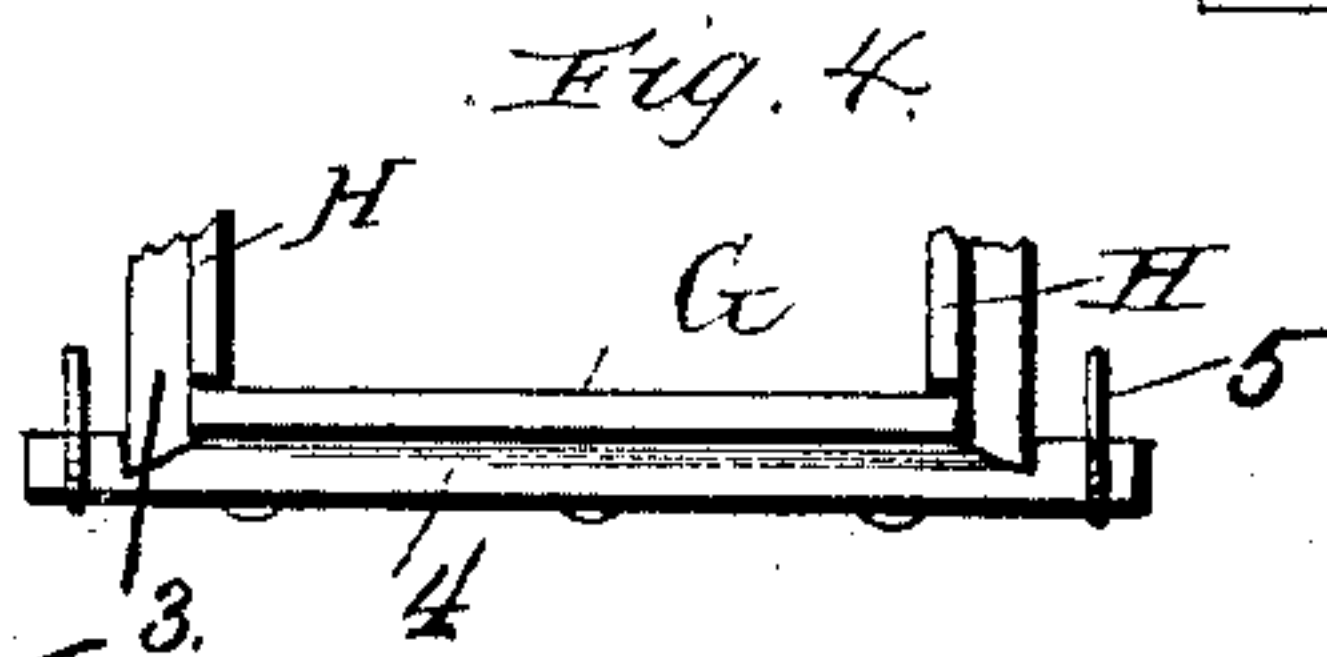
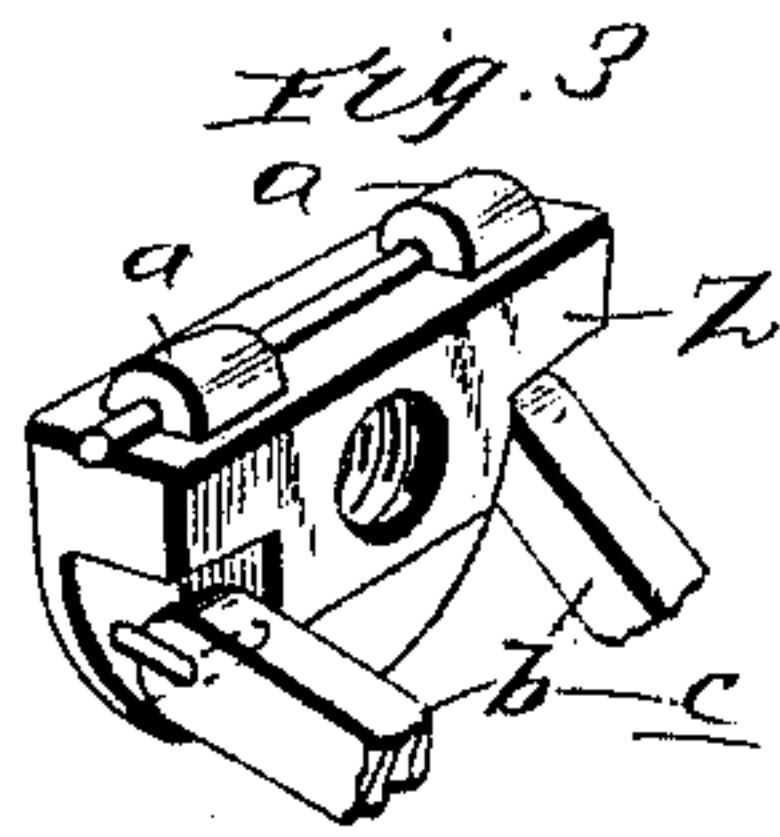
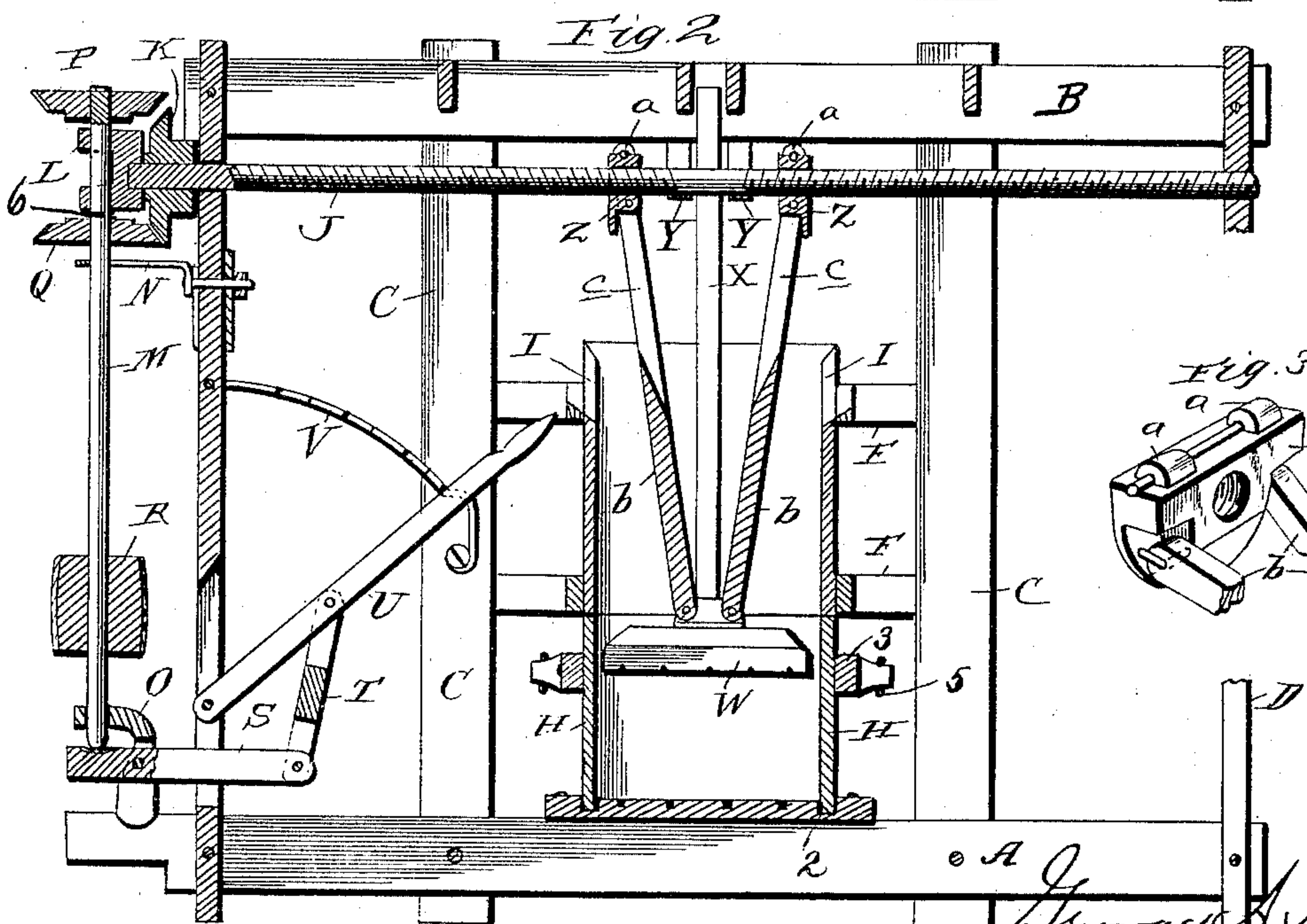
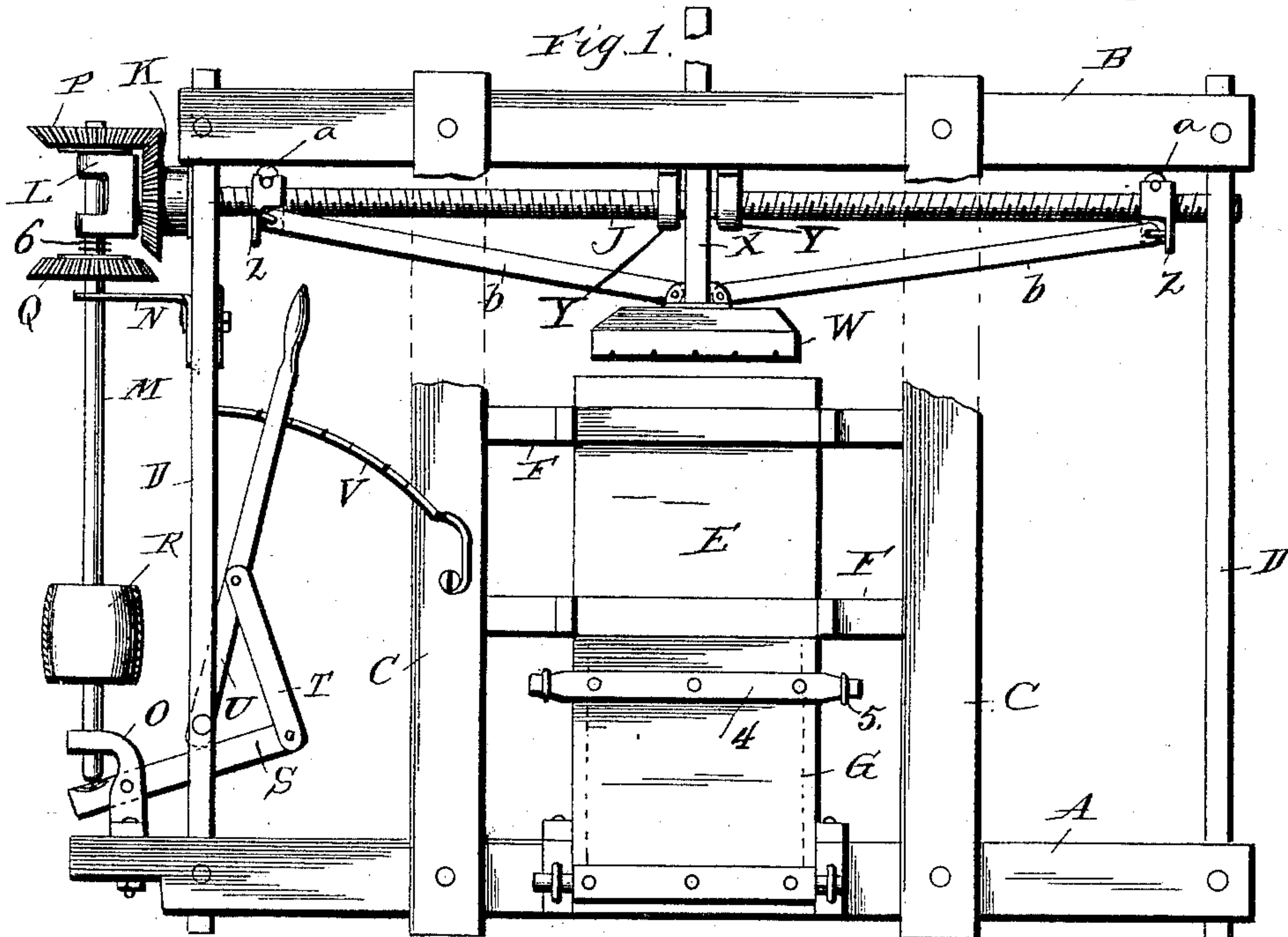


(No Model.)

G. A. NELSON.
BALING PRESS.

No. 433,629.

Patented Aug. 5, 1890.



Witnesses:
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UNITED STATES PATENT OFFICE.

GEORGE A. NELSON, OF WOODS, TEXAS.

BALING-PRESS.

SPECIFICATION forming part of Letters Patent No. 433,629, dated August 5, 1890.

Application filed January 28, 1890. Serial No. 338,381. (No model.)

To all whom it may concern:

Be it known that I, GEORGE A. NELSON, a citizen of the United States, residing at Woods, in the county of Panola and State of Texas, have invented certain new and useful Improvements in Baling-Presses; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to improvements in baling-presses; and it consists in certain novel features, hereinafter described and claimed.

In the drawings, Figure 1 is a side elevation of my improved press, showing the plunger or follower raised and the mechanism arranged to lower it. Fig. 2 is a vertical longitudinal section of the same, showing the plunger lowered and about to be raised. Fig. 3 is a detail view of one of the slides. Fig. 4 is a detail horizontal section of the press-box.

In building a press in accordance with my invention I employ a frame consisting of the lower sills A, the upper sills B, and the standards C D, erected on the lower sills and supporting the upper sills. The press-box or baling-chamber E is supported by the central standards C, through the cross-bars F, secured to said standards, and is provided in its lower portion with the downwardly-swinging doors or sides G and the removable ends H, as clearly shown. The top of the press-box is provided in its ends with the vertical notches I, the purpose of which will presently appear. The lower edges of the removable ends H fit in grooves 2 in the bottom of the press-box, and they are provided near their upper ends with the bars 3, the ends of which engage recesses or notches in the ends of the bars 4 on the doors. The ends are thus held in a vertical position, and the several parts are held in their closed positions by bails 5, which are slipped over the ends of the bars 4, as shown. In the end standards D, I journal the driving-screw J, which is reversely threaded on the opposite sides of its center and has one end extended through the standard D and provided with a gear-wheel K, as shown. Beyond the gear-wheel K a block L is loosely fitted on the end of the screw, and a vertical driving-shaft M is journaled in said block,

the bracket N on the standard, and the bracket O on the lower sills, and is capable of endwise movement in said bearings. On the upper end of this shaft, I secure a pinion P, which is adapted to mesh with the upper side of the gear-wheel K, and below the block L, I secure on the said shaft a similar pinion Q, which is adapted to mesh with the lower side of the gear-wheel K. A spring 6 is arranged around the shaft M between the block L and the gear-wheel Q, so as to press the said wheel and the shaft downward.

Instead of cog gear-wheels, as shown in the drawings, I may sometimes employ frictional gear-wheels, and such an obvious change is entirely within the scope of my invention. The vertical driving-shaft is rotated by means of a belt passing from a suitable motor and around a drum R on the shaft, and it is shifted endwise in its bearings, so as to bring one or the other of the pinions into engagement with the gear-wheel by the mechanism I will now describe. The lower end of the shaft rests upon the outer end of a lever S, which is pivoted to the standard O and has its inner end connected by the links T with the long lever U. This lever U is pivoted to the standard D above the lever S, and its upper end plays in front of a notched bar or arm V, extending inward from the standard. When the lever engages the innermost notch, the plunger will be lowered, and when it is swung over against the standard the plunger will be raised. The plunger W moves vertically in the press-box, and it is guided in its movements by the vertical arms X, which rise from the plunger and pass upward on opposite sides of the driving-screw and between the central bearings Y thereof. Only one of these arms appears in any one figure of the drawings, as in Fig. 1 the farther arm is hidden by the near arm, and in Fig. 2 the near arm is removed. Upon the screw I mount the nuts or slides Z, which move to and away from the ends of the screw, and are provided with anti-friction rollers *a* on their upper sides, which are adapted to bear against the under sides of the upper sills and facilitate the true and easy movement of the slides. Links or vibratory arms *b* are pivoted at their upper ends to the slides and at their lower ends to the

plunger, so that as the slides are separated or brought together the plunger will be raised or lowered. The links move through the notches in the upper end of the press-box as their upper ends swing outward, and they are provided in their inner sides with the longitudinal grooves *c*, so that they may fit around the driving-screw when raised to their full extent.

10 From the foregoing description, taken in connection with the accompanying drawings, the operation and advantages of my improved press will, it is thought, be readily understood. The cotton or hay is fed into the press-box
15 in the usual manner, and the vertical driving-shaft is continuously rotated. While the material is being fed into the press-box, the long lever is arranged in a central position, so that the driving-screw will not be operated. When
20 the press-box has been charged, the proper pinion is thrown into engagement with the gear-wheel *K*, so as to force the plunger down upon the material. The operation is then re-

versed and the plunger raised, as will be readily understood.

It will be observed that I have provided a device which is very simple and compact in its arrangement and construction and continuous in operation.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

The combination of the horizontal driving-screw, the plunger, connections between the plunger and the screw, the endwise-movable vertical shaft, gearing between the said shaft and the driving-screw, the lever *S*, supporting said shaft, the lever *U*, and the links connecting the lever *U* with the lever *S*, as set forth.

In testimony whereof I affix my signature in presence of two witnesses.

GEORGE A. NELSON.

Witnesses:

C. S. KNIGHT,
J. J. MCMAHON.