

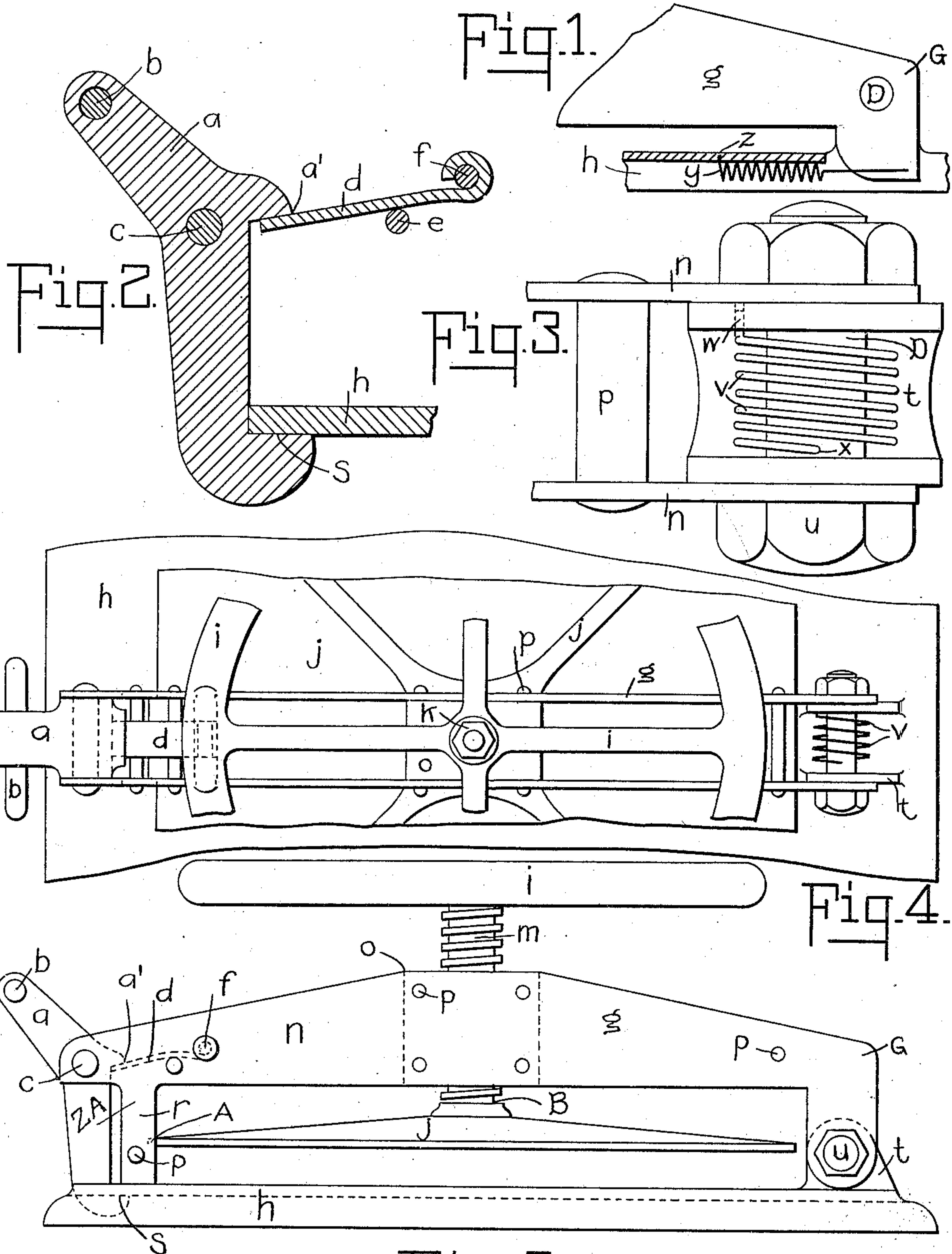
No. 627,081.

Patented June 13, 1899.

B. PHELPS.
COPYING PRESS.

(Application filed Sept. 24, 1898.)

(No Model.)



WITNESSES:

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E. E. Tooke

Fig. 5.

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UNITED STATES PATENT OFFICE.

BYRON PHELPS, OF SEATTLE, WASHINGTON.

COPYING-PRESS.

SPECIFICATION forming part of Letters Patent No. 627,081, dated June 13, 1899.

Application filed September 24, 1898. Serial No. 691,777. (No model.)

To all whom it may concern:

Be it known that I, BYRON PHELPS, a citizen of the United States, residing at Seattle, in the county of King and State of Washington, have invented a new and useful Copying-Press, of which the following is a specification.

My invention relates to improvements in the class of copying-presses in which the copying is done by applying pressure through the medium of a pressing-plate operated by a screw; and the objects of my improvements are, first, to so construct a press that the copy-book can be more readily removed and without having to revolve the screw, and, second, by an ingenious arrangement of parts and by using certain new details of construction to furnish a press which shall at all times serve as a table to hold the book, obviating the necessity of carrying the book from the press to a table or desk in order to refer to it, as now has to be done when using the presses now in use. I attain these objects by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a detail view of a preferred form of spring mechanism, showing the spring and the parts it is attached to, the rest of the machine being broken away. Fig. 2 is a sectional view of the catch mechanism I employ, showing the catch in position clamping the bridge in proper position. Fig. 3 is a detail plan view of another form of balancing spring mechanism, part of the press being broken away. Fig. 4 is a plan of my invention, part of the press being broken away. Fig. 5 is a front elevation of the complete press.

Similar letters refer to similar parts in all of the views.

The base of the frame *h* is made in the usual way, the top being perfectly flat and affording a good bed for the copy-book. At one side the bed has two upwardly-projecting bosses *t*, which form part of a hinge, to be described later. In the opposite side of the base and near the edge is a square notch, which allows the catch *a* to enter. The bridge which carries the pressing-plate is different from the usual form and is hinged at one end to the projecting ears *t* of the base, the other end being provided with a catch *a*, which engages on the under side of the base and nor-

mally holds the bridge firm and secure to the base.

The free end of the bridge *g* is held at a proper elevation from the base by the leg or stop *r*. The bridge has the screw *m* passing through the center in the usual way, and the screw carries the pressing-plate in the usual manner at the lower end and a fixed hand-wheel at the upper end.

When the bridge is secured, as shown in Figs. 4 and 5, the press is in condition for copying, and the pressing-plate *j* may be screwed down with any desired pressure against the book or papers by means of the screw and hand-wheel.

When the copying has been done and it is desired to remove the book or refer to it, the catch *a* is rocked by pulling on the handle *b*. The bridge thus being released, it can be swung into an upright position, leaving a clean space above the platen and affording ample room to examine or to remove the book.

It will readily be understood that the platen at all times serves as a table for the book.

In order that the bridge may be easily swung into the upright position, I have in my preferred construction formed it of two side plates, united at suitable intervals by the braces *p*, which are riveted to the side plates. This novel construction secures the maximum strength and rigidity with the least weight and is an important feature of my invention.

Even when the bridge is formed in the above manner I have found that the weight of the pressing-plate *j*, screw *m*, and hand-wheel *i* is still too much to be lifted handily, and I have therefore provided a spring *y* (shown in Fig. 1) to counterbalance this weight. The spring *y* is placed underneath the platen or base, to which it is fastened by one end, and the other end is fastened to a projection from the bridge. This spring should be of sufficient strength to about counterbalance the weight of the bridge and attachments.

In Fig. 3 is shown another good method for counterbalancing the bridge, and consists of a spiral spring *V*, which encircles the bolt *D* and to which the spring is attached by one end at *X*. At the other end the spring enters a hole *w* in the stationary boss *n*. The bolt

D is screwed tight and held fixedly to the bridge. The holes in the lugs *n* are large enough to permit the bolt to turn easily, so that the spring acting on the bolt will exert its counterbalancing effect on the bridge.

The device I employ for securing the bridge in the horizontal position is best shown in Fig. 2, and consists of an angular piece *a*, fulcrumed at *c* and having the projecting lip *a'* and the L-shaped end *s*. A handle *b* is provided at the free end by which the catch may be rocked, and also affords means for lifting the bridge into a vertical position. A flat spring *d* at one end encircles a brace *f* and passing over a supporting-brace *e* engages with the under side of the lip *a'* and tends to keep the latch *a* in the locked position shown. The means for keeping the pressing-plate from revolving when the screw is turned consists of two legs *Z A*, projecting downwardly from the two side plates of the bridge, and of a projecting lug *A* on the edge of the pressing-plate *j*. The lug *A* fits in between the two legs *Z A* loosely, affording a free passage vertically and effectually preventing any rotation of the pressing-plate. A heel *G* is formed on the hinge end of the bridge and acts as a

support for the bridge when the bridge is rocked into the vertical position, the heel *G* striking against the base and keeping the bridge in proper position.

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

In a copying-press a horizontal base having lugs, *t*, a hinged frame, having a latch for securing its free end to the base, and a heel, *G*, on the hinged end, a spring, *d*, for engaging the catch normally with the base, a downwardly-projecting stop on the frame, a vertically-movable pressing-plate, a lip on the pressing-plate engaging in the projecting stop of the hinged frame, a screw mounted in the threaded center of the bridge and a hand-wheel fixedly secured to the upper end of the screw, substantially as shown and for the purpose specified.

In witness whereof I have hereunto set my hand this 12th day of September, 1898.

BYRON PHELPS.

Witnesses:

JAMES P. SULLIVAN,
MARTIN CUDDY.