

(No Model.)

2 Sheets—Sheet 1.

A. G. WARD & B. F. WICKWIRE.

PRINTING PRESS.

No. 464,052.

Patented Dec. 1, 1891.

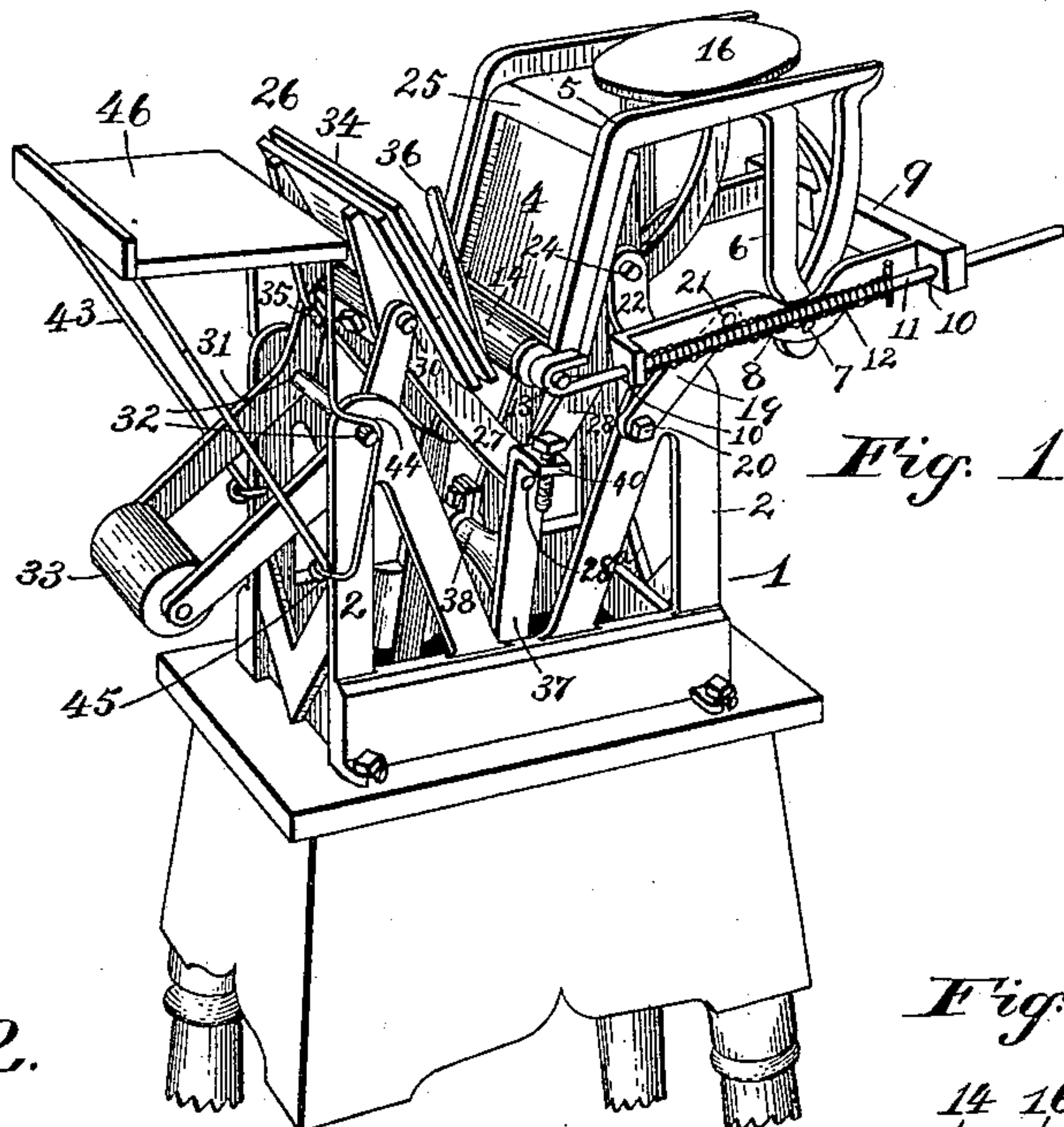


Fig. 1.

Fig. 2.

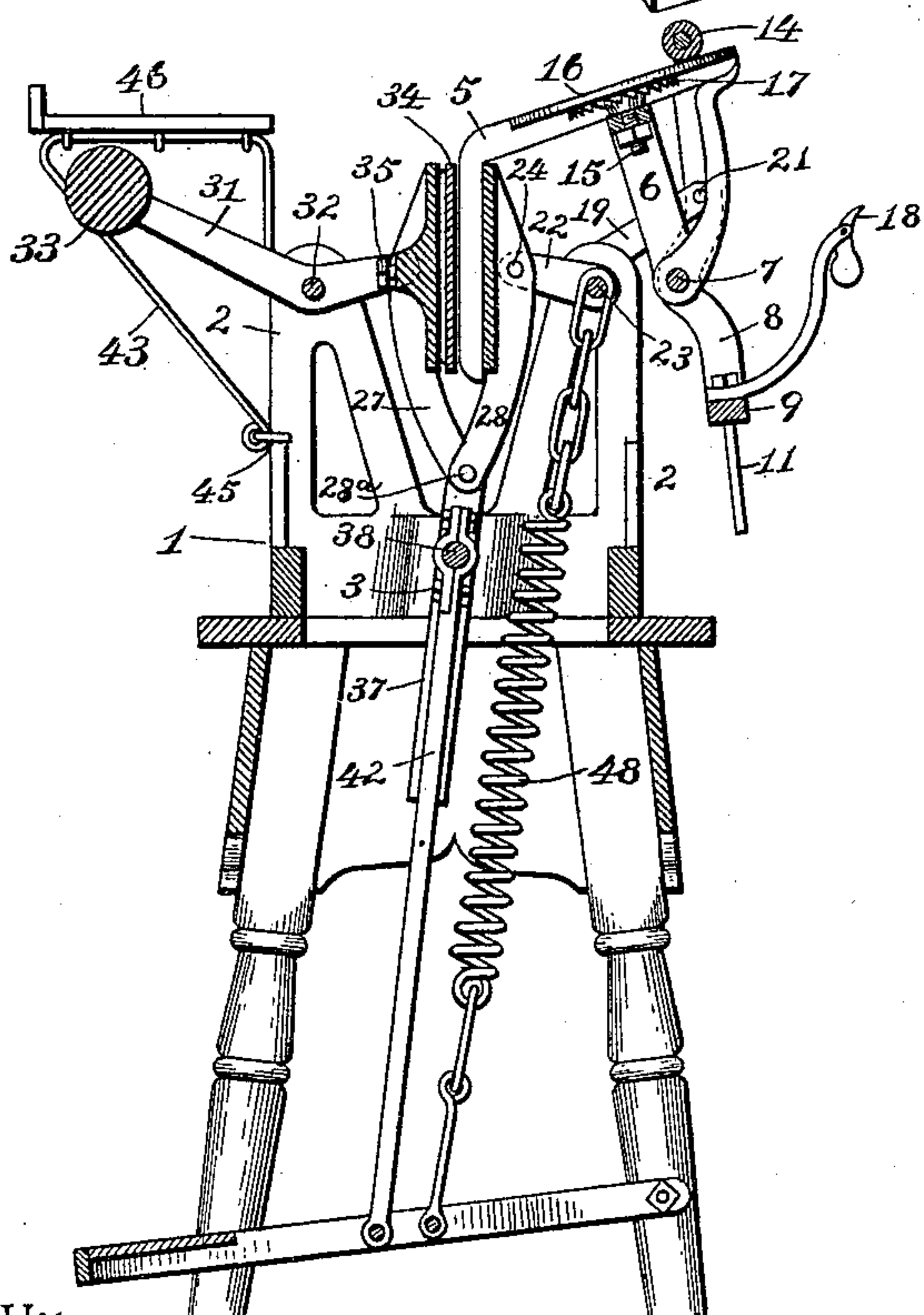
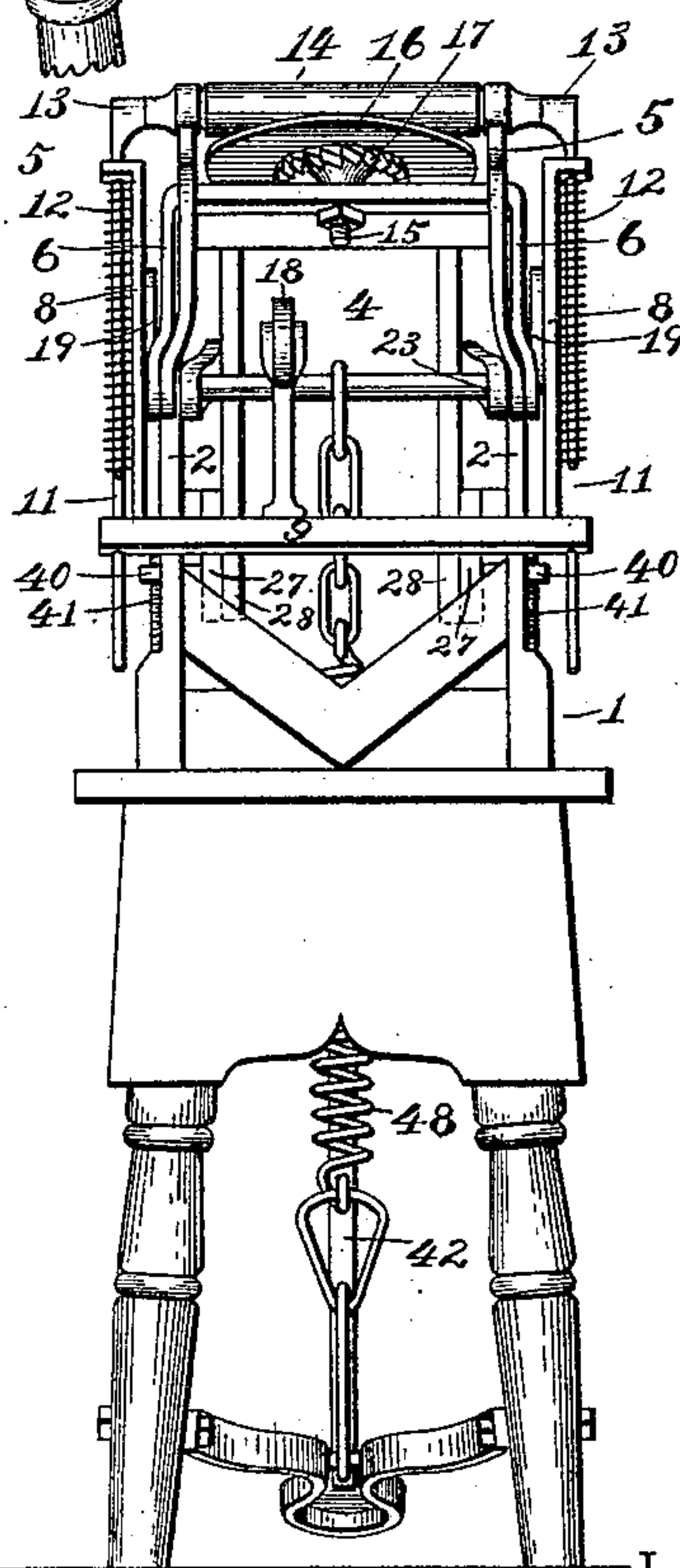


Fig. 3.



Witnesses:

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(No Model.)

2 Sheets—Sheet 2.

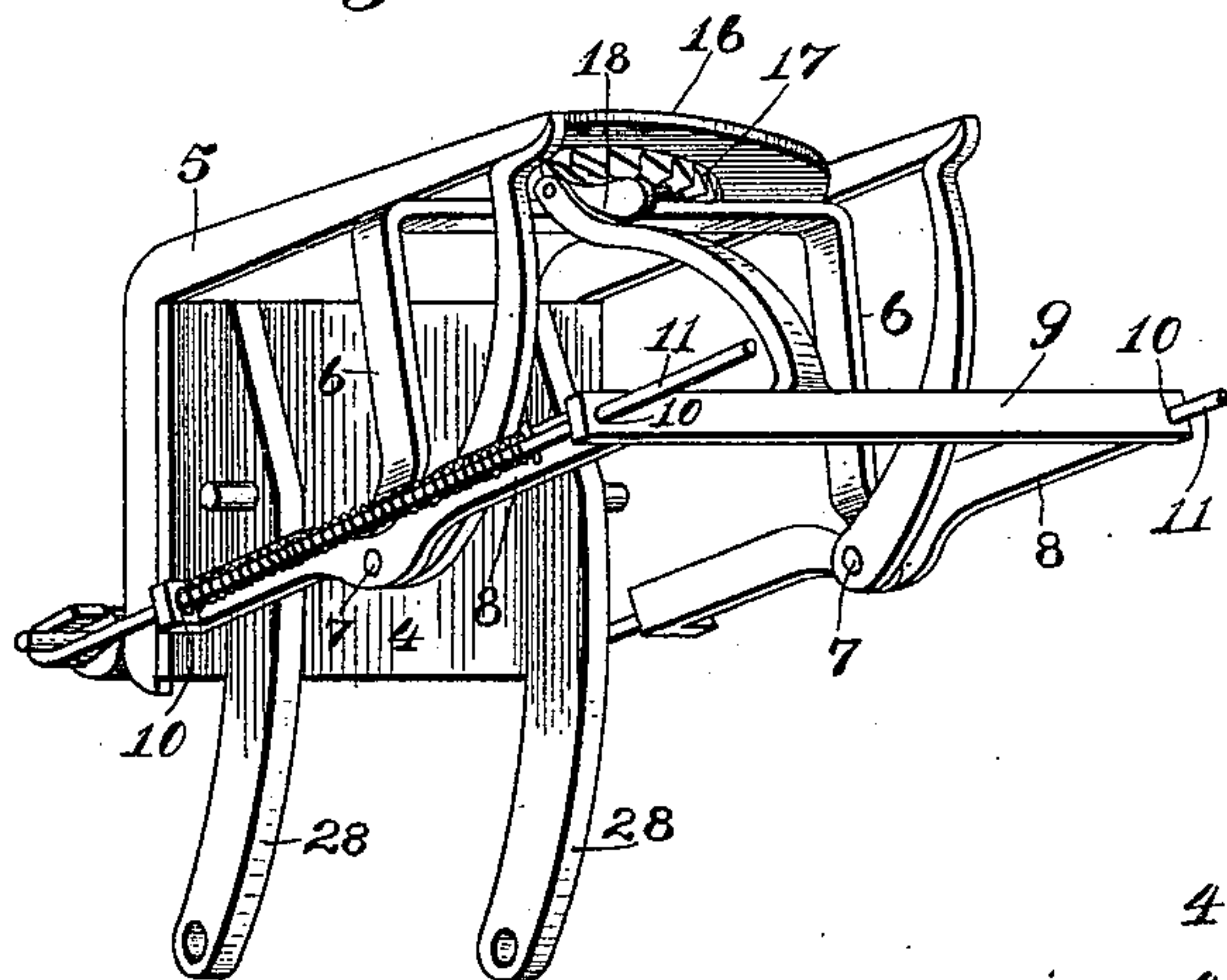
A. G. WARD & B. F. WICKWIRE.

PRINTING PRESS.

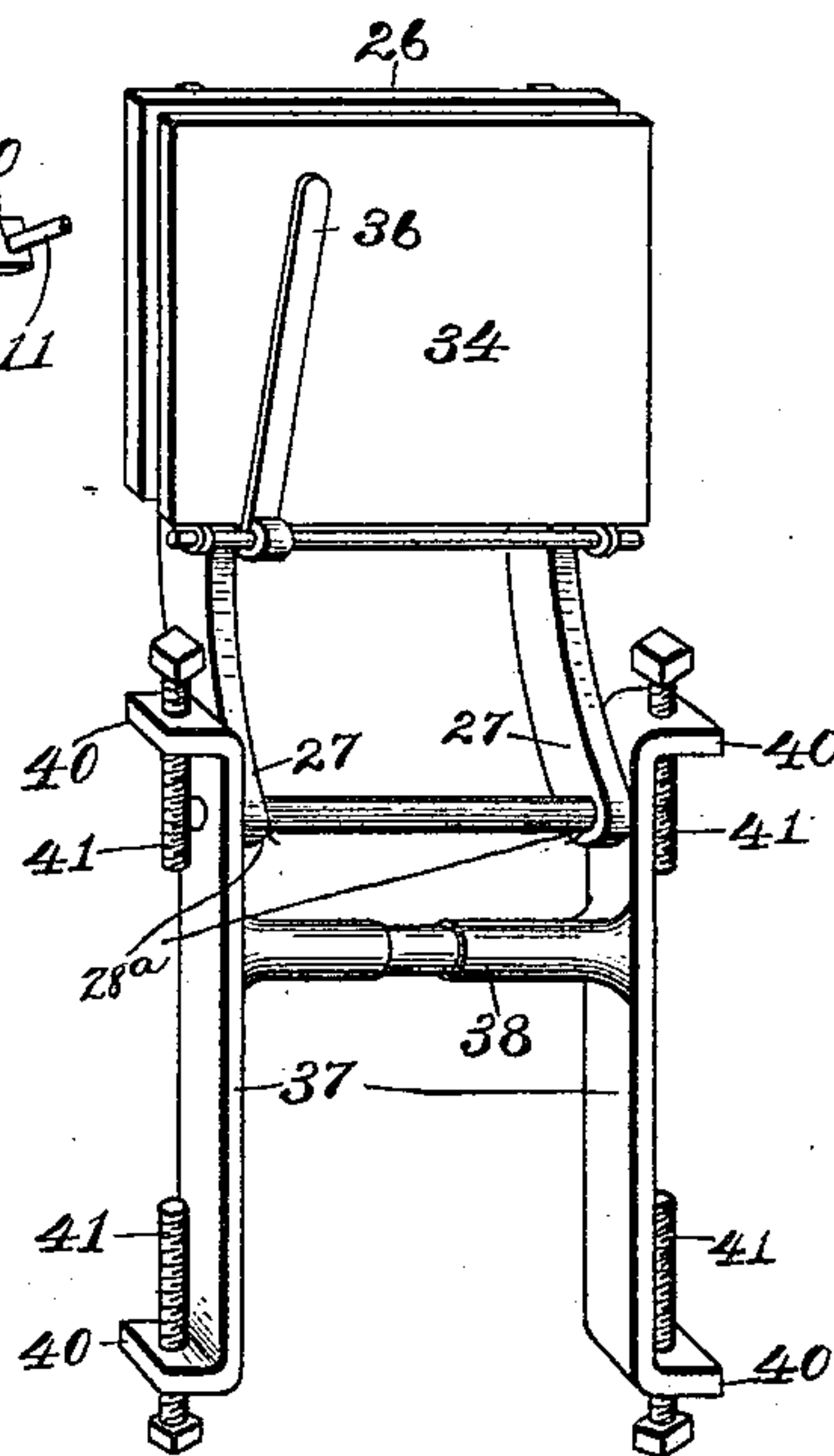
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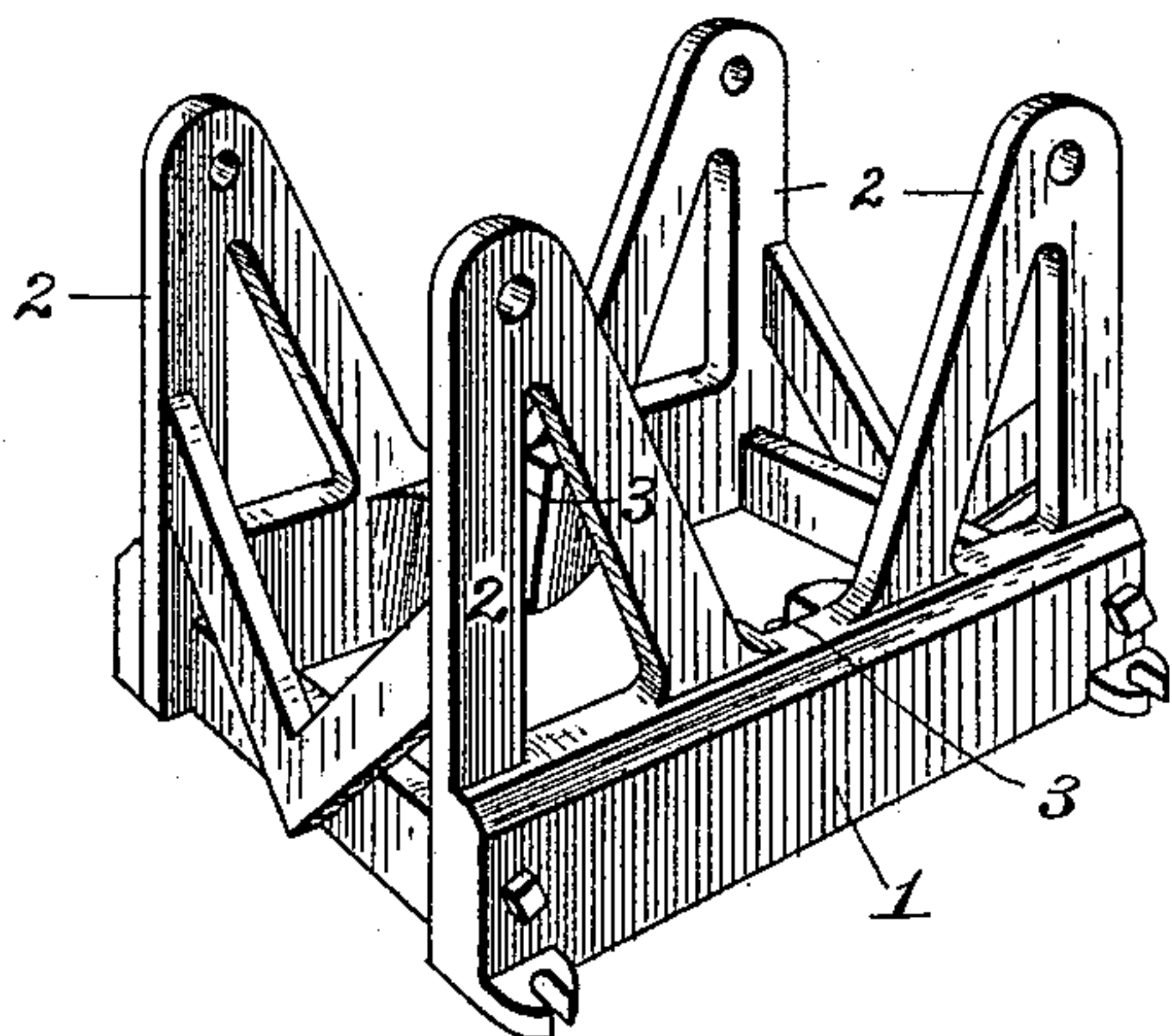
*Fig. 4.*



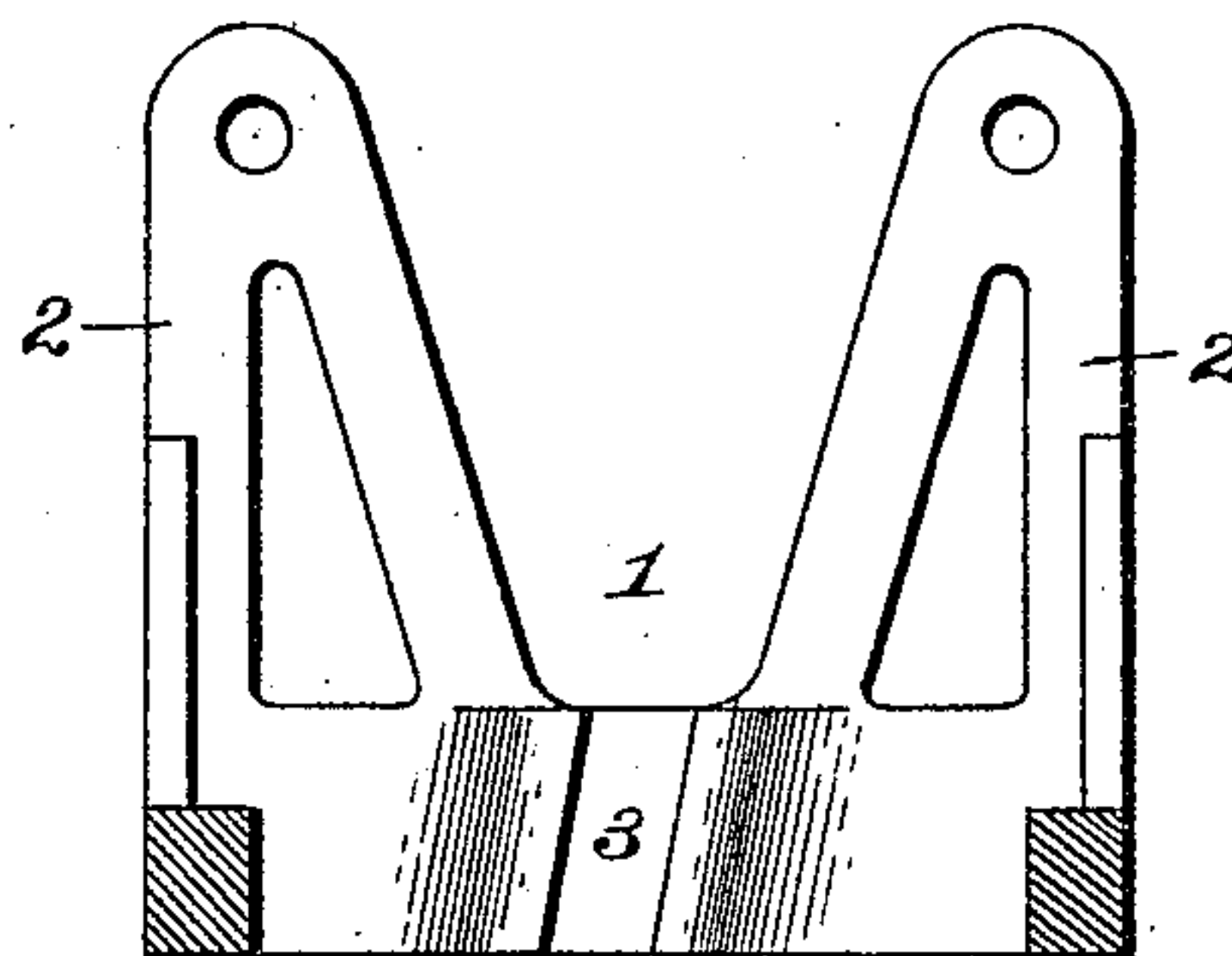
*Fig. 5.*



*Fig. 6.*



*Fig. 7.*



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# UNITED STATES PATENT OFFICE.

ARTHUR G. WARD AND B. FRANKLIN WICKWIRE, OF BANCROFT, IOWA.

## PRINTING-PRESS.

SPECIFICATION forming part of Letters Patent No. 464,052, dated December 1, 1891.

Application filed May 27, 1891. Serial No. 394,277. (No model.)

*To all whom it may concern:*

Be it known that we, ARTHUR G. WARD and B. FRANKLIN WICKWIRE, citizens of the United States, residing at Bancroft, in the county of Kossuth and State of Iowa; have invented a new and useful Printing-Press, of which the following is a specification.

This invention relates to improvements in printing-presses; and the objects and advantages of the same, together with the novel features thereof, will hereinafter appear, and be particularly pointed out in the claims.

Referring to the drawings, Figure 1 is a perspective of a printing-press constructed in accordance with our invention. Fig. 2 is a vertical longitudinal section thereof. Fig. 3 is a rear elevation. Fig. 4 is a detail in perspective of the bed. Fig. 5 is a detail in perspective of the platen and platen-operating frame. Fig. 6 is a detail in perspective of the press-frame. Fig. 7 is a sectional view of the same.

Like numerals of reference indicate like parts in all the figures of the drawings.

In practicing our invention we mount upon a suitable frame-work or base the rectangular press-frame 1, from the opposite four corners of which rise the opposite pairs of front and rear standards 2, said frame 1 between the standards having its opposite side bars provided with inclined ways or slots 3, formed upon the inner faces of the side bars.

The bed 4 comprises a pair of opposite obtusely-bent side bars 5, located above and between the rear pair of standards 2. From these side bars depend opposite inverted-L-shaped supporting-bars 6, to the extremities of which are pivoted, as at 7, the ink-roller-actuating arms 8, which arms are connected at their rear ends by the cross-bar 9, extended beyond the arms, and in connection with the outwardly-turned upper extremities of said arms are perforated at 10 to receive the ink-rods 11, around which are coiled springs 12. The extremities of the rods are bent to form hooks 13, which receive the bearing ends of the ink-roller 14. In the L-shaped standards 6 there is journaled upon a spindle 15 the ink-disk 16, said disk having upon its under side a ratchet-face 17, engaged by a loose pawl 18, extending from the cross-bar 9, where- by said disk is operated or partially rotated

at each movement of the cross-bar. Links 19 are pivoted, as at 20, to the rear standards 2, and, as at 21, to the arms 8 above their pivots 7. Links 22 are pivoted to the rear pair of standards, as at 23, and also at 24 to the bed, so that as the bed moves toward the front and center of the frame-work the ink-roller is drawn back over the inking-disk, and when said bed moves to the rear the roller moves to the front, as will be apparent, and thus inks the body of type contained within the chase 25, supported by the bed.

26 designates the platen provided with a pair of inwardly-extending arms 27, which are pivoted, as at 28<sup>a</sup>, to the lower extremities of a pair of bars 28. In rear of their middles the side bars of the platen have pivoted thereto, as at 30, curved arms 31, which are fulcrumed or pivoted, as at 32, to the upper ends of the front pair of standards 2, and at their rear ends are weighted, as at 33. The platen 34, mounted on the impression-frame, is made adjustable by means of the set-screws 35 and is provided with the usual sheet-holding clips 36.

In the recesses 3 of the side bars of the frame is mounted a pair of inclined sliding bars 37, connected near their upper ends by a bent bar 38, and beyond said bent bar pivoted at 28<sup>a</sup> to the connecting ends of the bars 28 and 27 of the bed and platen, respectively. The extremities of the sliding bars are laterally bent to form perforated lugs 40, through which are passed set-screws 41 for abutting against the upper and lower edges of the side bars of the frame, and thus limiting the movement of the sliding bars. To the cross-bar 38 is loosely connected the upper end of a pitman or connecting-rod 42, which latter depends to and is operated by any suitable means, as a fly-wheel shaft or treadle-shaft, should the latter be employed.

43 designates a pair of triangular wire frames, each provided with an offset or shoulder 44 at one side, adapted to engage the ends of the pivot 32, which pass through the front pair of standards 2, and the lower ends of the triangular wire frames are inwardly bent to form standard-engaging shoulders 45, which take over the front edges of the standards, and thus the frames are prevented from accidental displacement. The frames have



secured thereto and mounted thereon a paper-supporting table 46, from which the blank sheets of paper may be fed to the impression-plate, and a subsequent downward pull upon the pitman serves to draw the impression frame and plate and the platen to a vertical position, where they meet, and thus the impression is made.

From the above description it will be seen that both the bed and platen frames move simultaneously, which movement is not accompanied by any great friction of the parts, and through the medium of simple connections wholly omitting all the usual gearing necessary to give the parts the proper movements. It will be observed that a press thus constructed will be operated with great ease and smoothness, is of exceedingly cheap and simple construction, light and durable, consists of few and easily-formed parts, and requires but slight power to operate it, in that the weight 33 serves to counterbalance the impression-frame, while the bed is drawn back by a coiled spring 48, connected to the rear end of the bed and the treadle of the press, said spring also serving to elevate the treadle.

Having described our invention, what we claim is—

1. In a printing-press, the combination, with the rectangular frame provided with opposite vertical ways and having the front and rear pairs of standards, of a pair of bars weighted at their front ends and fulcrumed on the front pair of standards, a platen connected to the rear ends of said bars, a bed pivotally connected at its lower end to the lower end of the impression-frame, said bed being fulcrumed on the rear pair of standards, a pitman, and vertically-reciprocating connections mounted in the ways and located between the pitman and the pivotal connection at the lower ends of the frame and platen, substantially as specified.

2. In a printing-press, the combination, with the frame-work having the rear pair of standards and the platen located in front of the same, of the bed comprising a pair of obtusely-bent side bars, suitably-connected bars 6, depending therefrom near their rear ends, an ink-disk 16, swiveled in the bars, having a ratchet-face upon its under side, links 22, pivotally connected to the standards and to the

bed, arms 8, bent at their upper ends and perforated, pivoted to the lower ends of the bars 6, the cross-bar 9, connecting the arms, extending beyond the same, and perforated, the reciprocating rods 11, terminating at their front ends in hooks, an inking-roller engaging the hooks, coiled springs encircling the rods, a sliding frame mounted in opposite ways formed in the frame-work, said frame being connected to the pivoted platen, means for reciprocating said frame, and a pawl mounted on the cross-bar of the arms and engaging the teeth of the inking-disk, substantially as specified.

3. The combination, with the opposite standards provided with laterally-disposed pins 32, of the opposite triangular wire frames having shoulders 44 at their rear sides and at their lower ends bent to engage the front ends of the standards, and the table mounted upon the frames, substantially as specified.

4. In a printing-press, the combination, with the rectangular frame, the inner opposite sides of which are provided with recesses 3, of the front and rear pairs of standards rising from the corners of the frame, the angle-bars 31, the platen pivoted, as at 30, at the front end of the angle-bars 31, the weight 33, located at the rear end of the angle-bars, the arms 27, extending from the lower edge of the platen, the links 22, pivoted to the rear pair of standards, the side bars 5 and 28, the latter pivoted to the ends of the links, the depending standards 6, connected with the side bars 5, the forwardly-disposed arms 32, extending from the side bars and pivotally connected to the arms 2 of the frame, the sliding bars 37, mounted in the recesses 3 of the frame-work and pivoted at their upper ends to the pivot of the arms 27 and 28 and having their ends laterally disposed and provided with adjustable set-screws, and the transverse connecting-bar 38, connecting the bars 37, substantially as specified.

In testimony that we claim the foregoing as our own we have hereto affixed our signatures in presence of two witnesses.

ARTHUR G. WARD.  
B. FRANKLIN WICKWIRE.

Witnesses:  
G. H. DANIELS,  
JAMES ROSS.