(No Model.) 2 Sheets—Sheet 1.

G. L. ADAMS.

PRINTING PRESS.

No. 260,147. Patented June 27, 1882.

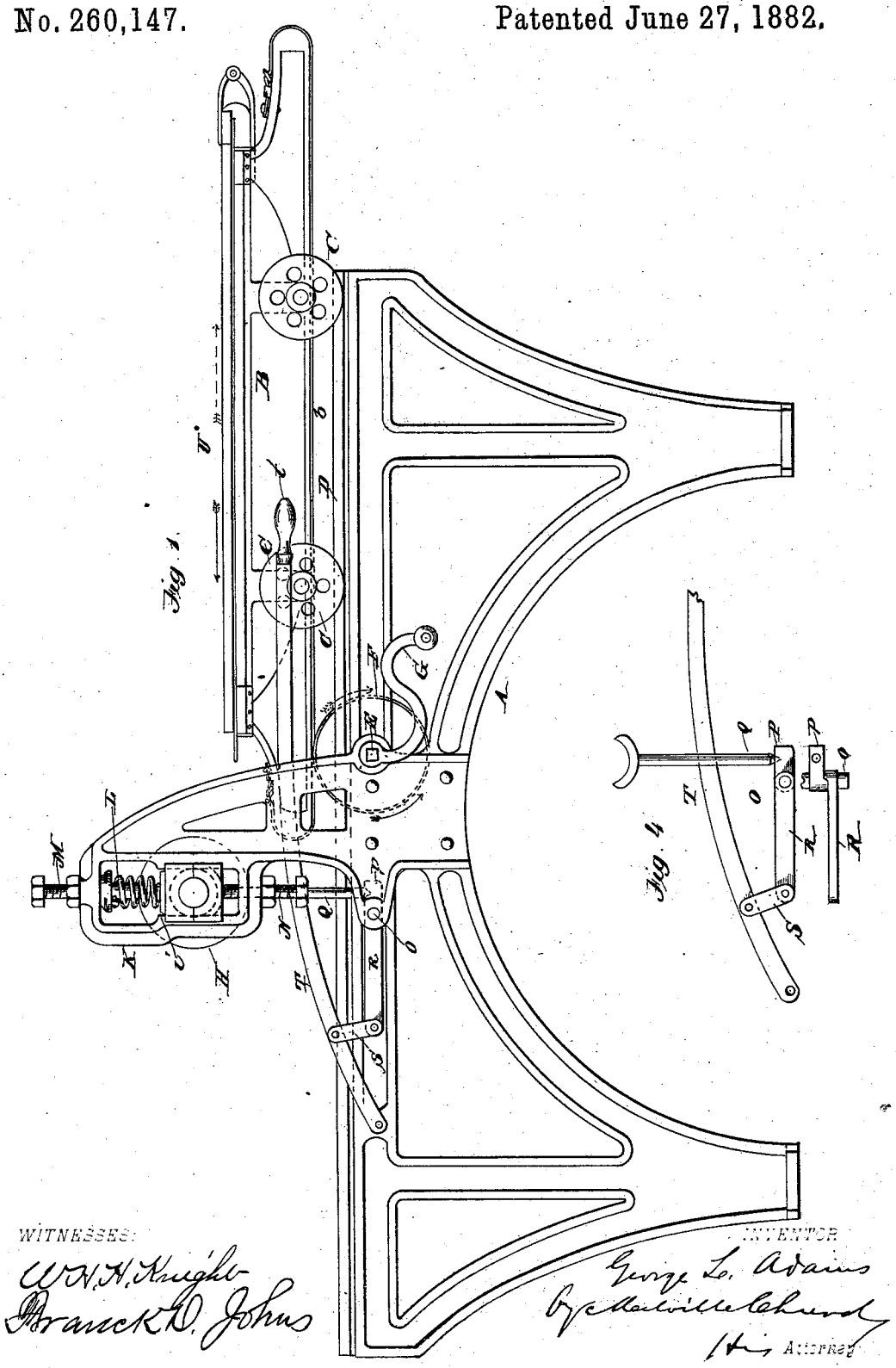

Fig. 1.

Fig. 4.

WITNESSES:

W. H. Knight

Branck D. Johns

INVENTOR

George L. Adams

by Melville Church

his Attorney

(No Model.) 2 Sheets—Sheet 2.

G. L. ADAMS.

PRINTING PRESS.

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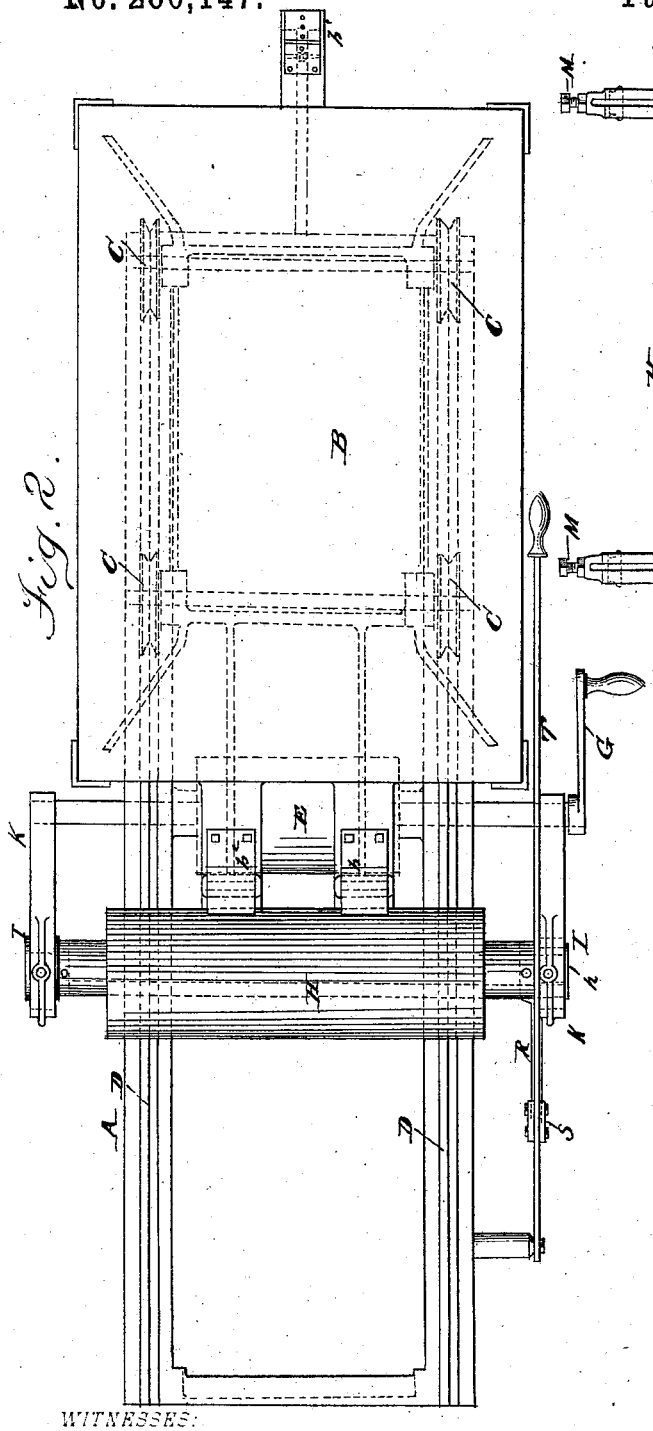

Fig. 2.

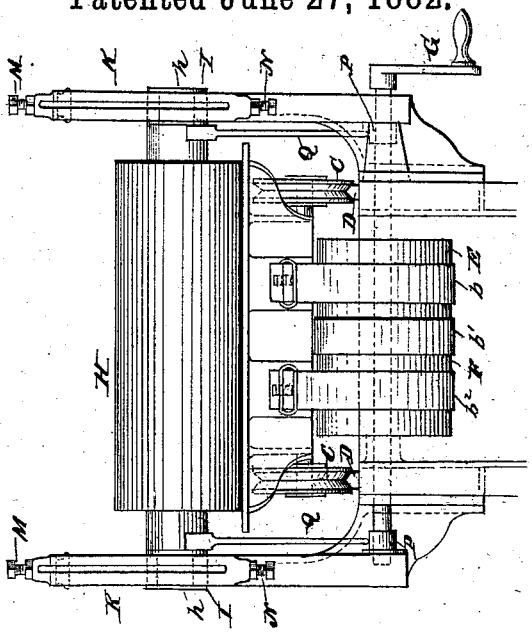

Fig. 3.

WITNESSES:

J. Walter Fowler

Franck D. Johns

INVENTOR

George L. Adams

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His Attorney

UNITED STATES PATENT OFFICE.

GEORGE L. ADAMS, OF FOWLERVILLE, MICHIGAN, ASSIGNOR OF ONE-HALF TO JOHN C. ELLSWORTH, OF SAME PLACE.

PRINTING-PRESS.

SPECIFICATION forming part of Letters Patent No. 260,147, dated June 27, 1882.

Application filed June 5, 1882. (No model.)

To all whom it may concern:

Be it known that I, GEORGE L. ADAMS, of Fowlerville, in the county of Livingston and State of Michigan, have invented certain new and useful Improvements in Printing-Presses; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a side elevation of a press constructed in accordance with my invention. Figs. 2 and 3 are respectively a top plan view and an end view of the same, and Fig. 4 is a detail view of the means for raising and lowering the impression-cylinder.

Similar letters of reference in the several figures denote the same parts.

My invention has for its object to provide an improved hand printing-press which can be worked with greater rapidity and with less expenditure of power than those heretofore in use, and which shall combine cheapness of construction with durability.

The class of presses to which my invention relates is that in which a reciprocating bed is employed in connection with an impression-cylinder; and its special novelty consists in the combination, with the impression-cylinder, of improved means for raising and lowering the impression-cylinder, the same being constructed substantially as I will first proceed to describe, and then point out particularly in the claims at the end of this specification.

Referring to the drawings, A represents the frame of the press, which may be formed of wood or metal, or both wood and metal, at the pleasure of the constructer.

B is the reciprocating bed, supported by wheels C, which have V-shaped grooves in their peripheries and travel upon correspondingly-formed guides or rails D upon the frame, as shown clearly in Fig. 3.

E represents a shaft journaled in the main frame, and carrying a drum, F, and at one extremity a hand-crank, G, for rotating it. Secured to this drum are the ends of three belts, b b' b^2, the other ends of said belts being secured to the reciprocating bed—that is to say, the belts b and b^2 to one end of said bed and the belt b' to the opposite end of said bed. When the drum is rotated by the turning of the crank G in the direction indicated by the arrow in full lines, Fig. 1, the belt b' is wound upon the drum, the belts b b^2 are unwound therefrom, and the bed is advanced under the impression-cylinder H; but when the crank is turned in the reverse direction, as indicated by the dotted arrow, Fig. 1, belts b b^2 are in turn wound upon the drum, belt b' unwound therefrom, and the bed is withdrawn again from under the impression-cylinder and into its first position.

The impression-cylinder H preferably consists of a roll of wood or metal, covered with felt or other similar material, and its journals h h are mounted in sliding boxes I I, that work in vertical guides i i in standards K K, extending above the bed of the press, as shown.

Springs L L, rendered adjustable by means of screws M M, bear with yielding pressure upon the upper portion of the journal-boxes I I, and adjusting-screws N N limit the downward movement of said journal-boxes.

Extending transversely across the main frame is a rock-shaft, O, upon which are mounted projections or cams P P, that support the lower ends of vertical shafts or rods Q Q. The upper ends of these shafts are bifurcated to embrace or partially embrace the journals of the impression-cylinder near the journal-boxes of the same.

Rigidly secured to the rock-shaft O, at or near one end, is a lever, R, and this lever is connected by means of a jointed link, S, to a long hand-lever, T, pivoted near the forward end of the press, and having its handle t located at the side of the press in convenient position to be worked by the same operator who works the hand-crank G. When the lever T is depressed the rock-shaft is rocked in one direction and the cylinder is raised against the tension of the springs L L through the medium of the cams P P and vertical shafts Q Q; but when said lever is released the impression-roll by its weight, assisted by the spring L L, again descends, its extent of movement being limited by the adjusting-screws N N.

The operation of the press will now be readily understood. The tympan U of the bed hav-

ing been thrown back at an angle of about forty-five degrees, so as to expose the types, the sheet is adjusted and the tympan closed, as shown in Fig. 1. The operator then presses with one hand upon the handle of the lever T, so as to raise the impression-cylinder, while with the other hand he rotates the crank G in the direction indicated by the full-lined arrow, thus drawing the bed under the impression-cylinder. When the bed has reached the proper point the lever T is released and the cylinder is allowed to descend and bear with more or less pressure upon the bed, according to the adjustment of the screws N N. The crank is then turned in the opposite direction and the bed drawn out from under the cylinder to its first position, a neat and regular impression being meanwhile made upon the paper. The convenient arrangement of parts in this press renders it possible to make very rapid impressions with the expenditure of a minimum amount of force on the part of the operator.

Having thus described my invention, I claim as new—

1. In a printing-press having a flat bed to be reciprocated by hand-power under an impression-cylinder, the combination of said cylinder, journaled in movable bearings, with the pivoted hand-lever, connected, substantially as described, with said bearings, and having its handle in proximity to the handle for reciprocating the bed, whereby the impression-cylinder can be raised and lowered and the bed reciprocated by the operator, all without change in the latter's position.

2. The combination, with the impression-cylinder, journaled in movable bearings having springs above them, of the vertical lifting-rods, the rock-shaft, the cams P, the lever R, connecting-link S, and the hand-lever T, having its handle projecting in proximity to the handle by which the bed is reciprocated, the whole arranged for operation substantially as described.

GEORGE L. ADAMS.

Witnesses:
FRED F. CHURCH,
M. P. CALLAN.