C. DUVALL,
F. L. FREEMAN.