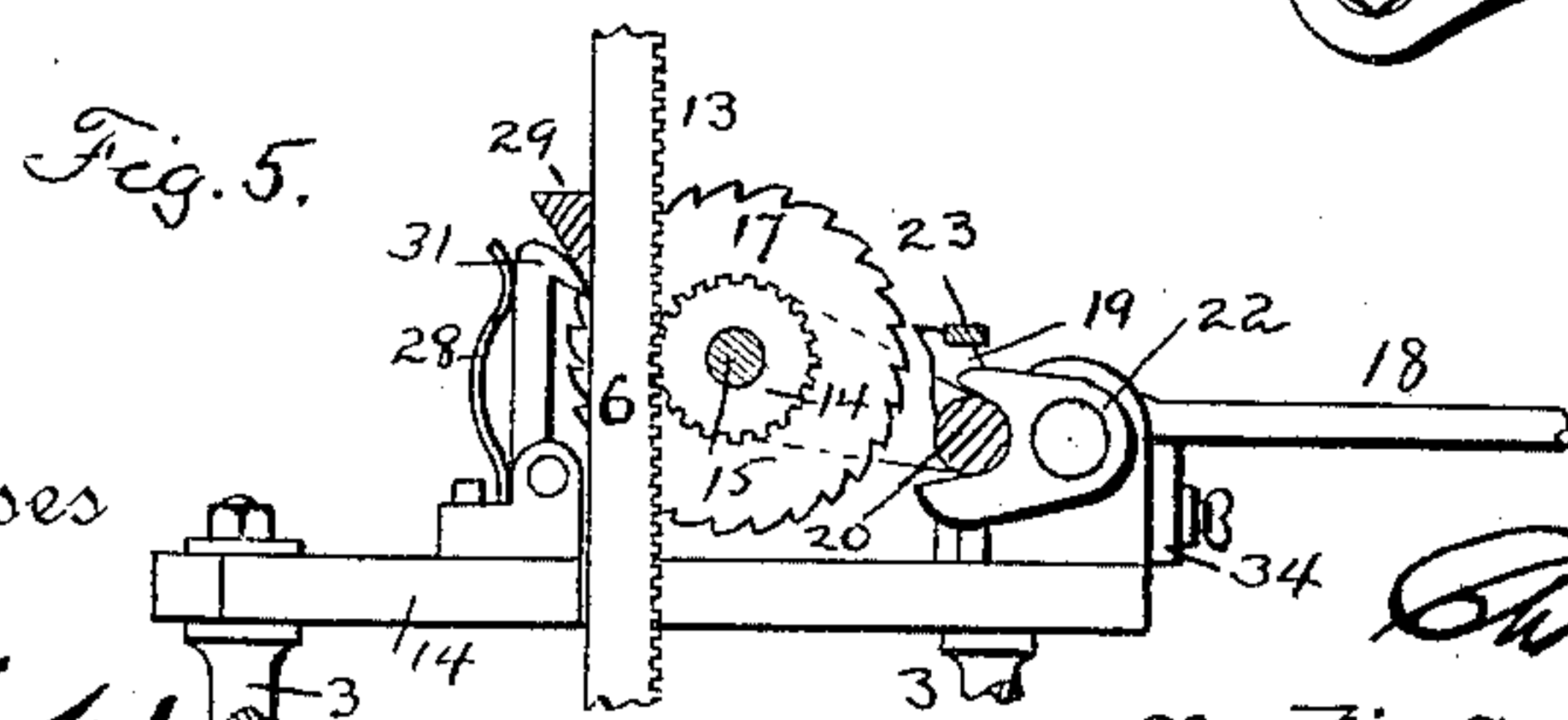
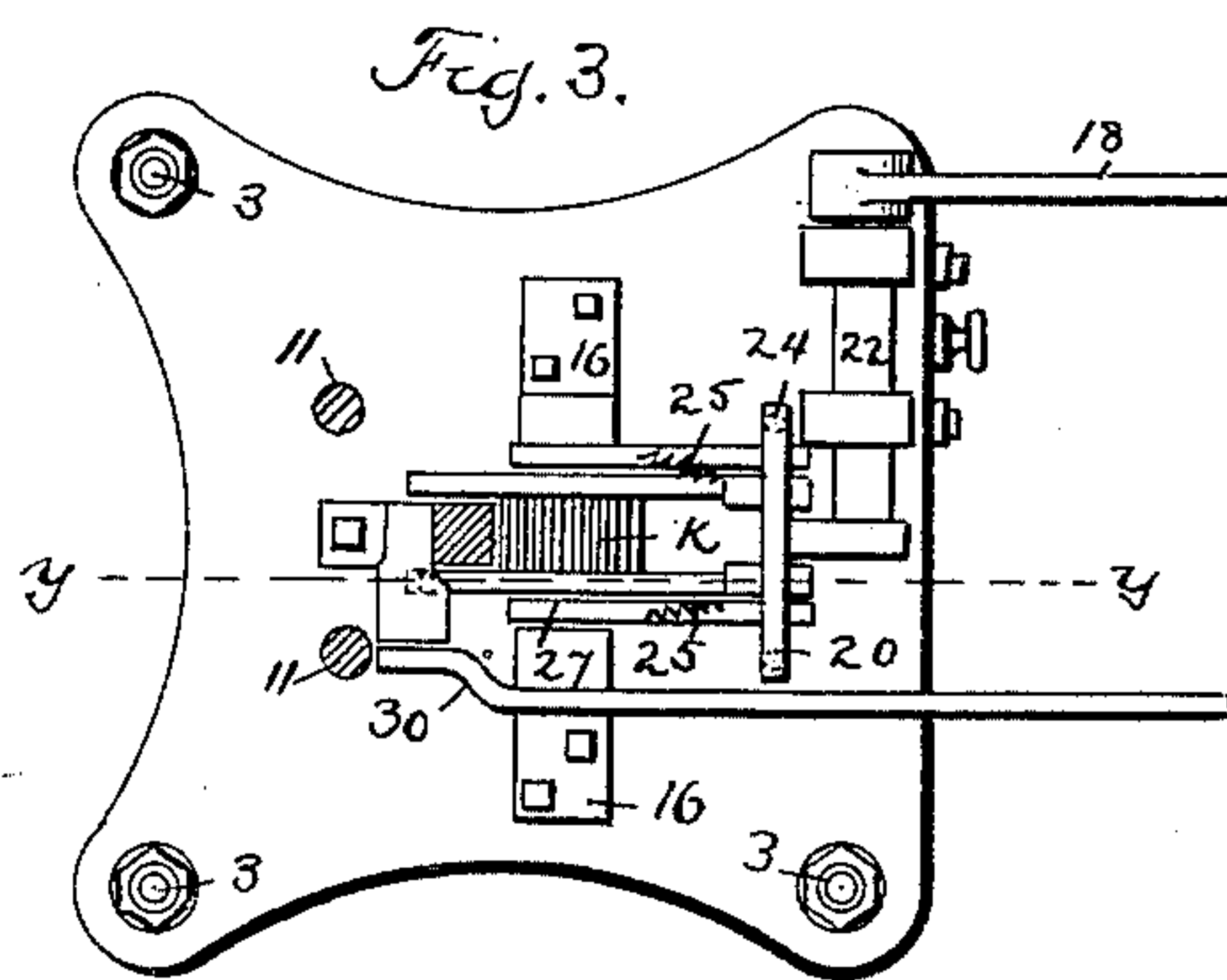
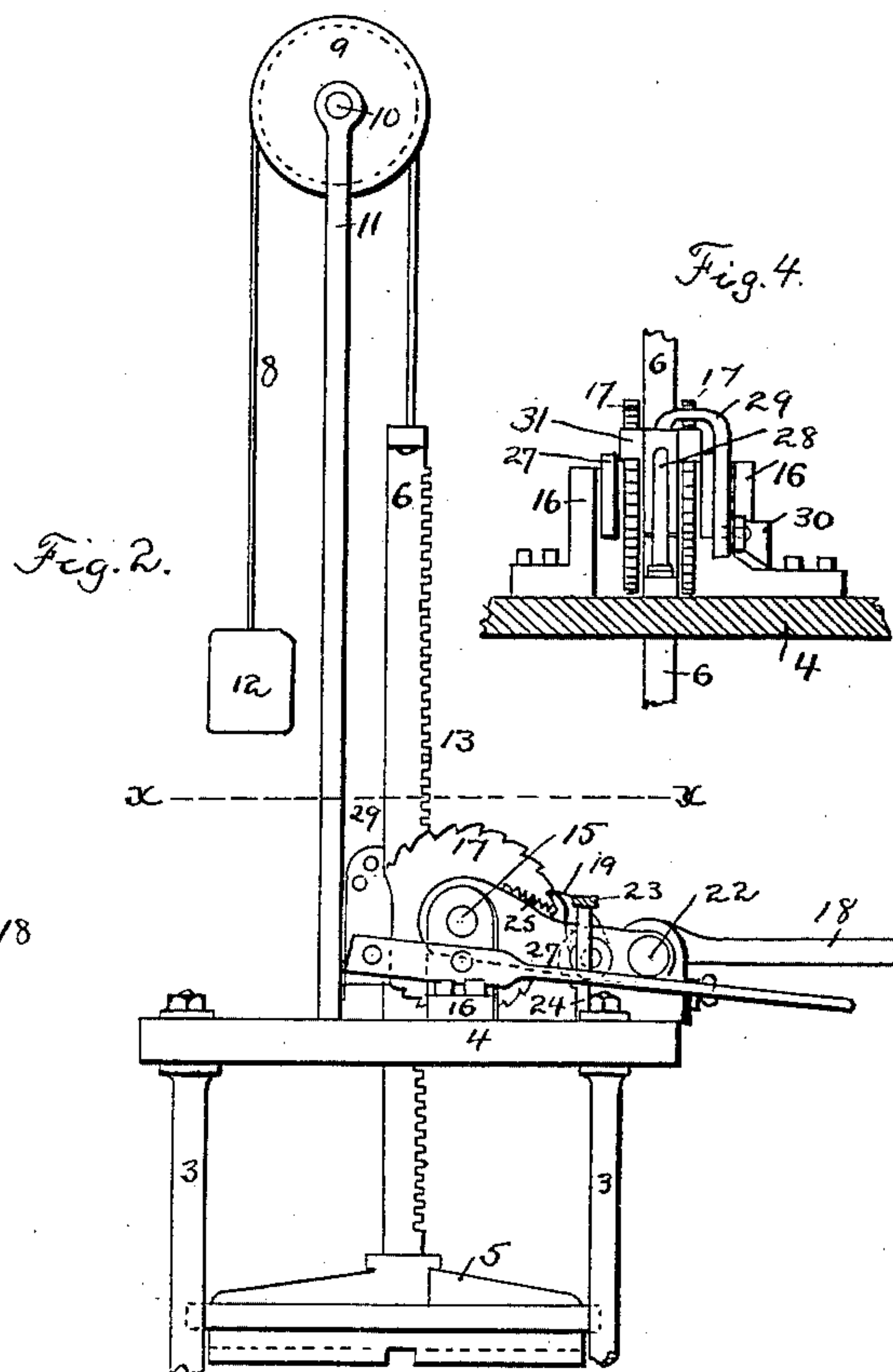
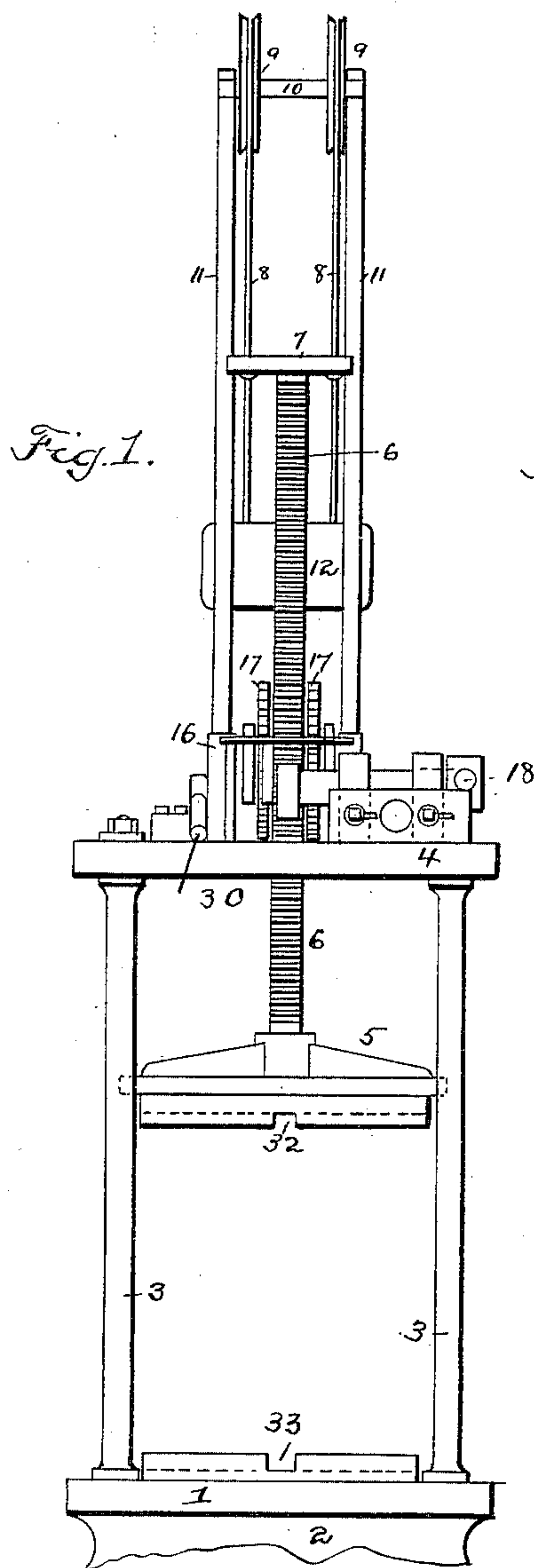


(No Model.)

C. KECK.
BOOK BINDER'S PRESS.

No. 450,886.

Patented Apr. 21, 1891.



Witnesses

J. W. Rutherford
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Inventor

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By His Attorneys

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UNITED STATES PATENT OFFICE.

CHRISTIAN KECK, OF CINCINNATI, OHIO, ASSIGNOR TO WILLIAM H. CHRISTIE, OF SAME PLACE.

BOOK-BINDER'S PRESS.

SPECIFICATION forming part of Letters Patent No. 450,886, dated April 21, 1891.

Application filed October 31, 1889. Renewed February 20, 1891. Serial No. 382,194. (No model.)

To all whom it may concern:

Be it known that I, CHRISTIAN KECK, a citizen of the United States, and a resident of Cincinnati, in the county of Hamilton and State of Ohio, have invented certain new and useful Improvements in Book-Binders' Presses, of which the following is a specification.

My invention refers to an improvement in mechanism for operating an adjustable press-platen which is counterpoised by weights, substantially as shown in the application of William H. Christie, Serial No. 313,514, filed June 7, 1889. In said invention is shown a power-press with a platen detachably connected to the power-driving mechanism and counterbalanced by weight to hold the platen in any adjusted position. This is the invention of William H. Christie, which is hereby disclaimed.

My invention relates to the detail parts of the driving mechanism and the construction and arrangement of the same, all of which will be fully set forth in the description of the accompanying drawings, making a part of this specification, in which—

Figure 1 is a front elevation of my improvement attached to a press. Fig. 2 is a side elevation of the same. Fig. 3 is a top sectional plan view on line *xx*, Fig. 2. Fig. 4 is a longitudinal section on line *yy*, Fig. 3. Fig. 5 is a rear elevation of the holding-pawl and wedge mechanism.

1 represents the bed of the press; 2, the base, and 3 3 the posts.

4 represents top plates sustained upon the posts 3.

5 represents the platen.

6 is a rack-bar attached to the platen 5. The latter is suspended, preferably, by attaching the weights to the cross-head 7 on the rack-bar.

8 represents cords passing over the pulleys 9, which are mounted on shaft 10, journaled in the upright posts 11, which posts are supported by the plate 4.

12 represents a counter-balance, the weight of which is equal to the weight of the platen and rack, so that the platen may be moved up and down by hand and be sustained in any adjusted position.

In my invention I employ a rack-bar and pin-

ion engaging therewith, with ratchet-wheels located upon either side of said rack-bar, and the lever and link connections for operating the lever and driving the ratchet-wheels.

The power is conveyed as follows: 13 represents the teeth of the rack-bar, which engage with pinion 14, mounted upon shaft 15, which is journaled in ears of brackets 16. 17 represents ratchet-wheels keyed to said shaft 15 upon either side of the pinion 14. Said pinion is driven by means of the ratchet-lever 18, which drives the pawls 19. Pawls 19 are pivoted and supported by their axis 20, which journals in the links 27 and rests in the fork 21, which is keyed to the stud-shaft 22, to which the ratchet-lever 18 is also keyed. 23 represents a cross-bar rigidly connected to the pawls 19. 24 represents pins, which project up outside of the pawls 19, and when the ratchet-lever stands in its normal position, as shown in Fig. 2, the said pawls are thrown and held out of engagement with the ratchet-wheels 17 by means of the cross-bar 23, resting upon the pins 24. 25 represents springs attached to the pawls 19 and links 27, so as to pull the pawls into engagement with the ratchet-wheel when the lever 18 is depressed, lifting the cross-bar 23 off of the pins or keepers. The pawls are operated by depressing the lever 18, which lifts the axial shaft 20, bringing the pawls into engagement with the ratchet-wheels. The links 27 move the pawls in the arc described by the teeth of the ratchet-wheel. When the lever is raised, the links 27, carrying the pawls 19, drop down and spring 25 yieldingly allows the pawls to pass over the teeth of the ratchet-wheel. On the opposite side of the ratchet-wheel is provided a duplex holding-pawl 31, which engages with the respective ratchet-wheels. This pawl is normally held in engagement with the ratchet-teeth by means of the spring 28, which presses them up, and they are held out of engagement by the wedge 29, which is operated by the lever 30. When lever 30 is depressed, the wedge 29 is raised up and the spring 28 presses the pawl 31 into engagement with the teeth of the ratchet-wheel. When said lever is raised up, it pulls the wedge 29 down in between the holding-pawl 31 and the rear edge of the rack-bar 6, which prevents the engagement of the

holding-pawl 31 with the teeth of the ratchet-wheels. When lever 18 stands in its normal position, (shown in Figs. 2 and 4,) the pawls are also in disengagement with the ratchet-driving wheels. The pressed platen 5 is therefore free to move up and down by extraneous means, so as to be adjusted to any desired height. 34 represents a slide, which is moved longitudinally under the lever 18, as shown in Fig. 1, to hold the lever up and the pawls 19 out of engagement with the teeth of the ratchet-wheel 17. The lever 30 may be counterbalanced, so as to hold the wedge in either position.

By the peculiar construction herein described I am enabled to employ driving mechanism of a superior quality than the ratchet and pawl driving mechanism heretofore employed in the arts, and, while I have shown it especially designed for a press-platen, it is obvious that it is equally well adapted to drive other similar mechanism.

Having described my invention, what I claim is—

1. In combination with the rack-bar of a press-platen counterpoised by weights, the combination of the ratchet-wheels 17, located

upon either side of said bar, and pinion 14, located between the ratchet-wheels, the lever 18, carrying the fork 21, engaging with the axis 20 of the links 27, and the driving-pawls 19, whereby the movement of said lever operates simultaneously the pawls and ratchet-wheels on either side of the rack-bar, substantially as specified.

2. In combination with the rack-bar 6 of the counterbalanced press-platen, the ratchet-wheels 17, located on either side of said rack-bar, the link mechanism carrying pawls 19, the operating-lever 18, and the duplex holding-pawls 31, substantially as herein specified.

3. In combination with the rack-bar 6 of the counterbalanced press-platen operated by duplex ratchet-wheels 17, and duplex driving-pawls linked together and operated by the lever 18, and the cross-bar 23, normally resting on pins or keepers 24, substantially as herein specified.

In testimony whereof I have hereunto set my hand.

CHRISTIAN KECK.

Witnesses:

EDWARD BOYD,
T. SIMMONS.