

No. 669,369.

Patented Mar. 5, 1901.

C. H. PALMER & J. W. DENMEAD.

PRINTING PRESS.

(Application filed May 22, 1899.)

(No Model.)

3 Sheets—Sheet 1.

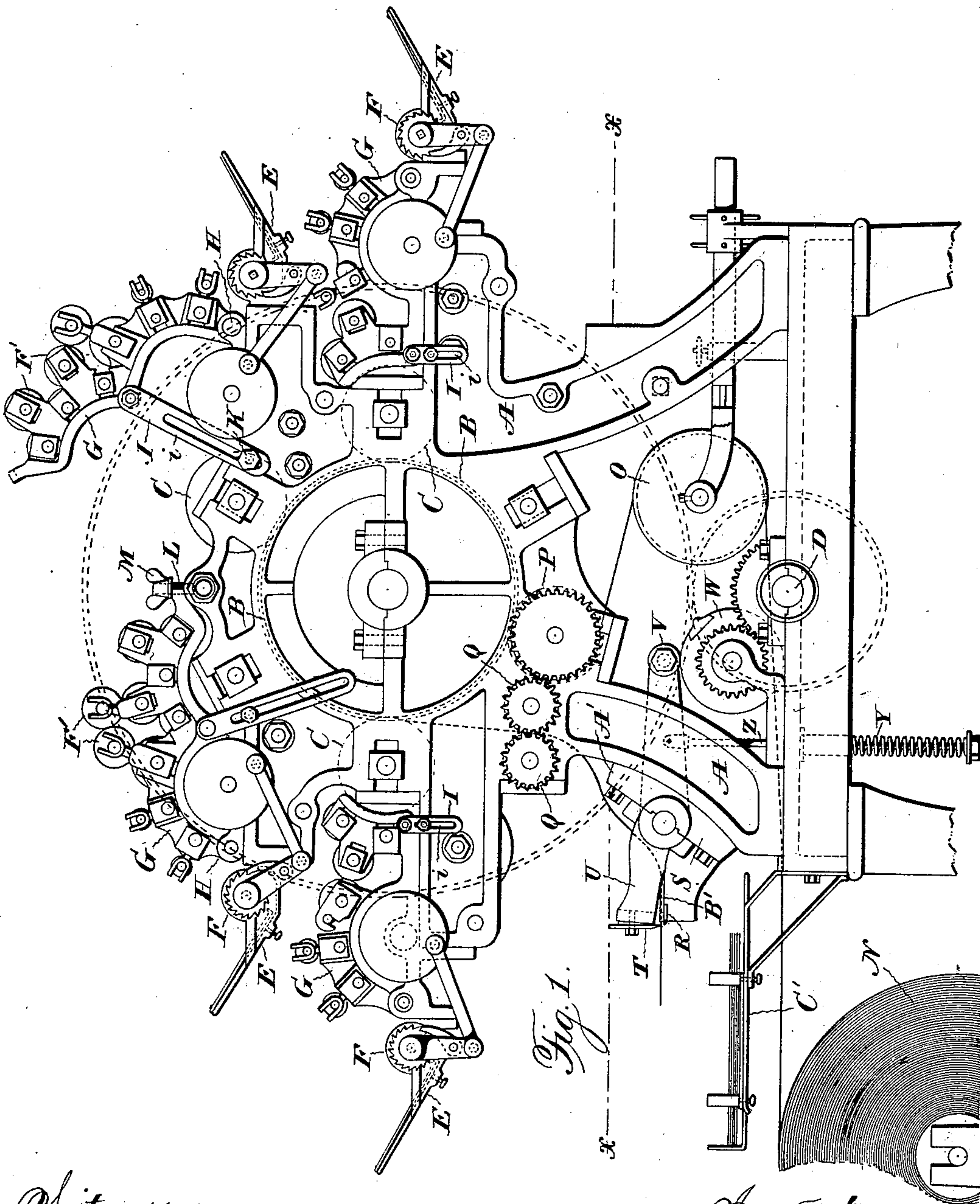


Fig. 1.

Witnesses:

Jas. E. Hutchinson.  
Henry C. Hazard.

Inventors.

Chas. H. Palmer & J. W. Denmead,  
by Prindle & Russell their Attys.

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3 Sheets—Sheet 2.

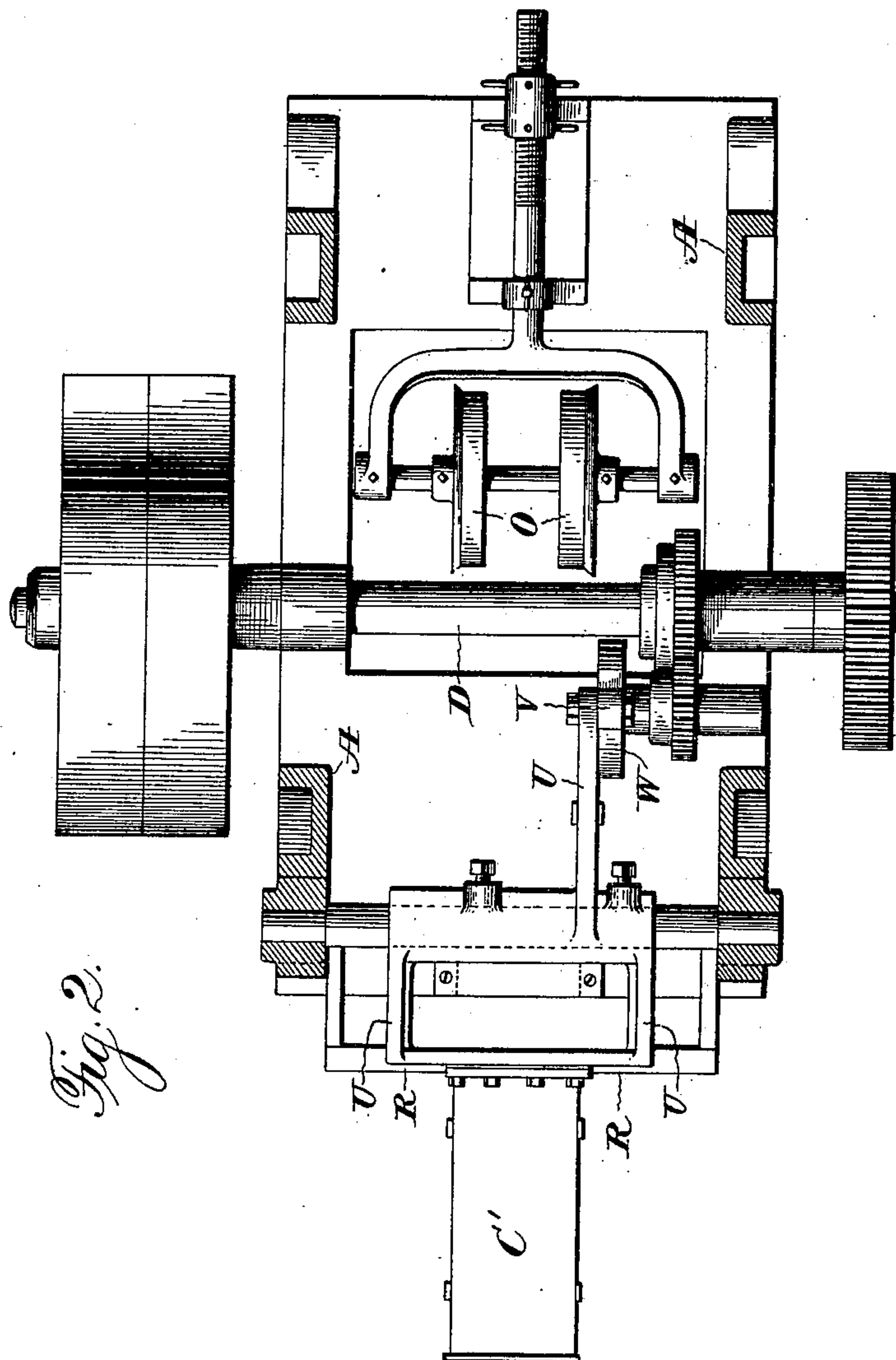


Fig. 2.

Witnesses:  
Jas. C. Hutchinson.  
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Chas. H. Palmer and Jno. W. Denmead.  
By Prindle and Russell, their Attys.

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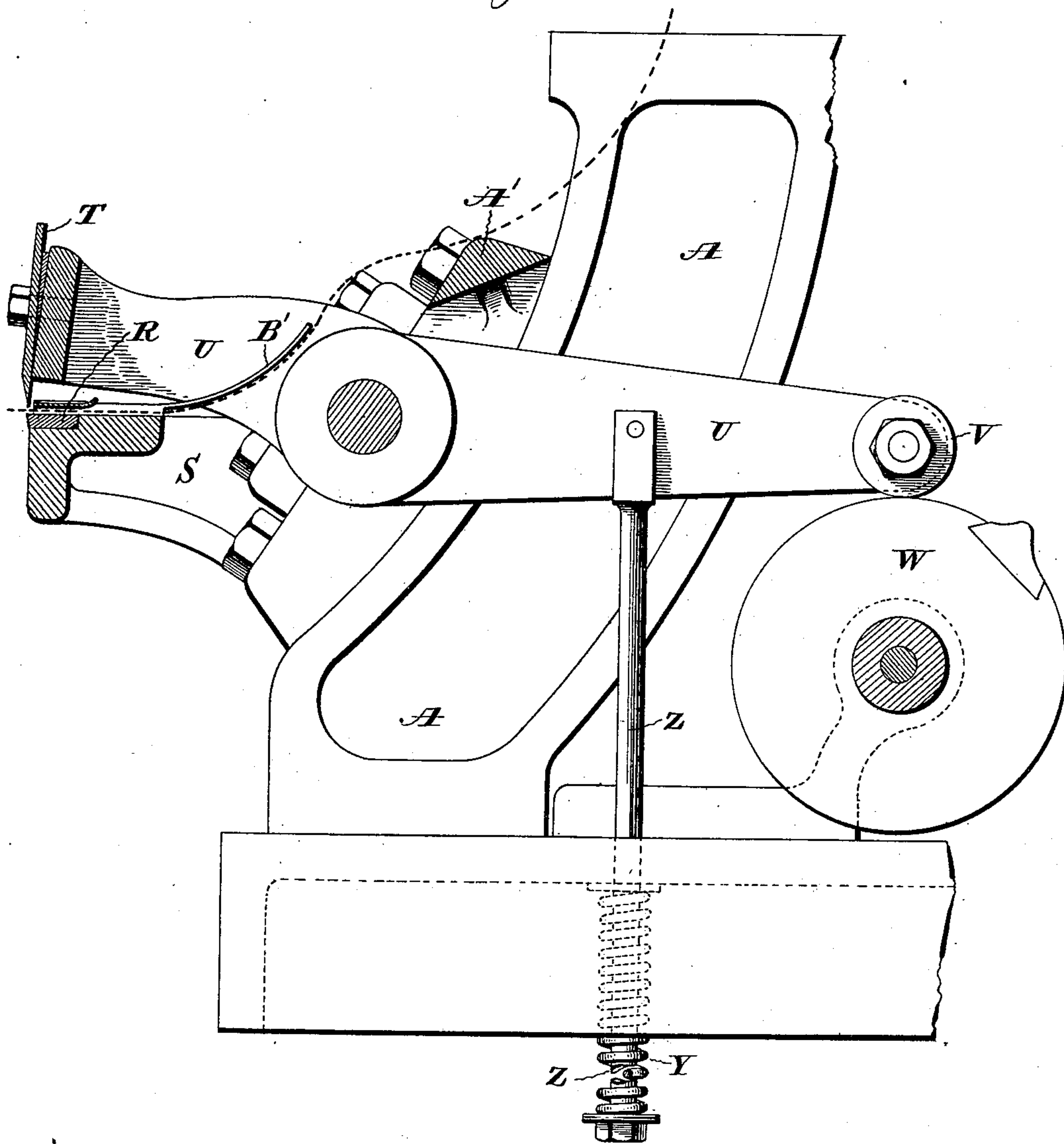
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3 Sheets—Sheet 3.

*Fig. 3.*



*Witnesses:*

*Jas. Hutchinson.  
Henry C. Hazard.*

*Inventors.*

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# UNITED STATES PATENT OFFICE.

CHARLES H. PALMER AND JOHN W. DENMEAD, OF BARBERTON, OHIO.

## PRINTING-PRESS.

SPECIFICATION forming part of Letters Patent No. 669,369, dated March 5, 1901.

Application filed May 22, 1899. Serial No. 717,844. (No model.)

*To all whom it may concern:*

Be it known that we, CHARLES H. PALMER and JOHN W. DENMEAD, of Barberton, in the county of Summit, and in the State of Ohio, have invented certain new and useful Improvements in Printing-Presses; and we do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, in which—

Figure 1 is a side elevation of a color-printing press embodying our improvements; Fig. 2, a horizontal section on the line  $x x$  of Fig. 1, and Fig. 3 a detail vertical section of the cutting mechanism.

Letters of like name and kind refer to like parts in each of the figures.

The object of our invention is to make certain improvements in printing-presses; and to this end said invention consists in the printing-press having the features of construction substantially as hereinafter specified.

We illustrate our invention as adapted to a color-printing press of usual general construction—that is, it comprises a frame A, an impression-cylinder B, and a series of form-rolls C and C, arranged in a semicircle around said cylinder. The latter and the forms are driven by being suitably geared to a driving-shaft D, journaled in bearings on the frame base or bed. For each form there is an ink-fountain E of common construction, from which ink is taken and transferred to the form by a series of rolls. The main distributing-roll F of each inking apparatus is fixedly mounted in bearings on the press-frame A; but the other rolls F' and F' are journaled in a frame or bracket G, that is hinged at one extremity by a suitable pivot H to the frame A, so that the frame G, with said rolls, may be swung outward on the pivot H away from the main distributing-roll and the form-roll. A bar I, pivoted at one end to the side of the bracket of frame G and having a longitudinal slot  $i$ , through which a screw or bolt K passes into the side of the main frame A, constitutes means whereby the bracket may be secured in either a raised position or one with the rolls F' and F' in working relation to the printing and main distributing roll, the bolt K serving to firmly clamp the bar against the

side of the frame A. If desired to supplement the bolt K in holding the bracket with the rolls in working position, an additional holding device may be used—such, for example, as is shown applied to two of the brackets—consisting of a bolt L on the frame A and a thumb-nut M on the bolt. As two adjacent brackets G and G can be arranged with their free ends toward each other, a single bolt and nut can be utilized for two brackets, the nut being made to overlap the edge of each bracket. The object of mounting the inking-rolls, save the main distributing-roll, in a bracket or support that is movable is twofold: It gives ready access to the form and main distributing rolls for cleaning or other purposes without any disturbance of the inking-rolls in their working positions in their bearings, and it enables the inking-rolls that have contact with the form-rolls to be lifted out of contact with the latter when the press is not at work, thus obviating injury to said rolls by their being misshaped from resting on the irregular type-surfaces of the form-rolls when the latter are not in motion.

The paper to be printed is taken from a roll N, whence it passes to and around the roll O of the tension device, and thence over a second roll P to the impression-cylinder B. After receiving the impressions the paper passes between a pair of gear-driven rollers Q and Q to a cutting-off mechanism, consisting of a fixed knife R on a bracket S, bolted to the frame A, and a movable knife T, mounted on one end of a lever U, pivoted intermediate its ends to the bracket S. At its other end the lever has a roller V, which is held against the periphery of a cam-wheel W by a coiled spring Y, that encircles a rod Z, connected at one end to the lever U, a collar on the rod being engaged by one end of said spring, while the other end of the spring bears against a relatively-fixed point—some convenient part of the frame A. The cam-wheel W is suitably geared to the driving-shaft D and is shaped so that at each revolution it rocks the knife-lever U to cut off the paper. At a point intermediate the rollers Q and Q and the knives there are a support or guide A' for the paper, over which it passes, and another guide B', reaching close to the knives, beneath which the paper passes.



As the paper moves continuously through the press, it is apparent the check which is given during the operation of the knives causes the sheet to buckle; but as the action of the knives is very quick the buckle is so slight that it disappears as soon as the knives separate. Such buckling as takes place is intermediate the rollers Q and Q and the knives, and hence it in no wise interferes with the proper acting of the printing mechanism.

Preferably a shelf C' is attached to the frame A in position to receive the pieces of paper as they are cut off.

Having thus described our invention, what we claim is—

1. In a paper-cutting mechanism, the combination of means for continuously feeding the paper, and a knife that crosses the path of and severs the paper, and by engagement with which the travel of the paper is arrested during the cutting operation, the paper being free to buckle and buckling of itself during the cutting operation at a point between the knife and said feeding means, substantially as and for the purpose described.

2. In a paper-cutting mechanism, the combination of means for continuously feeding a strip of paper, a knife that crosses the path of and severs the paper, means for guiding the paper, and a projection over which the paper passes and which projection deflects the paper out of its regular course, whereby the paper is caused to buckle and is thus saved from injury during the stoppage of the paper by the knife, substantially as described.

3. In a paper-cutting mechanism, the combination of means for continuously feeding the paper, a knife that crosses the path of and severs the paper, means for guiding the paper, and a projection over which the paper passes and which projection deflects the paper out of its regular course, whereby the paper is caused to buckle and is thus saved from injury during the stoppage of the paper by the knife, the paper being free at all points between the means for feeding and the knife, substantially as and for the purpose described.

4. In a paper-cutting mechanism, the combination of means for continuously feeding the paper, a knife that crosses the path of and severs the paper, and by engagement with which the travel of the paper is arrested, means for guiding the paper, and a projection over which the paper passes and which projection deflects the paper out of its regular course, whereby the paper is caused to buckle and is thus saved from injury during the stoppage of the paper by the knife, substantially as and for the purpose described.

In testimony that we claim the foregoing we have hereunto set our hands this 15th day of April, 1899.

CHARLES H. PALMER.  
JOHN W. DENMEAD.

Witnesses:

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W. I. HAYS.