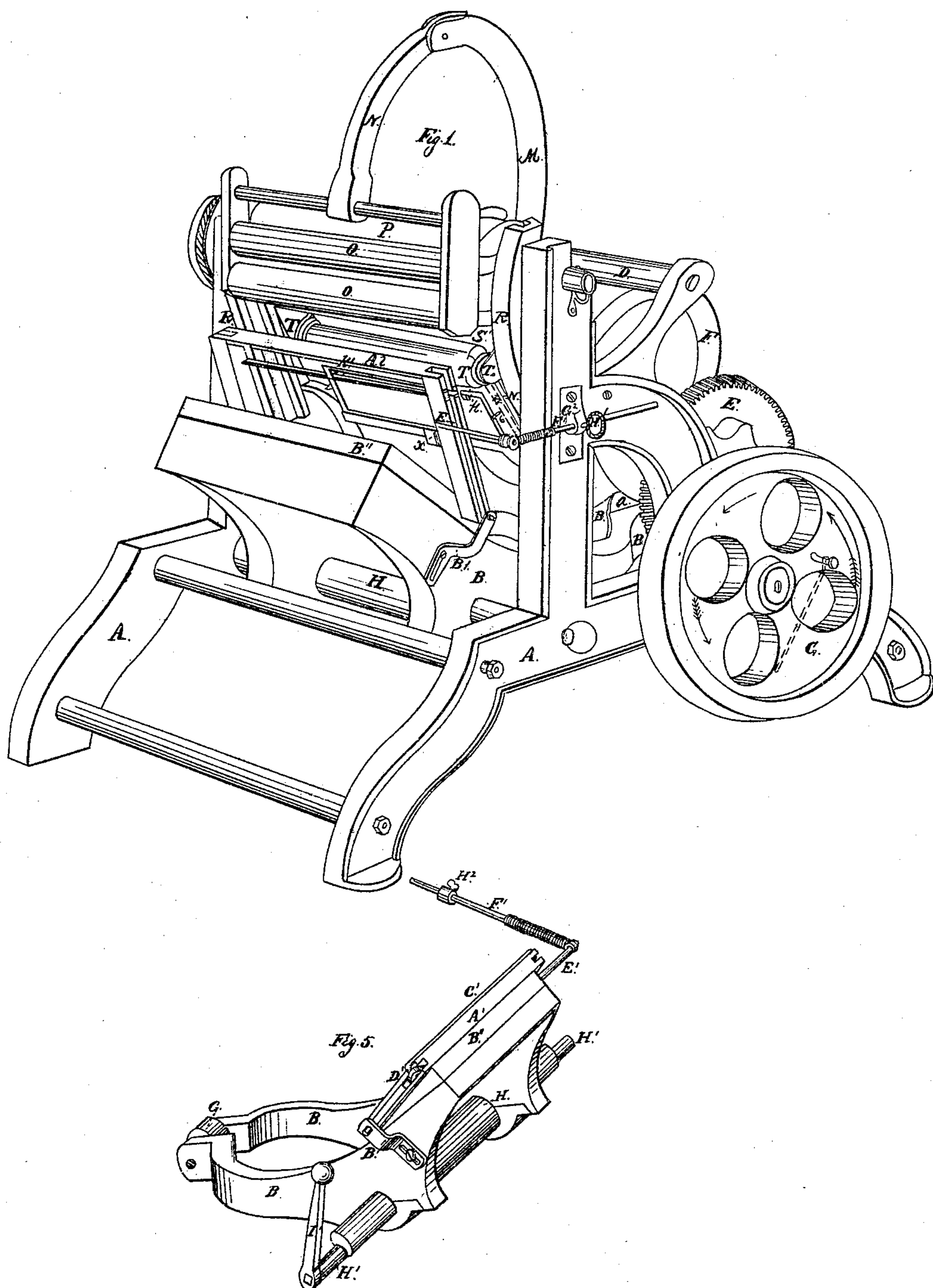


J. Young
Printing Press.

N^o 9721.

Patented May 10. 1853.



J. Young,
Printing Press,
No. 9,721, Patented May 10, 1853.

Fig. 2.

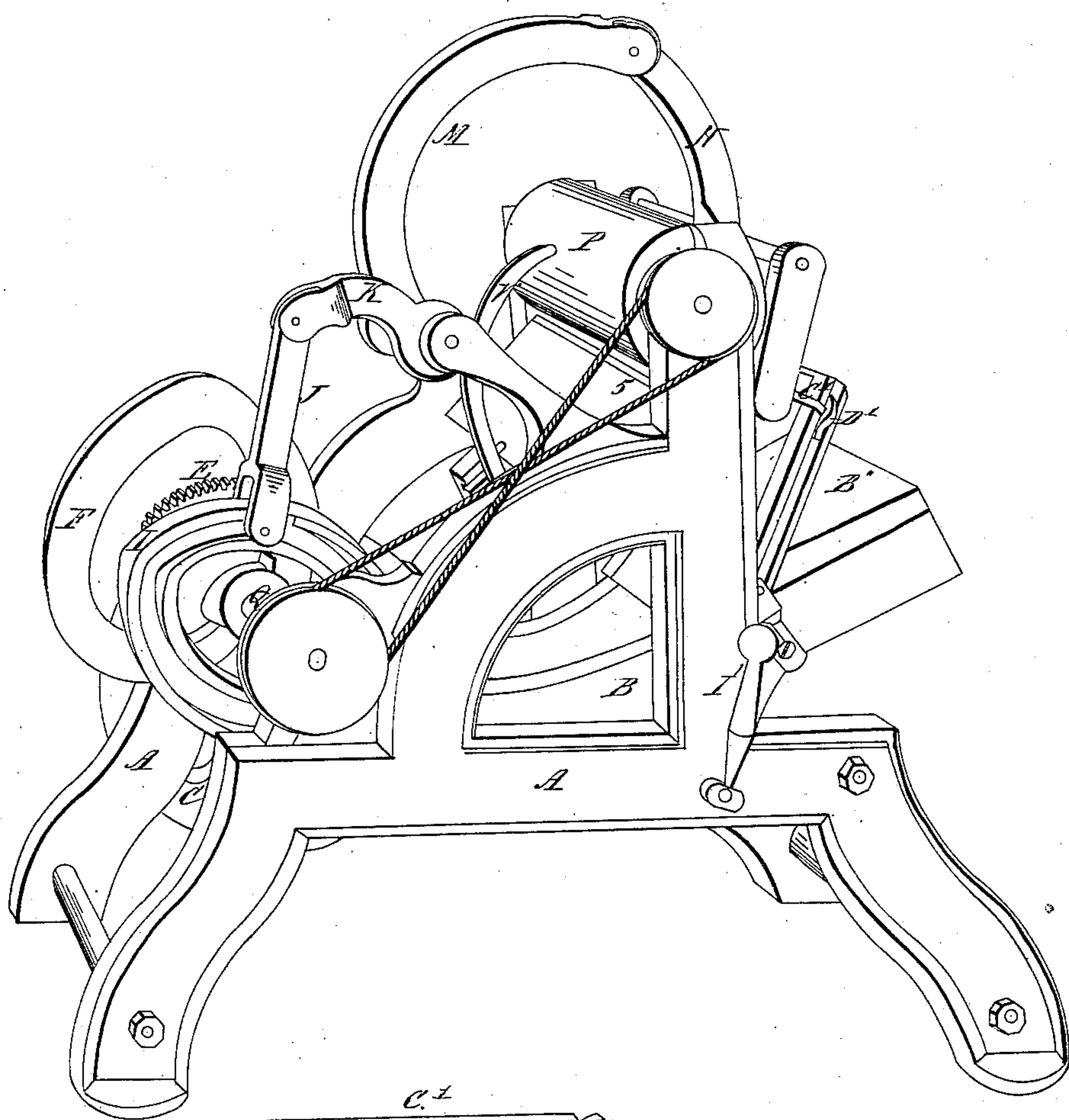
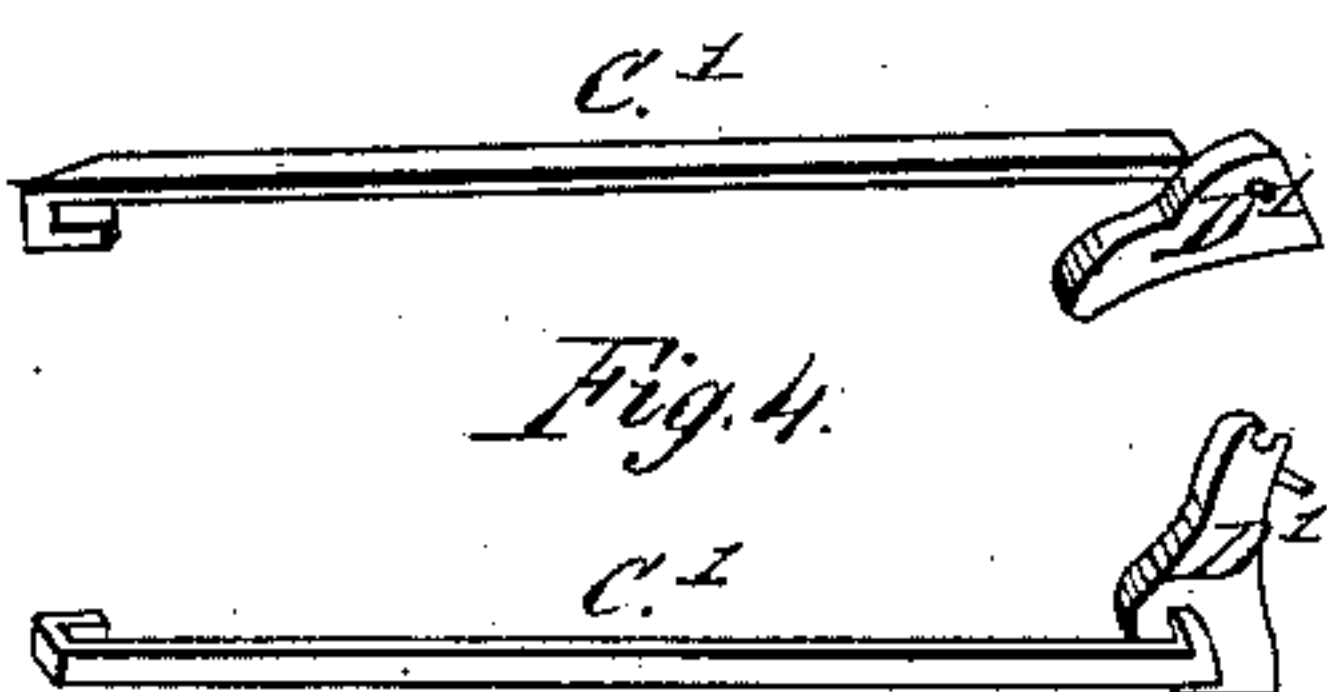
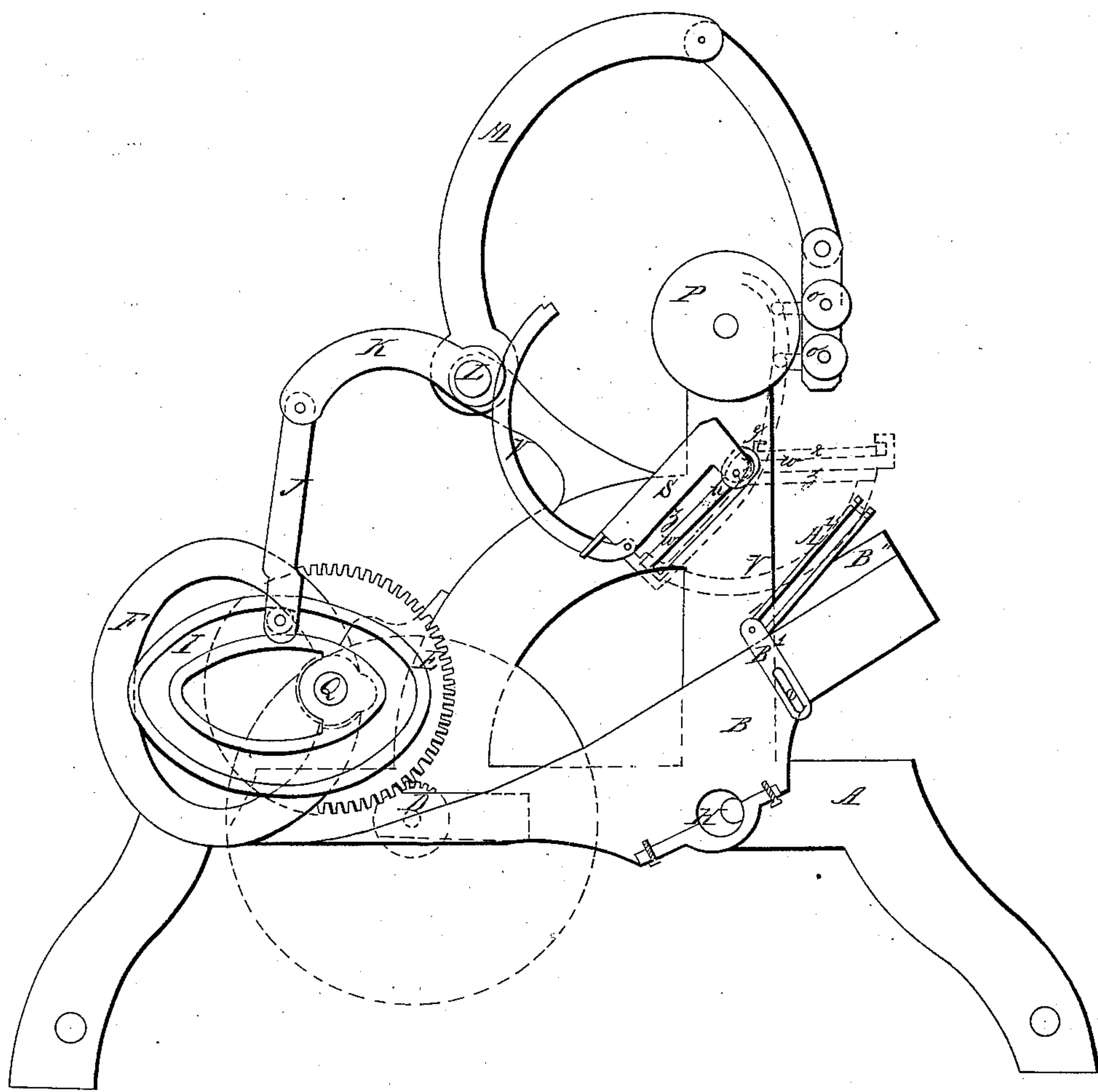


Fig. 4.



J. Young,
Printing Press,
Nº 9,721, Patented May 10, 1853.

Fig. 3.



UNITED STATES PATENT OFFICE.

JAMES YOUNG, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR TO JOHN W. MIDDLETON.

PRINTING-PRESS.

Specification of Letters Patent No. 9,721, dated May 10, 1853; Antedated November 10, 1852.

To all whom it may concern:

Be it known that I, JAMES YOUNG, of Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Printing-Machines, and that the following is a full, clear, and exact description of the principle or character which distinguishes them from all other things before known and of the usual manner of making, modifying, and using the same, reference being had to the accompanying drawing, making a part of this description.

My invention consists in the construction and arrangement of the various parts of a printing press, so as to execute the work with facility, while the greatest simplicity of construction is maintained, and the whole is quite under the management of the press-man.

The special points of novelty are the making and the mode of throwing off the impression, the nippers and nipper frame, the false bed and its accessories, the mode of working the rollers, and the mode of fastening the frame to the bed.

The construction is as follows:

A is a frame of suitable proportions and strength to support the working parts in their proper positions, on the rear part of this frame there is a cam shaft Q that receives its motion from a driving pinion D driven by a pulley C on the shaft of said pinion which latter gears into a spur wheel E on shaft Q. At or near the center of the shaft Q there is a cam F that gives the impression by acting on two levers B which I denominate platen arms, these levers are curved at their rear end so as to come nearly together and bear a roller G between them, against which the before-named cam F acts. Thence they extend up on either side, in an inclined position as clearly shown in Figs. 3 and 5 to the front where they bear the platen B''. These levers are of the first order and have their fulcrum at H in the lower cross bar of the frame; this fulcrum has an eccentric H¹ see Figs. 3 and 5 by turning which the impression is thrown off or on at pleasure by raising or lowering the position of the platen and this is effected by moving the hand lever I¹, shown in Fig. 2, instead of the eccentric being placed at this point, the fulcrum may be permanent and an eccentric or inclined planes or wedges put under the

platen B'' over the screws, an obvious arrangement that would be the equivalent of that described and represented. In the frame and fixed stationary is the bed S, placed above and opposite to the platen on the upper edge of this bed, at either end, are lugs T see Fig. 1, projecting from its face to which are hinged a false bed U upon which the form of types is put, the false bed being swung out into a horizontal position for that purpose as shown by the dotted lines in Fig. 3, where it is supported by a segment bar V jointed to its lower edge and projecting back when the false bed is in position, at the upper edge of the false bed near the joints are fixed the hooks Y under which that edge of the chase is slipped and at the opposite side a movable hook X see Fig. 3, is placed to clamp the opposite side of the chase and thus hold the form to the bed, this hook is connected with sliding pieces W at each end of the false bed that extend back to the hinge joint, at which point an eccentric T', is placed on the ears T by which as the bed descends the hook X is drawn up, while in the horizontal position it is moved back by the eccentric at T far enough to permit the form to be lifted off, directly above the bed there is a distributing roller P against which the inking rollers O, O, rest while the impression is made, the carriage or frame of the rollers is suspended by a connecting rod or link N jointed to a curved arm M projecting upward and forward from a shaft L. Sustained in the upper part of the frame another arm K affixed to this shaft projects backward nearly horizontally over a grooved cam on the cam shaft Q, with which it is connected, by a link J, the lower end of which is forked and embraces the cam, I a stud on said fork entering the groove in the face of the cam by which its motion is regulated. This cam causes the inking rollers to pass down over the types and back and thus inking them during the interval between the impressions. The rollers are guided in their course over the types by two grooved ways one on each cheek of the press in which stud rollers run that are affixed to the sides of the roller frame carriage.

The nipper frame A¹ is a common device being a simple frisket frame hinged to the platen, but I have improved its construction and movement, on one side of this frame the

lower edge of which is hinged to the platen an arm F^1 projects beyond the side of the frame, to this arm a rod F^1 is appended that passes through a staple G in the side of the cheek of the frame and carries upon it a set collar H , to limit its range of motion, between the staple G and the nipper frame, there is a spring that gives the proper amount of pressure upon the nipper during the act of drawing the sheet from the form, at either end of the nipper frame are grooves in the outer edge into which the ends of the nipper take, this nipper is a straight bar C^1 , having one of its ends bent into a hook as clearly shown in the detached views Fig. 4, the other end is bent to right angle and on it is affixed a clamp D^1 , to clamp it in place. By this device I can readily shift the nipper to any desired position. It will be obvious that instead of the arm projecting at E^1 there may be arms extended down beyond the joint of the upper frame working against a stud on the frame so as to close the frame upon the platen, but this is a mere change of form involving the same principles.

To operate this press the bed is first brought into the position shown in the dotted lines in Fig. 3 and a form laid on to it, the segment V is then unfastened and the bed falls back into place, the clamp at X at the same time gripping it and holding it fast, the nippers are then properly set and

a sheet of paper or card laid on to the platen. When the press is put into operation, the rollers $O O$ descend and ink the types and after they return to their position on the roller the platen ascends and makes the impression, the nipper first being brought into contact with the paper in the ascent of the platen and held by the spring on the rod F^1 till the paper is withdrawn from the form after the impression is made when the nipper is made to let go at any point to which it is adjusted and the sheet is thrown off.

Having thus fully described my improvements in printing presses what I claim therein as new and for which I desire to secure Letters Patent, is,

1. I claim the combination and arrangement of mechanism for operating the inking roller, as herein specified.

2. I claim a false bed hinged to a stationary one, and the mode of fastening the form to the bed as described.

3. I claim the eccentric in combination with the platen by means of which the latter can be adjusted while in motion or thrown off substantially in the same manner and for the purpose specified.

JAMES YOUNG.

Witnesses:

J. J. GREENOUGH,
WM. GREENOUGH.