

(No Model.)

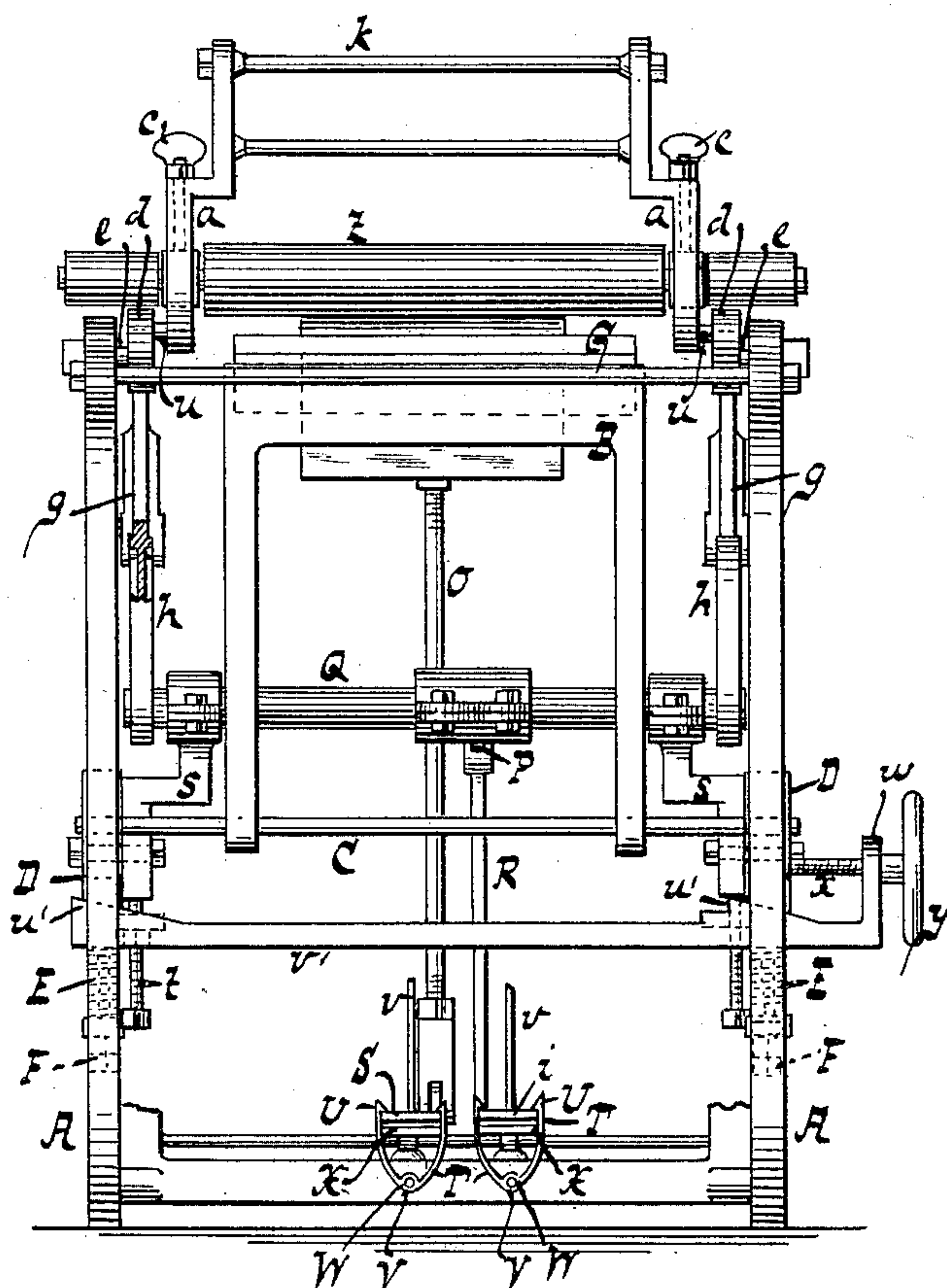
2 Sheets—Sheet 1.

C. WELTNER.
BOOK BACKING MACHINE.

No. 437,066.

Patented Sept. 23, 1890.

Fig. 1.



WITNESSES:

William Miller
Eduard Wolff

INVENTOR

Conrad Weltner

BY

Van Santvoord & Hauff
ATTORNEYS

(No Model.)

2 Sheets—Sheet 2.

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Fig. 2.

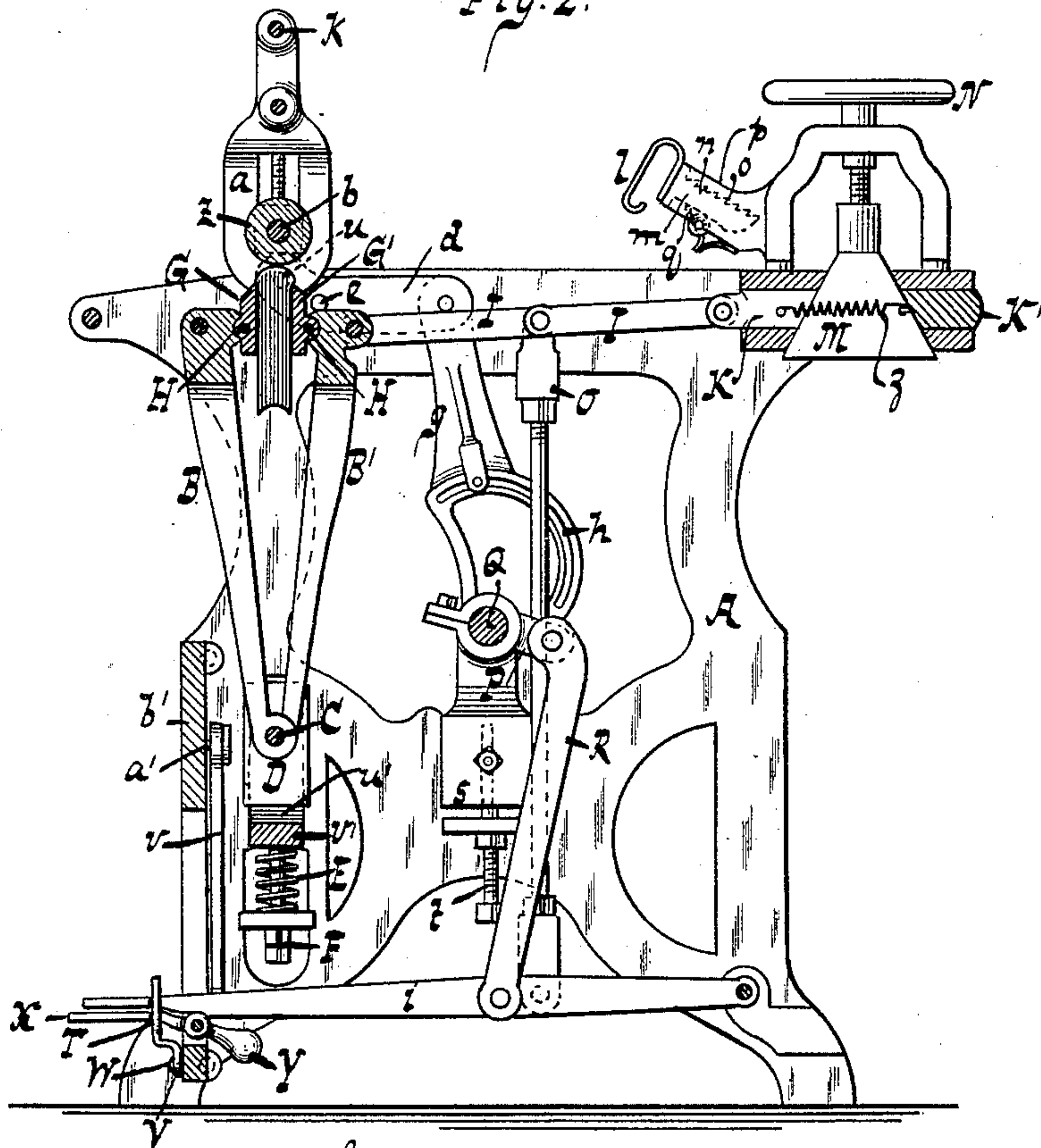
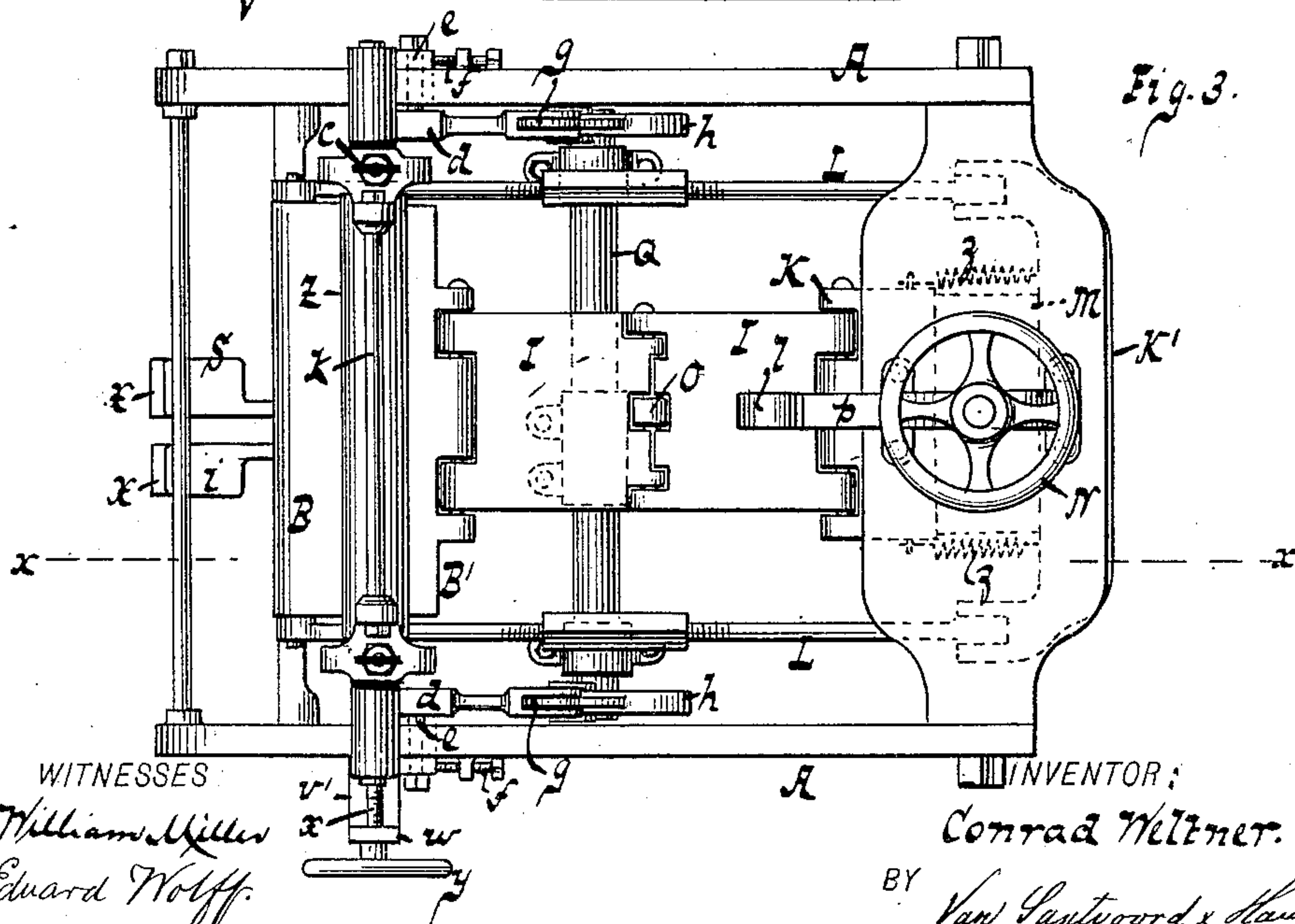


Fig. 3.



WITNESSES
William Miller
Edward Wolff.

INVENTOR:
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UNITED STATES PATENT OFFICE.

CONRAD WELTNER, OF NEW YORK, N. Y.

BOOK-BACKING MACHINE.

SPECIFICATION forming part of Letters Patent No. 437,066, dated September 23, 1890.

Application filed June 12, 1890. Serial No. 355,217. (No model.)

To all whom it may concern:

Be it known that I, CONRAD WELTNER, a citizen of the United States, residing at New York, in the county and State of New York, have invented new and useful Improvements in Book-Backing Machines, of which the following is a specification.

This invention relates to an improvement in book-backing machines; and the invention consists in the details of construction set forth in the following specification and claims and illustrated in the accompanying drawings, in which—

Figure 1 shows a front elevation of a book-backing machine containing my invention. Fig. 2 is a section along $x x$, Fig. 3. Fig. 3 is a plan view of Fig. 1.

In the drawings, the letter A indicates a frame or support. The holding-jaws B B' are jointed or pivoted at C. Said joint or pivot C is supported on slides D, supported by the wedges or inclines u' of the slide v' . Said slide has an arm w , tapped for the reception of a screw x , operated by hand-wheel y . If the screw is turned in so as to press against frame A, the wedges u' raise the jaws higher, while a contrary movement of the wedges allows the jaws to sink. The slides v' rest on the cap of a spring E, so that said slide and jaws can give somewhat in a vertical direction. To the cap of spring E is secured a screw, and by tightening the screw, more or less, the spring can be compressed, as desired.

The jaws B B' are provided with clamping plates or faces G, pivoted or jointed at H, so that said plates can sit snugly against the sides of the book, which is clamped by the jaws B B'. The jaw B' is connected by a toggle-joint or toggle-arms I I to a slide-block K. The jaw B is connected by arms L to a slide-block K'. A wedge M, operated by a hand-wheel N, can spread the blocks K K' farther apart or allow them to come nearer together, so as to adjust the jaws B B' for books of various thicknesses. A spring or springs z tend to draw the blocks K K' together.

The toggle-arms I I are connected by links O to foot-lever S. In the drawings, the lever S is shown in its depressed position, so as to hold the toggle-arms extended, whereby the jaw B' is held toward the jaw B in position

to clamp a book between said jaws B B'. When the lever S is raised, the toggle-arms I I are swung upward and out of line, so as to move jaw B' away from jaw B, whereby the jaws release a book which may be clamped between them. The lever S is held in its depressed position by the latches T, extending from below and provided with lugs U to catch over the lever. The latches T consist of spring-arms, which extend toward one another at their lower ends and are connected at V, and a bolt W secures said arms to the frame A. A foot-lever X is interposed between the latches T, and by depressing said foot-lever the latches T are spread or separated, so as to release the lever S. The lever S when released is raised by spring or weight v . The lever X when released is moved to its starting-point either by the pressure of the latches T tending to come together or by weight Y, so that said lever as it rises allows the latches T to approach one another, so as to be ready to again lock the lever S when depressed. By having the latches T extending from below said latches can be placed near the bottom of the frame A, so as not to be in the way of operating or examining the machine.

The forming-roller Z is mounted in the frame a , which supports the axle b of said roller. A screw or screws c can set the roller Z nearer to or farther from the jaws B B', as required. The frame a is supported by a pivot u , mounted in arms or levers d , fulcrumed at e . The levers d are connected to links g , actuated by the cams or cam-grooves h , swinging with the pivot or support Q. A lever or arm P and link R connects the cams h to the foot-lever i . In the drawings, the foot-lever i is shown depressed, whereby the roller Z is held toward the jaws B B'. When the lever i is raised, the cams h are moved so as to draw down the links g and swing the levers d to carry the roller Z away from the jaws. The lever i is held depressed by latches T, provided with a releasing-lever X, the same as described in connection with lever S. The lever i is raised by a spring or weight v , the same as lever S.

When in its operating position, the roller Z is actuated by the handle or hand-bar k , so as to form or roll the back of the book. When released, the handle k rests against

the spring or yielding buffer-stop *l*, supported by the slide *m*, having teeth *n*, which engage teeth *o* in the guide or support *p*. A lever *q*, pressed by spring *r*, holds the teeth *n* in engagement with the teeth *o*. When the lever *q* is moved against the resistance of spring *r*, the teeth *n* drop out of engagement with the teeth *o*, and the slide *m* is free to be adjusted in the support *p*. When the lever *q* is released, the spring *r* moves the lever and slide *m* so as to bring the teeth *n* into engagement with the teeth *o* and lock the slide against further movement.

The pivot *Q* is supported by the block or blocks *s*, which can be adjusted higher or lower, as required, by the set-screws *t*. In order to properly adjust the forming-roller with respect to the jaws, the fulcrums *e* of the levers *d* or the boxes of said fulcrums are subject to the action of set-screws *f*, whereby the levers and forming-roller can be set forward or back, as desired.

The springs *v*, Fig. 1, for raising the levers *S i* are readily formed by securing a stud *a'* to the frame *A* and coiling a band of spring-wire about said stud, so as to form the spring-coil *b'* and attaching the body part or strap *v* to the required lever *S* or *i*.

What I claim as new, and desire to secure by Letters Patent, is—

1. In a book-backing machine, the combination of the vertically and laterally adjustable jaws, toggle-arms for actuating one of said jaws; and a foot-lever connected to said toggle-arms, substantially as described.

2. The combination, with the forming-roller frame, of a buffer-stop, a support for said

stop engaging teeth placed, respectively, on the stop and its support, and a spring-pressed lever or catch for forcing said teeth into engagement with one another, substantially as described.

3. The combination, with a forming-roller frame, of a supporting-pivot for said frame, and adjustable levers *d* for supporting said frame, substantially as described.

4. In a device for holding down the clamping and forming roller levers *S i* of a book-backing machine, the latches extending from below and provided with lugs to catch over the levers, said latches having the lower ends of their supporting-arms inclined toward one another, in combination with a foot-lever interposed between said arms, whereby when depressed said foot-lever acts against the inclined portions of the arms to move the lugs to the releasing position, substantially as described.

5. The combination, with the foot-lever *i*, spring *v*, and link *R*, of an arm *P*, the pivot or rock-shaft *Q*, to which said arm is connected, a grooved cam *h*, connected to the rock-shaft, the links *g*, connected to the cam and the levers *d*, and forming-roller frame actuated by said links, substantially as described.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

CONRAD WELTNER.

Witnesses:

WM. C. HAUFF,
E. F. KASTENHUBER.