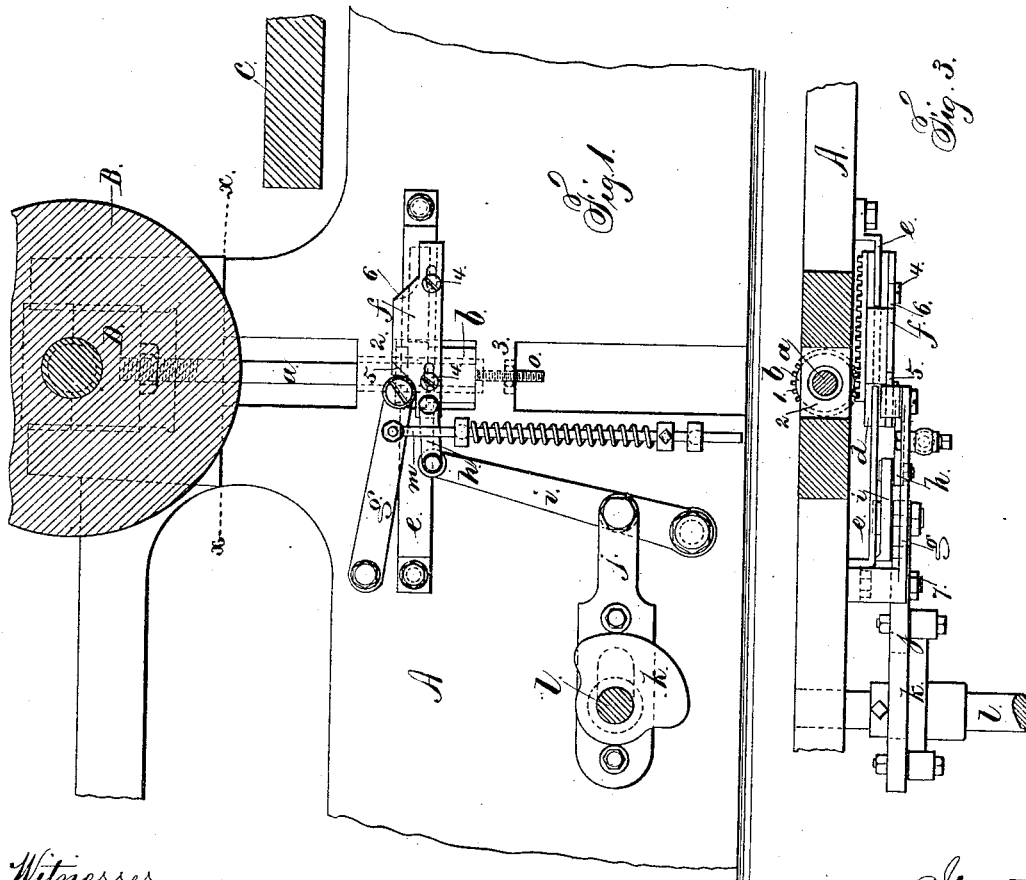
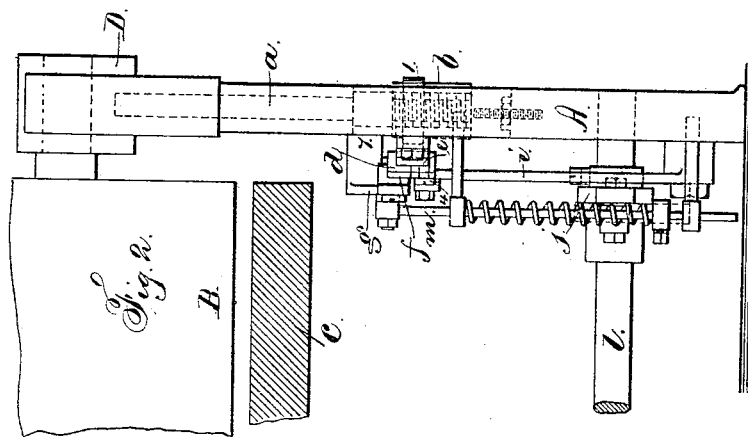


(No Model.)

J. BROOKS.
PRINTING PRESS.

No. 266,760.

Patented Oct. 31, 1882.



Witnesses
Harold Serrell
Chas. A. Smith

Inventor
per John Brooks.
Lemuel W. Serrell atty.

UNITED STATES PATENT OFFICE.

JOHN BROOKS, OF PLAINFIELD, NEW JERSEY, ASSIGNOR TO HIMSELF AND
C. POTTER, JR., & CO., OF NEW YORK, N. Y.

PRINTING-PRESS.

SPECIFICATION forming part of Letters Patent No. 266,760, dated October 31, 1882.

Application filed February 25, 1882. (No model.)

To all whom it may concern:

Be it known that I, JOHN BROOKS, of Plainfield, in the county of Union and State of New Jersey, have invented an Improvement in Printing-Presses, of which the following is a specification.

In printing-presses that are usually known as "two-revolution" presses the impression-cylinder makes one revolution while the type-bed is moving in one direction and the other revolution while the type-bed is moving the other way, and in order to be able to revolve the impression-cylinder continuously it is necessary to separate the impression-cylinder from the types. This has been done by raising the impression-cylinder during one revolution and lowering it during the next revolution; but the means employed for this purpose are complicated, occupy considerable space, and do not always insure a reliable raising-and-lowering movement. Hence the impression in printing is not always perfect in consequence of variations in the pressure upon the paper. I combine with the impression-cylinder and its journal-boxes two screws and nuts for the same, one at each side of the press, and mechanism for revolving such nuts automatically upon said screws as the bed terminates its stroke in one direction to lift the impression-cylinder bodily, and for turning the nuts the other way to lower and hold down firmly the impression-cylinder as the bed terminates its stroke in the other direction.

In an application of like date herewith I have described and more broadly claimed means for actuating the screw-nut by a longitudinally-moving rack. I do not therefore claim the same herein.

In the drawings, Figure 1 is a section of the cylinder and an elevation of part of the frame and the mechanism for raising and lowering the journal-box of the impression-cylinder. Fig. 2 is an end elevation of the frame and elevation of the mechanism applied to the journal-box at one side of the press, and Fig. 3 is a sectional plan view at the line *x x*.

The frame A is to be of any desired character. The impression-cylinder B and type-bed C are of usual construction. The journal-boxes D of the impression-cylinder are accurately

fitted to slide up and down in slotted bearings in the frame A, and to the journal-boxes D there are attached vertical screws *a*.

As the devices at the two sides of the frame are just alike, it will only be necessary to describe one of them, and to remark that the threads of the screws *a* should be one right-handed, the other left-handed, so that the devices that move the nuts *b* may both be within the frames of the press; or the cams hereinafter described may be set to act in reverse directions. The nut *b* is made as a cylinder, with gear-teeth at 1, and this nut is within an opening in the frame below the cross-bar 2 and above the rest 3 for the lower end of the nut. The screw *a* is by preference provided with a thread at the upper end, screwing into the bottom of the journal-box, and having a lock-nut, so that the parts may be adjusted, if necessary; but the lock-nut will hold the screw firmly, so that it cannot turn after being adjusted. It will now be evident that if the nuts *b* are turned one way as the bed completes its reciprocation in one direction the impression-cylinder will be raised and held up by the screws out of the way of the types as the bed returns, and that if the nuts are turned the other way the cylinder is lowered and held down firmly while giving the impression as the types move beneath it.

I do not claim screws and nuts for raising the impression-cylinder, as these, with one rack-bar running across the press, have been used. By employing separate rack-bars—one at each side—I am enabled to adjust the parts and insure greater accuracy.

The rack-bar *d* is made as a saddle to rest upon the stationary slider-bar *e*, that is made angling at the ends and bolted to the frame. This rack-saddle *d* has teeth at one side, that engage in the teeth 1 of the nut *b*. At the other side of the rack-saddle there is the bar *f*, having slotted holes for the bolts 4, that bolt this bar *f* to the rack-saddle *d*, so that the locking-bar may be moved endwise before giving motion to the rack-saddle.

Upon the shaft *l* there is a cam, *k*, that gives motion to the link *j* and rocking lever *i*, and the upper end of this lever *i* is connected by the link *h* to the bar *f*. The shaft *l* should revolve once for every two revolutions of the im-

pression-cylinder B, and the cam thereon is so placed and shaped that it moves the lever *i* in one direction as the bed C terminates its stroke in one direction and the other way as the bed 5 finishes its stroke in the other direction, and thereby the bar *f* and rack-saddle will be made to revolve the nuts and raise and lower the impression-cylinder alternately.

As a precaution against any inaccuracy of 10 adjustment or tendency of any part to fail in performing its entire movement, I provide on the bar *f* the two inclines 5 and 6, that stand in opposite directions, and I pivot a locking-lever, *g*, to the frame at 7, and connect to the 15 same a rod, *m*, with a spring around it, which tends to draw down the locking-lever *g*; and it is preferable to employ a cylindrical stud or roller at the end of this locking-lever *g*, so that as the rack-saddle completes its movement in one 20 direction the round part of the lock-lever *g* will slide down behind the upper part of such rack-saddle, and not only lock the parts, but insure the full movement of the rack-saddle endwise and the proper hold of the nut in keeping the impression-cylinder down in place. 25 Upon the cam *k* moving the lever *i* and bar *f* in the other direction, the incline 5 first lifts the lock-lever *g* out of contact with the rack-saddle, and after the bar *f* has given motion 30 to the saddle and nut and raised the impression-cylinder the lock-lever end passes down

behind the upper part of the rack-saddle, holding the parts firmly until they are again moved the other way.

A set-screw, *o*, introduced in the frame below the lower end of each screw *a*, forms a 35 stop in bringing down the impression-cylinder to its place previous to giving the impression.

I claim as my invention—

1. In a printing-press, the combination, with 40 the impression-cylinder, its journal-boxes, and the screws connected with such journal-boxes, of nuts for such screws within an opening in the frame of the machine, below the cross-bar 2 and above the rest 3, teeth upon the nuts, 45 the rack-saddles *d*, and bars *f*, one at each side of the press and running longitudinally of the frame, and mechanism, substantially as described, for giving end motion to such racks, as set forth.

2. The combination, with the impression- 50 cylinder and each of its journal-boxes, of the screw *a*, nut *b*, rack-saddle *d*, saddle-bar *e*, bar *f*, lock-lever *g*, and mechanism, substantially as described, for moving the lock-lever, sub- 55 stantially as set forth.

Signed by me this 18th day of February, 1882.

JOHN BROOKS.

Witnesses:

GEO. T. PINCKNEY,
HAROLD SERRELL.