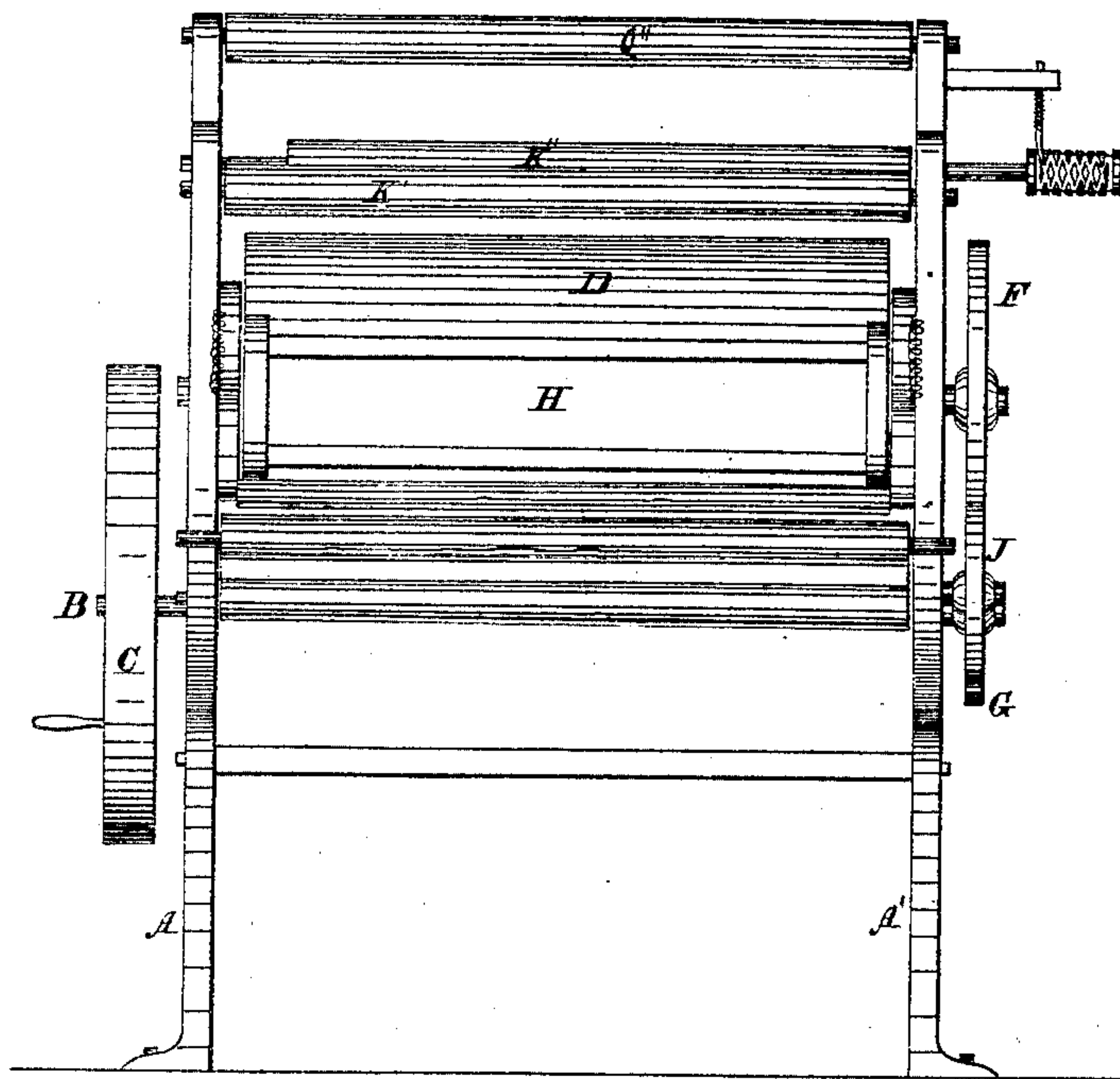


*E. B. Tripp.*  
*Printing Press.*

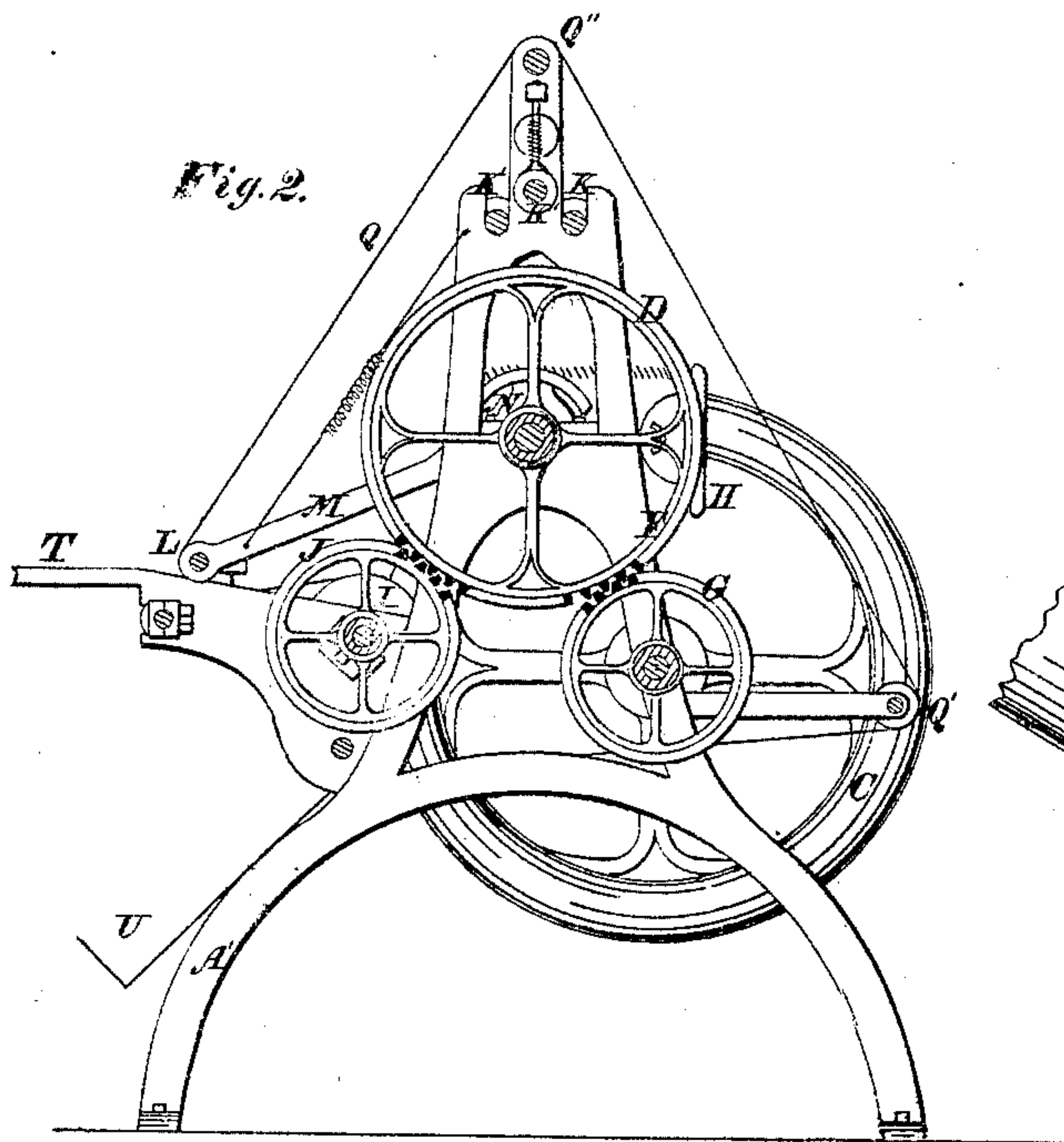
*N<sup>o</sup> 21528*

*Patented Sept. 14. 1858*

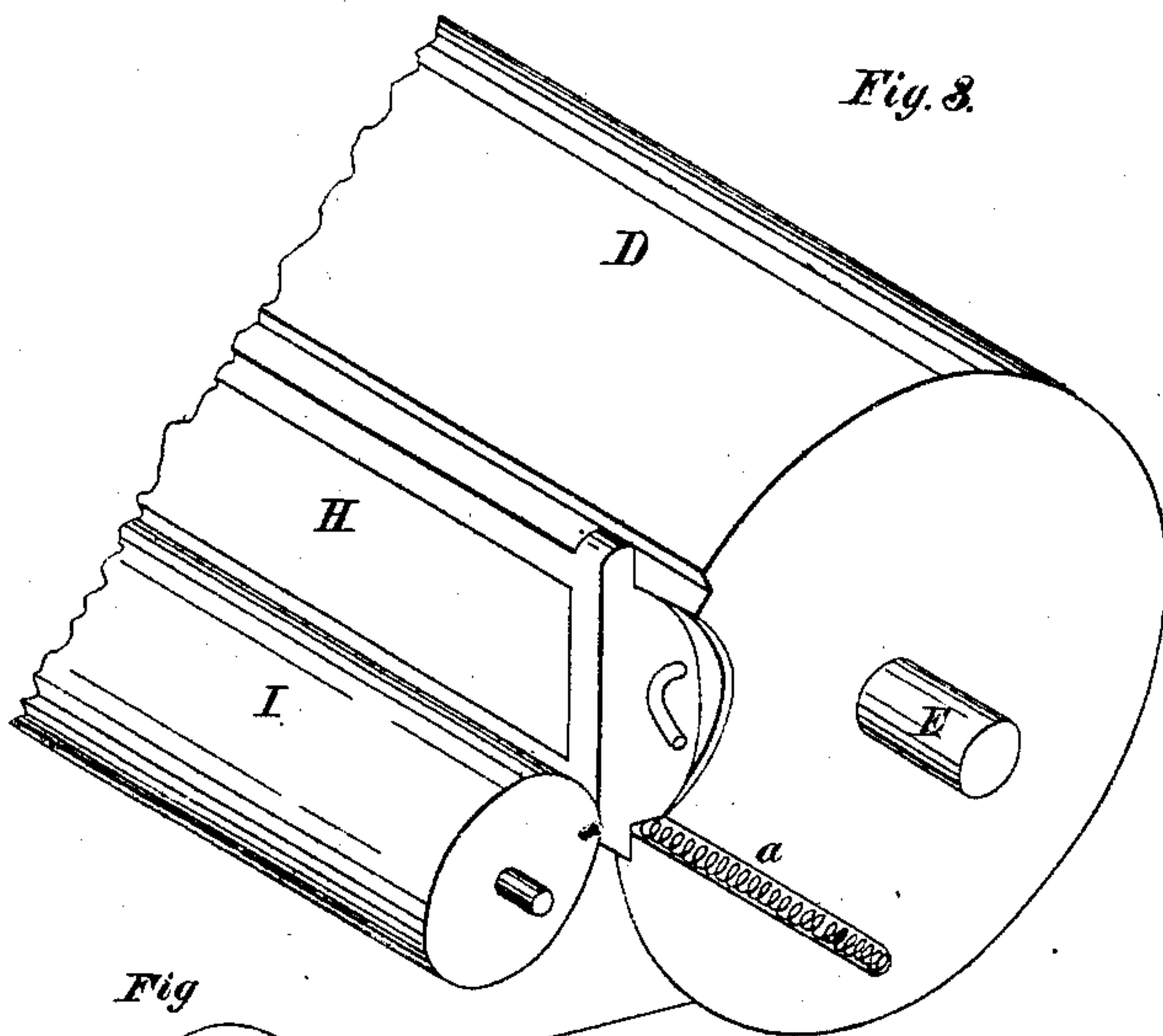
*Fig 1.*



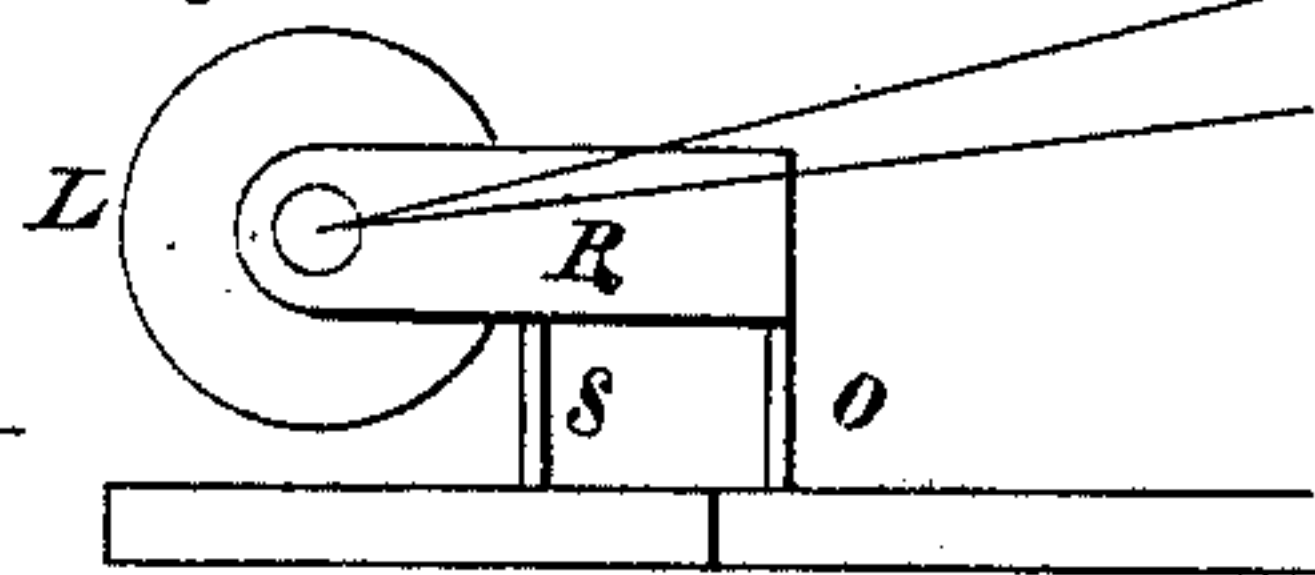
*Fig. 2.*



*Fig. 3.*



*Fig*





# UNITED STATES PATENT OFFICE.

ERVIN B. TRIPP, OF NEW YORK, N. Y.

## PRINTING-PRESS.

Specification of Letters Patent No. 21,528, dated September 14, 1858.

*To all whom it may concern:*

Be it known that I, ERVIN B. TRIPP, of the city, county, and State of New York, have invented certain new and useful Improvements in Rotary Printing-Presses; and I do hereby declare that the following is a full and exact description of the construction and operation of the same, reference being had to the accompanying drawings and to the letters of reference marked thereon, in which—

Figure 1 is an end, and Fig. 2 a side elevation of the press. Fig. 3 is a perspective broken view of the type and impression cylinders, on a larger scale, detached, and Fig. 4 a side view of the feed roll and guide on a larger scale detached.

My invention consists, first, in attaching to, and combining with the type cylinder of a rotary printing press a flattened plate or type bed which contains the type, and which revolves with that cylinder, and is so attached to it as to move over the impression cylinder in a circular line, or in the arc of a circle; 2d, in a feeding roller, operated by a positive movement derived from some of the rotating parts of the press, which can be adjusted in its movements to feed the paper to be impressed by the type at such given portion of the movement of the type cylinder as may be required to give to the paper the requisite amount of margin; and 3d, in a feeding guide, up to, and against which, the paper to be printed is fed, and which is governed in its movements by the movements of the feeding roll, so that it is elevated, to allow the paper to pass it, when the feeding roll is depressed and brought in contact with the paper, to feed the paper to the press, and is depressed, when the feeding roll is elevated and raised from the feeding table.

A, A' are the sides of the press, made of such height as to bring the feeding roll to the proper elevation to be conveniently attended by the operator of the press.

B is the main or driving shaft, upon which is secured the pulley or flywheel C by which the press is operated either by hand, or foot, or by power, as may be desired.

D is the type cylinder, secured to the shaft E, and operated by the gear wheel F upon that shaft, and by the pinion G upon the end of the main shaft B. Upon one side of the type cylinder is formed a recess to

receive the type plate or bed H in which the type, or the chase containing the type, is placed and secured. The face of the type plate or bed H is made flat so that the ordinary type, rules, leads, &c. may be used with, and upon it, and it is formed, in connection with the form of the recess in the side of the cylinder D, that its face, and the face of the type contained within it, shall move upon, and over the impression cylinder I in the arc of a circle, equal to the circle of the type cylinder, so that all parts of the face of the type shall be brought in contact with the face of the impression roller at a uniform distance from the axle of the type cylinder and therefore be subjected to a uniform pressure, as is required to produce a perfect impression of the type contained within the plate or bed upon the paper to be printed. This motion of the bed H is obtained by having its ends formed circularly to fit into similarly formed grooves or recesses in the side of the cylinder D, and allowing the bed to rock in these grooves or recesses as it is moved over the impression roller or cylinder. The lower edge of the type bed is kept in contact with the type cylinder by the spring a, that the edge may be prepared to pass over the impression roller, and over the inking rolls hereinafter named, without injury to the type or to the rolls, and that the face of the type bed, and the type contained in it, may follow a circular line as the bed is revolved with the type cylinder by the ends of the bed rocking in the grooves named.

The type bed is retained upon the type cylinder by a pin in each head of the cylinder passing through a groove in each of its ends—the grooves being made in a curved form to permit the bed to receive the rocking motion before described. The sides and ends of the type bed are raised above its face sufficiently to form supports against which the type, or the chase containing the type, is secured and retained in place either by wedges, set-screws, or other desired means. I, is the impression cylinder or roller, upon which the paper to be printed is carried, and by the pressure of which against the face of the type the impression is given. It is operated by the gear wheel F gearing into the pinion J on the end of its shaft—the diameters of the wheel and pinion being such in relation to the diameters of the cylinders D and I that the paper on the latter, and



the type on the former, shall be moved at precisely the same speed in order that the impression of the type on the paper shall be "clear," and not "blurred."

5 K, K', K'', are the inking rolls, by which the ink is distributed to the type. They are revolved by the type striking against and moving over the two former, and by these two revolving the upper one by friction of  
10 their surfaces.

L is the feeding roll, attached to the outer end of a pair of arms (of which one is shown at M Fig. 2) which are pivoted to the sides A, A', and which have their inner ends operated upon by the cams N on the shaft E to  
15 elevate their outer ends to raise the roll to allow the paper to be printed to be fed up to the guide O, and to depress them to lower the roll to come in contact with the paper, to feed the paper to the impression roller.  
20 These cams are secured to the shaft E by set screws, to allow them to be moved back or forth in order that the feeding roll may be brought in contact with the paper to feed it to the impression roller sooner or  
25 later, as more or less margin may be required to be given to the printed sheet. The feeding roll is operated by tapes Q running over it and over the impression roller, and the  
30 guide rollers Q', Q''.

O, is the guide, to, and against which the side of the sheet of paper is fed by the hand of the operator. It is attached to one end of the short beams or levers R, (the opposite  
35 one not shown in the drawings); the other end of the beams being attached to the shaft of the feeding roll. As the feeding roll is depressed to come in contact with the paper, the beams R vibrate upon their standards S, and thereby raise the guide from the feeding  
40 board or table to allow the paper to be carried past it to the impression roller; and as it is elevated—after the paper has passed the guide—the guide is depressed and  
45 brought in contact again with the feeding board for the paper to be fed against it as before.

The operation of the press is as follows: The type being properly secured in the type  
50 bed H, the ink rolls being duly changed and covered with ink, and the paper to be print-

ed being placed upon the feeding board T where it can conveniently be reached by the operator, the press is revolved as before stated. The type being inked by passing 55 over the inking rolls, and the sheet to be printed being placed against the guide O, the feeding roll is depressed and brought in contact with the paper by the continued revolution of the type cylinder at the same 60 time that the guide is elevated to allow the paper to be carried to the impression roller. After the sheet of paper has been carried over the impression roller the distance that is required to leave upon it the proper mar- 65 gin, the lower edge of the type is brought in contact with it and the impression of the type upon it is commenced, and is continued as the type and impression rollers revolve as before noted. The sheet when printed is 70 dropped from the type and carried, by the motion given to it by the impression roller, to the receptacle U beneath the feeding board.

I do not claim producing a printed im- 75 pression from type attached to, and revolving with, a type cylinder, but

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

1. The employment in connection with the 80 type cylinder D of a cylinder or rotary printing press of a flattened plate or type bed H in which the type to produce the printed impression upon the paper are placed, which plate or type bed is revolved 85 with that cylinder and is so connected with and attached to it as to have the face of the type contained in it more over the impression roller I in the arc of a circle as, and for the purposes set forth. 90

2. The feeding roll L, operated by a positive motion as specified, when combined with, and elevated and depressed by the arms M and cams N, in the manner, and for the purposes described. 95

3. The feeding guide O, operated in connection with the feeding roll L, as, and for the purpose set forth.

ERVIN B. TRIPP.

Witnesses:

GEORGE N. BUCKMAN,  
FRANCIS S. LOW.