

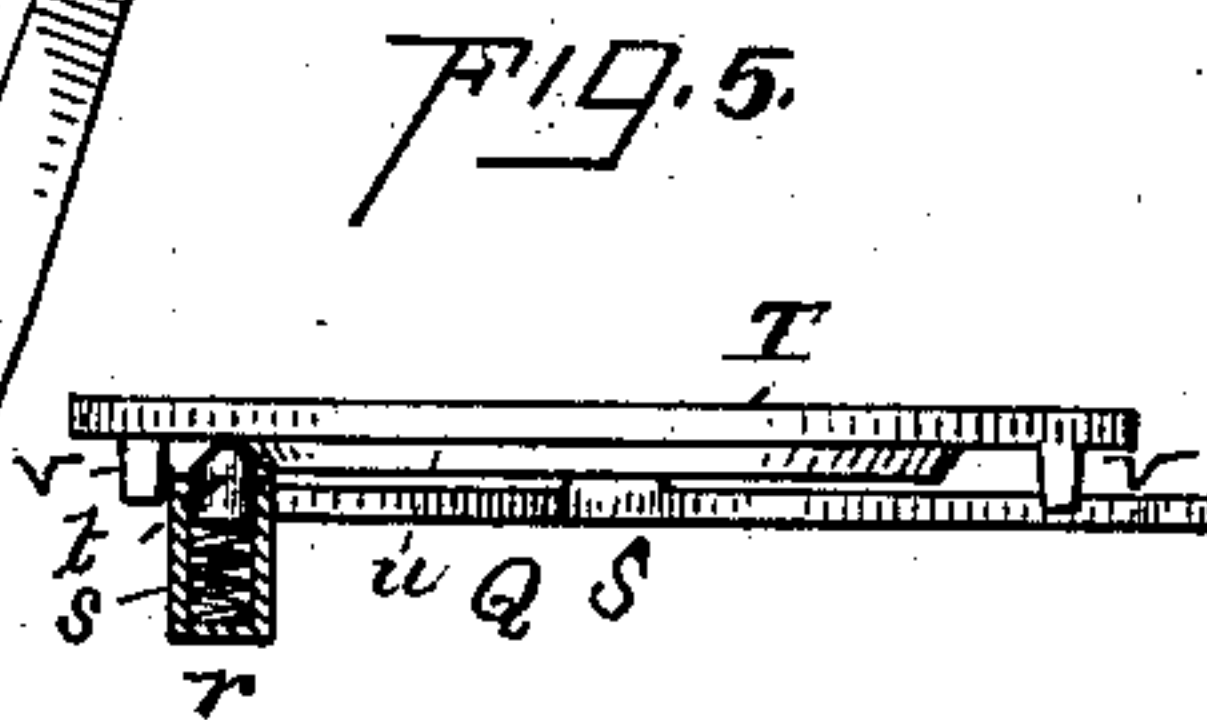
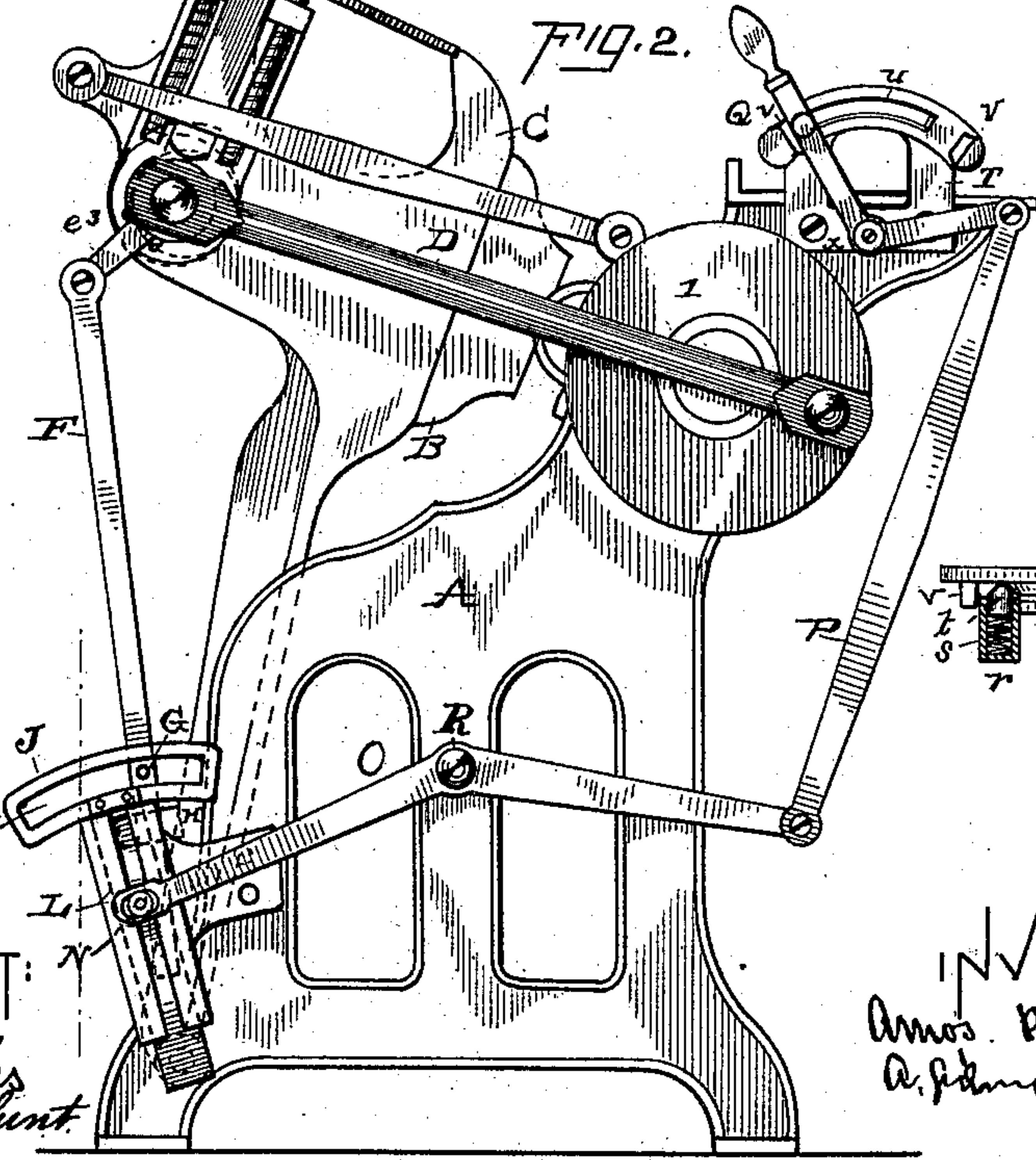
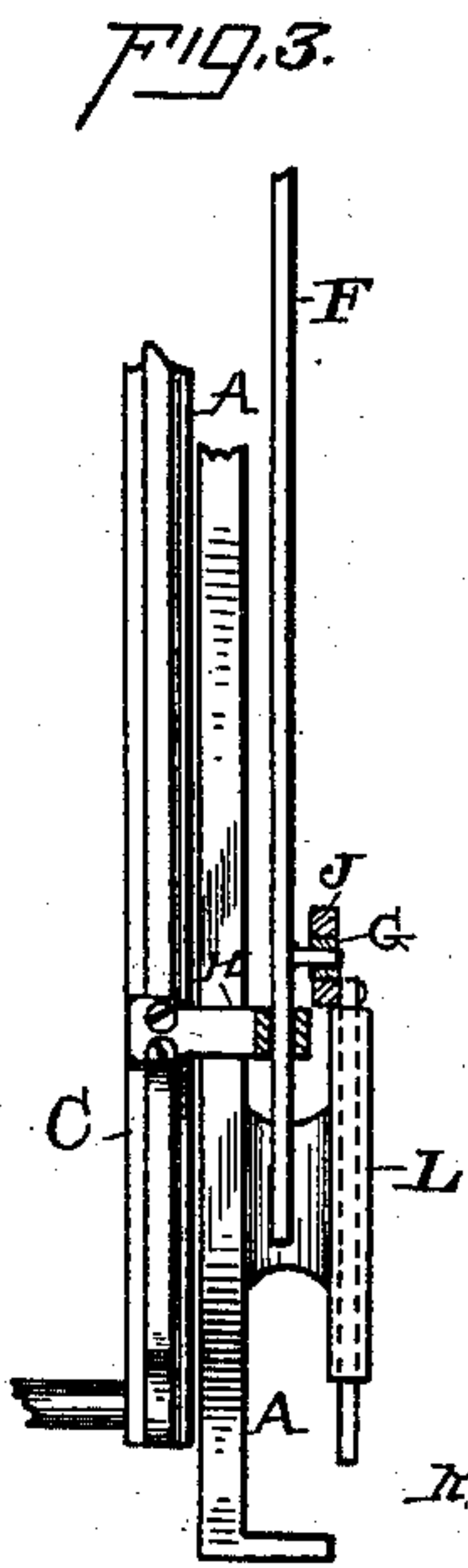
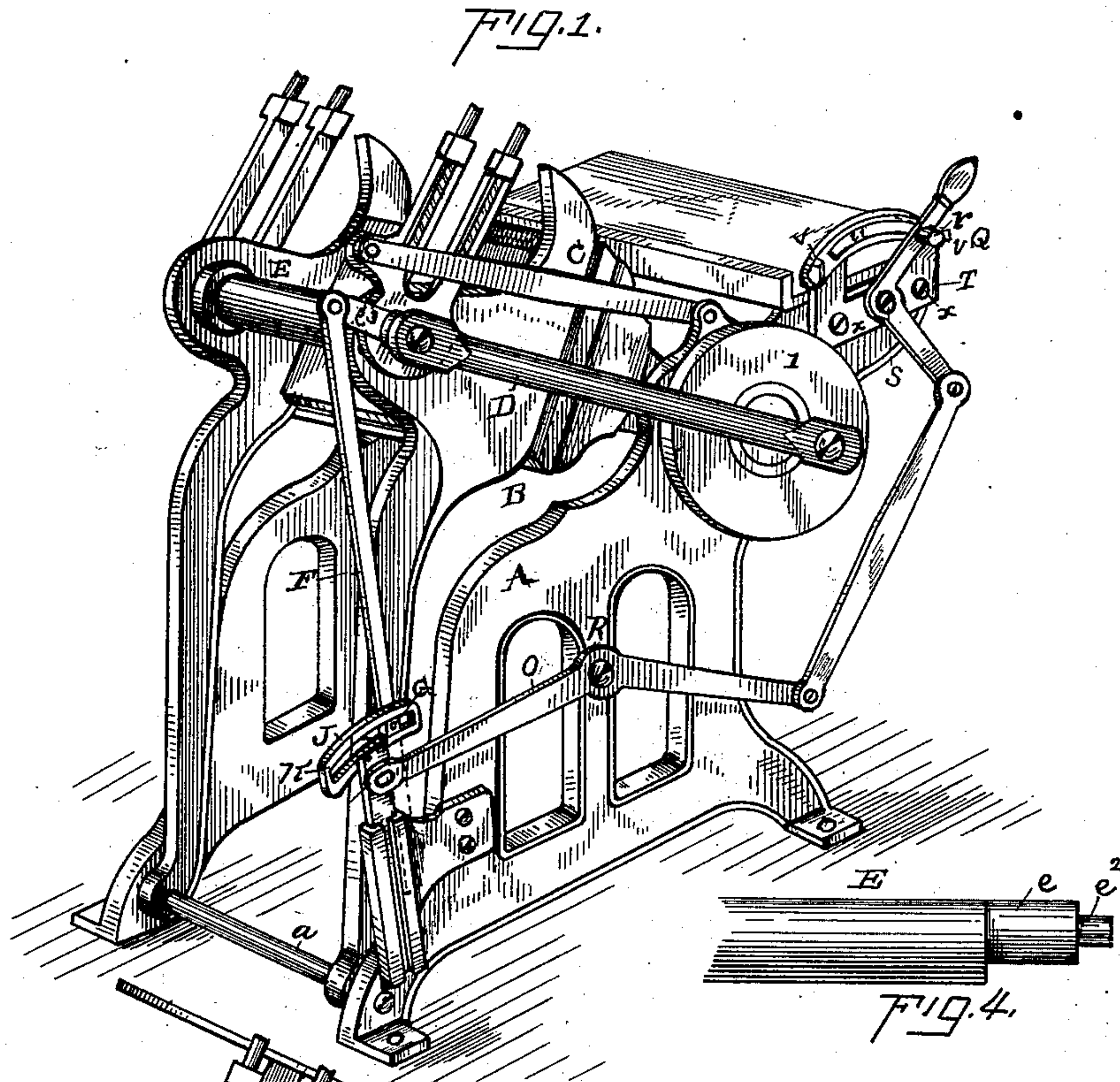
(No Model.)

A. P. BARBER.

# THROW-OFF MECHANISM FOR JOB PRINTING PRESSES.

No. 376,059.

Patented Jan. 10, 1888.



ATTENT:

W. V. C. Hoiles  
W. Bourditch, Blunt.

INVENTOR:  
Amos P. Barber by  
A. J. Brown atty



# UNITED STATES PATENT OFFICE.

AMOS P. BARBER, OF RAHWAY, NEW JERSEY, ASSIGNOR OF ONE-HALF TO  
WILLETT G. RATHBUN, OF SAME PLACE.

## THROW-OFF MECHANISM FOR JOB-PRINTING PRESSES.

SPECIFICATION forming part of Letters Patent No. 376,059, dated January 10, 1888.

Application filed April 4, 1887. Serial No. 233,624. (No model.)

*To all whom it may concern:*

Be it known that I, AMOS P. BARBER, (as-  
signor of one-half interest to W. G. RATHBUN,) of Rahway, Union county, New Jersey, have  
5 invented, made, and applied to use Improvements in the Construction of Throw-Off Mechanism for Job-Printing Presses; and I do declare the following to be a full, clear, and correct description of the same, reference being  
10 had to the accompanying drawings, making part of this specification, and to the letters of reference marked thereon, in which—

Figure 1 is a side view of a job-printing press to which my improvement has been applied, the impression being shown as suspended. Fig. 2 is a view of a job-printing  
15 press to which my improvement has been applied, the impression as on and the press in the act of printing. Fig. 3 is an end view of my improved means for suspending the impression. Fig. 4 is a view of a section of the back shaft employed by me. Fig. 5 is a plan  
20 view showing the construction of the handle for operating the throw-off mechanism and the plate used with the same.

In the drawings like parts of the invention are designated by the same letters of reference.

The nature of the invention consists in the construction of improved mechanism for use  
30 in job-printing presses, by which the impression may be suspended at the will of the operator and contact between the type held in the chase supported upon the bed of the press and the paper, card, or other matter placed upon  
35 the platen of the machine is prevented, the object of the invention being to provide a simple reliable throw-off mechanism, easily operated, and so constructed that the impression, when suspended, will remain so until restored  
40 by the operator.

The advantage of constructing a job-printing press with a throw-off mechanism is well known, and its value in preventing the printing of mislaid or ill-fed paper or cards need not  
45 be enlarged on here.

In the drawings I have shown my invention as used with a job-printing press employing a bed to receive the form or types, which bed is vibrated to and from the platen of the machine through a crank movement imparted to  
50 it by side connections, as shown.

A shows the frame of the machine; B, the platen upon which the paper or card to be printed is laid; and C is the bed to receive the form or types, and to which a vibrating movement upon the rod  $a$  is imparted by the side  
55 connections, D, that it may be moved to and from the platen B.

E shows a shaft free to turn in the bed C, and having upon each end an eccentric-bearing,  $e$ , to receive a roller-arm, and also an eccentric-bearing,  $e^2$ , over which is passed one end of the connection D, the opposite ends being passed over studs secured in a blank wheel, 1, and a gear-wheel upon the opposite  
65 side of the blank-wheel shaft.

Attached to the shaft E at or near one end is the crank-arm  $e^3$ , to which is fastened a sliding connection, F, carrying a stud, over which is passed a block, G, and at its base passing  
70 through a slotted stand, H, attached to and moving with the bed C. J shows a segmental plate provided with an opening, K, made of suitable dimensions to allow the block G to move freely in the same, which segmental plate  
75 J is free to move up and down in a grooved plate, L, secured upon the frame of the machine. The segmental plate J has properly positioned upon it a stud and roller, N, over which is passed the slotted end of a curved lever, O, the opposite end of which is connected  
80 to a connection, P, and this in turn to the handle Q, the lever O being free to turn upon a bolt, R, passed through it about centrally and entering the frame A.

The handle Q, the construction of which is more particularly shown in Fig. 5, is free to turn upon a bolt, S, passed through it centrally and entering the frame A. The handle Q is provided with a chamber,  $r$ , within which  
90 is placed a spiral spring,  $s$ , and in advance of the spring a dog,  $t$ , the forward portions formed with inclined sides. The handle operates in connection with a curved plate, T, the ends of which are provided with stops, as at  $v$ , while  
95 between these stops the plate is raised, as at  $u$ , and a space left upon each side of the raised portion and the stops. The plate T is secured to the frame by the bolts  $x$ .

Such being the construction, the operation  
100 will be readily understood. The shaft E, constructed as shown, with the eccentric-bearing



ings, being free to turn in the openings in the bed C and frame A, through which it is passed, and being connected to the sliding connection F, and this in turn to the handle Q through the lever O, to suspend the impression, as shown in Fig. 1 of the drawings, the handle Q is grasped by the hand of the operator and thrown back until the dog *t*, contained in the chamber *r* of the same, has passed by the raised portion *u* of the curved plate T and been thrown out by the expansion of the spiral spring *s* behind it, and has its bearing against the portion of the plate T and the rear stop, *v*, of this plate. By this movement of the handle Q the connection P, the lower end of which is attached to the lever O, free to turn upon the bolt R, the opposite end of which lever O is passed over the stud and roller N, positioned in the segmental plate J, is thrown down and causes the segmental plate J to rise or be drawn up over the plate L. As this plate J is drawn up, the block G, moving freely in the opening K in the segmental plate J, causes the connection F also to rise and the shaft E to be turned upward within the frame A and bed B, and with the shaft in this position the bed is drawn away or back from the platen. While the shaft E is thus thrown up, the block G, filling the opening in the segmental plate J, and the handle Q, having had its dog thrown out and bearing upon the face of the curved plate T, serve to prevent any change in the position of the shaft E, so that the impression will remain suspended until restored by the operator.

To restore the impression, Fig. 2 of the drawings, the operation described is reversed. The handle Q is thrown forward and its dog allowed to pass the raised portion of the curved plate T and be thrown out by the spiral spring behind it, and has its bearing between the raised portion of the plate and the forward stop. As the handle Q is thrown forward the connection P is thrown up, and through the lever O, free to turn upon the bolt

R, causes the segmental plate J to be thrown down, carrying with it the connection F, provided with the block G, freely moving in the opening K, and the shaft E, connected to the connection F, is turned down in its bearing in the frame A and bed C, and the bed is thrown forward for impingement or contact of the types or form in the bed, and the paper, card, or other matter to be printed placed upon the platen, so that an impression will result.

While I have shown and described a form of handle for operating the throw-off mechanism which seems to me most desirable, I am aware that other forms of handles may be availed of, it only being necessary that the same shall serve the purpose of operating the segmental plate through a lever or series of levers connecting the segmental lever and the segmental plate.

Having now set forth my invention, I claim as new—

1. The combination of the following elements: a vibrating bed upon which the form of types is secured, a shaft, E, having the eccentric-bearings  $e$   $e^2$  and crank-arm  $e^3$ , the connections D, connection F, carrying a block, G, the slotted plate H, the segmental plate J, with opening K, the stud and roller N, rocking lever O, connection P, and suitable mechanism for operating the same, when the same shall be constructed and operated substantially as and for the purpose set forth.

2. The combination of a vibrating bed, a shaft, E, having the eccentric-bearings  $e$   $e^2$  and crank-arm  $e^3$ , the connections D, connection F, block G, slotted plate H, segmental plate J, with opening K, stud and roller N, rocking lever O, connection P, handle Q, provided with dog *t* and spiral spring *s*, and curved plate T, constructed and operating substantially as and for the purpose set forth.

AMOS P. BARBER.

In presence of—

C. S. BARBER,

WILLIAM V. H. HICKS.