

C. E. Snelder.

Printing Press.

Patented Aug. 10. 1858.

N^o 21154.

Fig. 3.

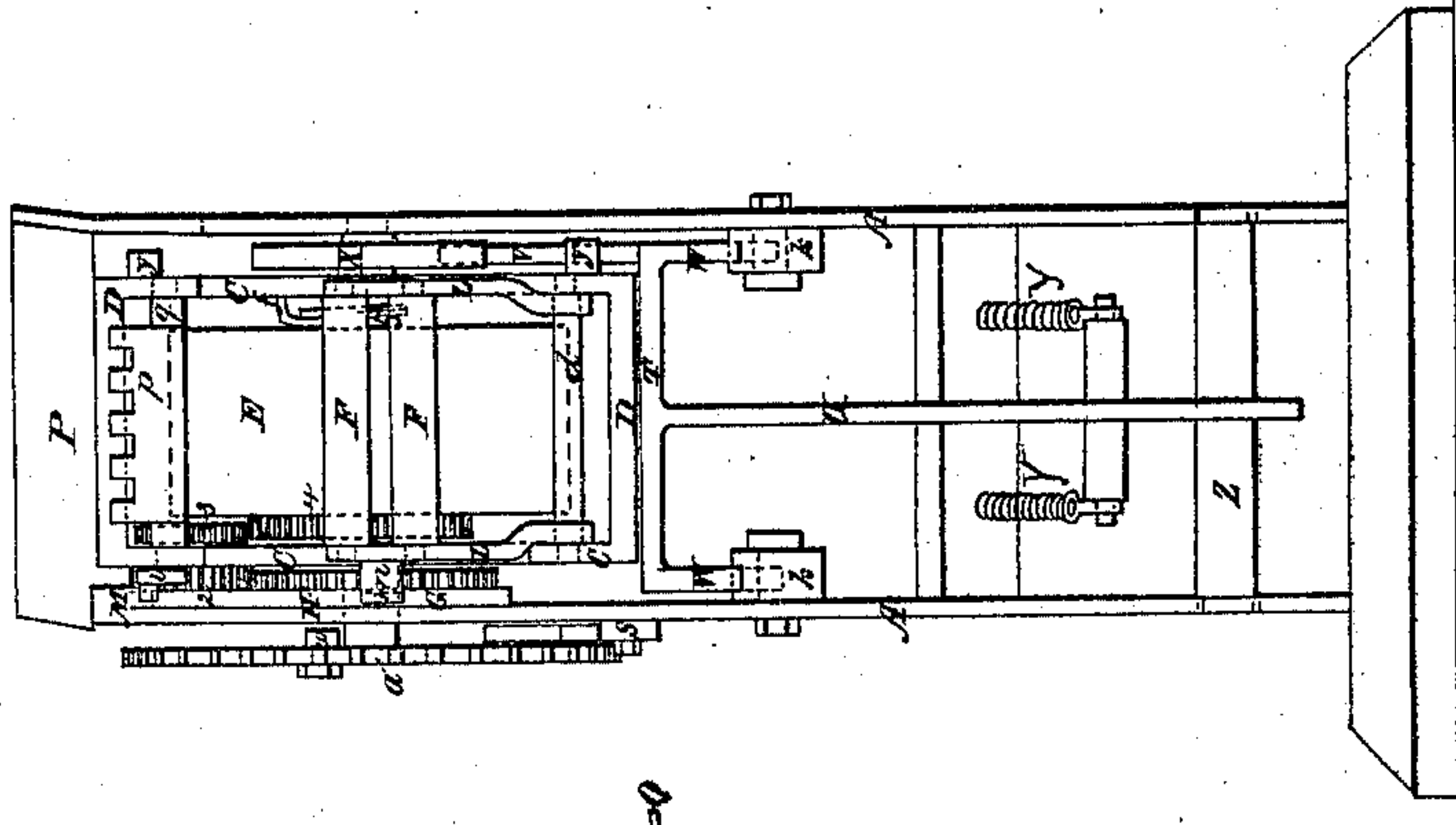


Fig. 2.

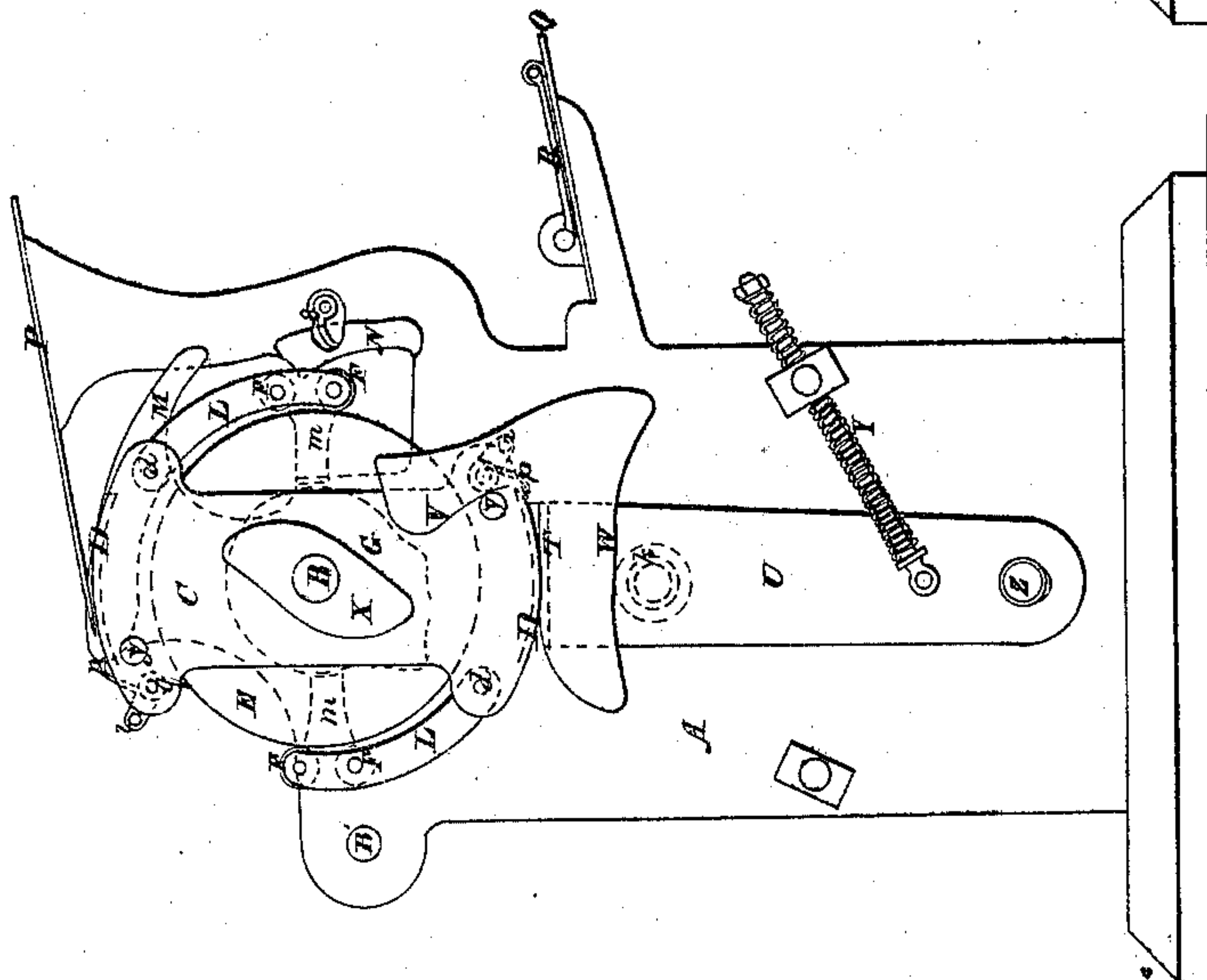
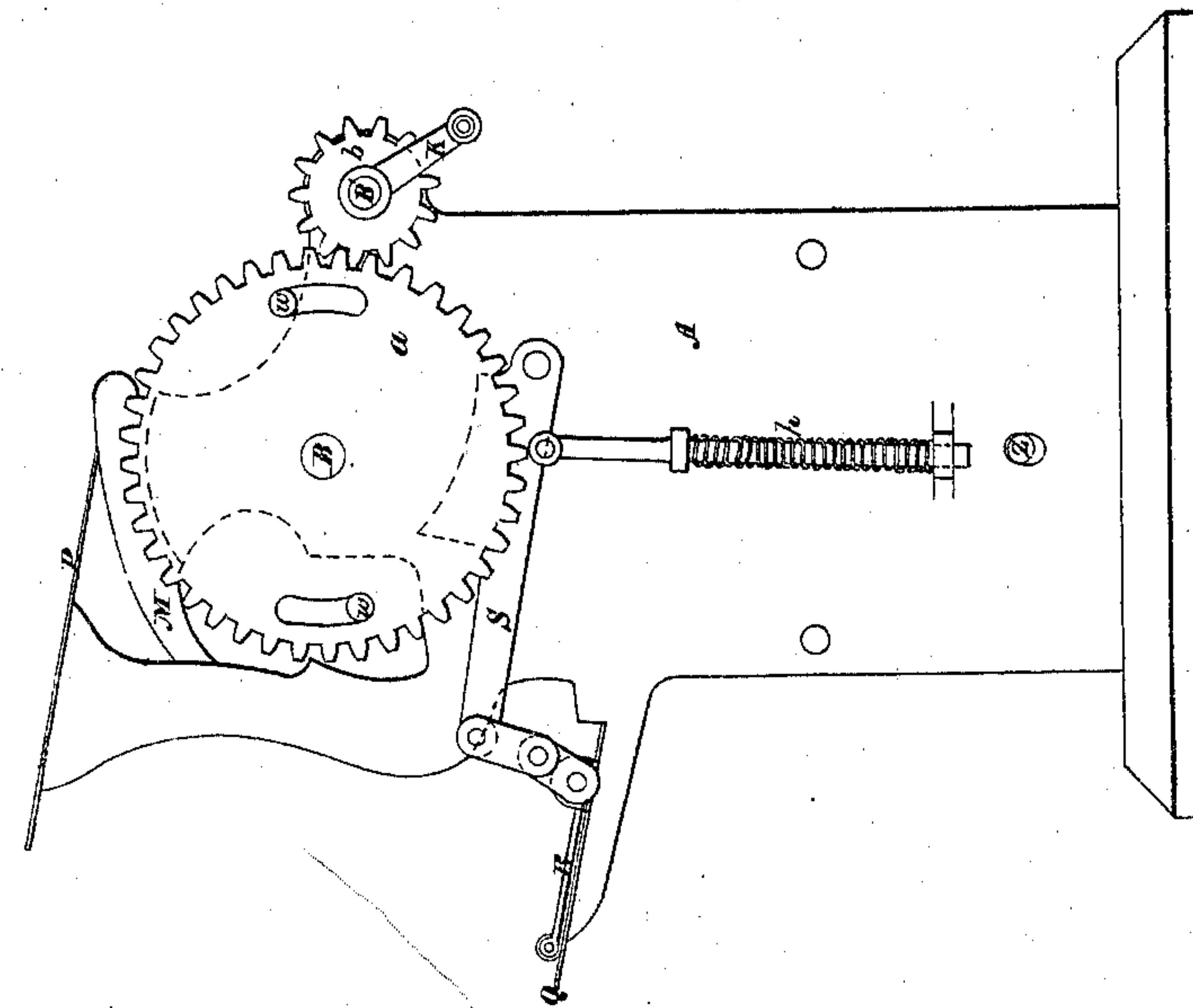


Fig. 1.



UNITED STATES PATENT OFFICE.

C. E. SNEIDER, OF NEW YORK, N. Y.

PRINTING-PRESS.

Specification of Letters Patent No. 21,154, dated August 10, 1858.

To all whom it may concern:

Be it known that I, C. EDWARD SNEIDER, of New York, in the county and State of New York, have invented a new and Improved Printing-Press; and I do hereby declare that the following is a full and exact description of the same, reference being had to the accompanying drawing and to the letters of reference marked thereon.

Figure I represents an outside side view. Fig. II a section, and Fig. III an end view with the driving shaft removed.

This invention consists 1st in the employment and use of a revolving segment frame, which receives the blank sheets of paper, and serves at the same time to support and carry the inking rollers and to communicate motion to the same. Secondly, in the employment of a rocking bed on which the form is placed and between which and the segments the impression is given, said rocking bed being likewise worked from the segment frame and provided with suitable ways on its underside passing over rollers to produce the required impression, and thirdly, in the employment of a novel fly motion by which the printed sheets are brought upon the fly board.

A are the frames of the press.

B is a shaft, supported in the frames A, and having two levers C, C, forming the segment frames, firmly secured to it.

D D are segments of a hollow cylinder, which are secured, opposite to each other, to the outer ends of the levers, C, C, and concentric with the shaft, B. The shaft B is turned by gear wheels *a*, *b*, the latter of which is fastened upon the driving shaft B' which receives its motion either by power, or by means of a crank K.

On the inner side of one of the frames A a cam G and a wheel H are firmly attached concentric to the shaft B, which latter passes through the same. Into the wheel H a pinion, 2, is made to work fast on a small shaft turning in one of the levers C and provided on the inside of said lever with another pinion, 3, working into a wheel, 4, firmly attached to the distributing roller E. This distributing roller E is situated upon the shaft B between the levers C, C, capable of turning independent of said shaft, and is provided on one side with an annular cam into which a pin, *f*, fast to one of the levers C, works by which a side motion is communicated to said distributing roller in con-

nection with its rotary motion produced through the gear wheels H, 2, 3, and 4.

F, F, are the inking rollers, attached to arms L, which turn upon shafts, *d*, fast in the segment frames C, C, and acted upon by springs to keep the same against the distributing roller E. One of the arms L of each pair, is provided with a projection *m*, working against the cam G, by which said rollers are pressed at the proper time against the surface of the form to ink the same after each sheet has been printed. Each segment D is provided with nippers or fingers, *p*, attached to a bar, *q*, and acted upon by springs to keep the fingers close to the segments. One end of the bars, *q*, is provided with a small crank *r*, and is actuated at the proper time so as to open the nippers to receive the blank sheets by the cam M, and again to allow the printed sheets to be taken hold of by the nippers, 8, and to fall upon the fly board by the cam N attached to one of the frames of the press.

P, is the feed board on which the blank sheets to be printed are placed and, Q, is the fly board on which the printed sheets are discharged.

R is the fly frame hinged to the fly board and operated by the lever, S, actuated by pins, *w*, fast on the wheel, *a*. This fly frame has small rollers on its end which are by the action of the pin, *w*, upon the lever, S, brought against the printed sheet at the proper time directly after the same is printed, and roll these over the same near to the end, when the nippers, *p*, are opened by the cam N, at the same time, that the nippers (8) are operated so that the end of the sheet is turned off the surface of the segment D and thereby allow the printed sheet to fall over the end of the fly frame, and is then brought by the same upon the fly board. The rollers on the end of the fly frame can be placed so as to roll only over the unprinted part of paper or sheet. *h*, is a spring acting against the lever S, to bring the fly frame back upon the fly board.

T is the bed to receive the type fastened on the end of an arm, U, attached to a shaft, *z*, turning in the side frames A of the machine. On the upper side of the bed a projection, V, is made actuated by pins *y*, attached to one of the levers, C, and by which said bed is moved along, at the time one of the segments D with the blank sheets attached moves over it, to receive the impres-

sion. When the pin, *y*, leaves the projection, V, after the sheet is printed, a cam X fast to the shaft B comes in contact with said projection, V, and retains the bed from going back too fast, so as to allow time for the inking rollers F to pass over the type, after which the springs, Y, bring the bed forward again. The sheet receives the impression between the segment and the form, and as the form is a plane surface and the segment is concentric with the shaft B. Eccentric ways, W, are provided on the underside of the bed T passing over rollers, *h*, attached to the side frames A, in order that a proper pressure or bearing will be obtained on all points of its surface.

The operation is as follows: The blank sheets to be printed are placed upon the feed board, P, and motion being given to the shaft, B', the shaft B and consequently the segments, D, receive a continuous rotary motion through the gear wheels, *b*, and, *a*, and as the segments as well as all other parts attached to the levers, C, C, are exactly opposite each other, the whole is exactly balanced, without any extra weight or counterpoise. As the segment D rotates the fingers, *p*, are operated by the cam M and are opened so as to grasp the blank sheet one at a time, and carry the same upon the segment between the same and the type form upon the table T, where the same receives the impression, the proper pressure or bearing being obtained through the action of the eccentric ways, W, over the rollers, *h*, as before described, while the bed T is carried along by the pin, *y*, coming in contact with the projection V on the upper side of the bed.

When the sheet has received its impression the fly frame, R, is acted upon through the lever, S, by the pin, *w*, fast to the wheel, *a*, and thrown by the same against the sheet, pressing the same against the segment D, after which the nippers, *p*, are acted upon by the cam N which open the same at the same time that the nippers, 8, are acted upon to turn the edge of the sheet so as to allow said sheet to fall over around the fly frame, R, which latter is then brought back again in its original position by the action of the

spring, *h*, by which operation the printed sheet is thrown upon the fly board. After the printed sheet has left the type, the bed T is acted upon by the springs Y but prevented from going too fast by the action of the cam, X, during which time the cam, G, operates upon the levers L thereby bringing the inking rollers F upon the type and ink the form when the springs Y move the table T back again ready for the next sheet.

This press is extremely simple and effective in its operation, and may be very rapidly, and with a moderate expenditure of power, operated, as all revolving parts balance each other, and there are no parts liable to get out of order.

What I claim as my invention and desire to secure by Letters Patent is

1. The revolving double segment frame with segments balancing each other, in combination with a rocking type bed T operated through the segment frames, substantially as described.

2. I claim the rocking type frame T with eccentric ways, W, attached, working over fixed rollers, in the manner and for the purpose described.

3. I claim the arrangement and manner of operating the distributing cylinder E supported, between the segment frames C, upon the shaft B to which the segment frames are attached, said cylinder being made to revolve in the opposite direction to the motion of the shaft, and having at the same time a side motion communicated to the said cylinder for the purpose of distributing the ink upon the inking rollers, as described in connection with an arrangement of inking rollers, operated in the manner substantially as specified.

4. I claim the arrangement and construction of the fly motion, in the manner and for the purpose as described operating in connection with the nipper, 8, substantially as specified.

C. EDWARD SNEIDER.

Witnesses:

HENRY E. ROEDER,
FRANCIS CRONIN.