

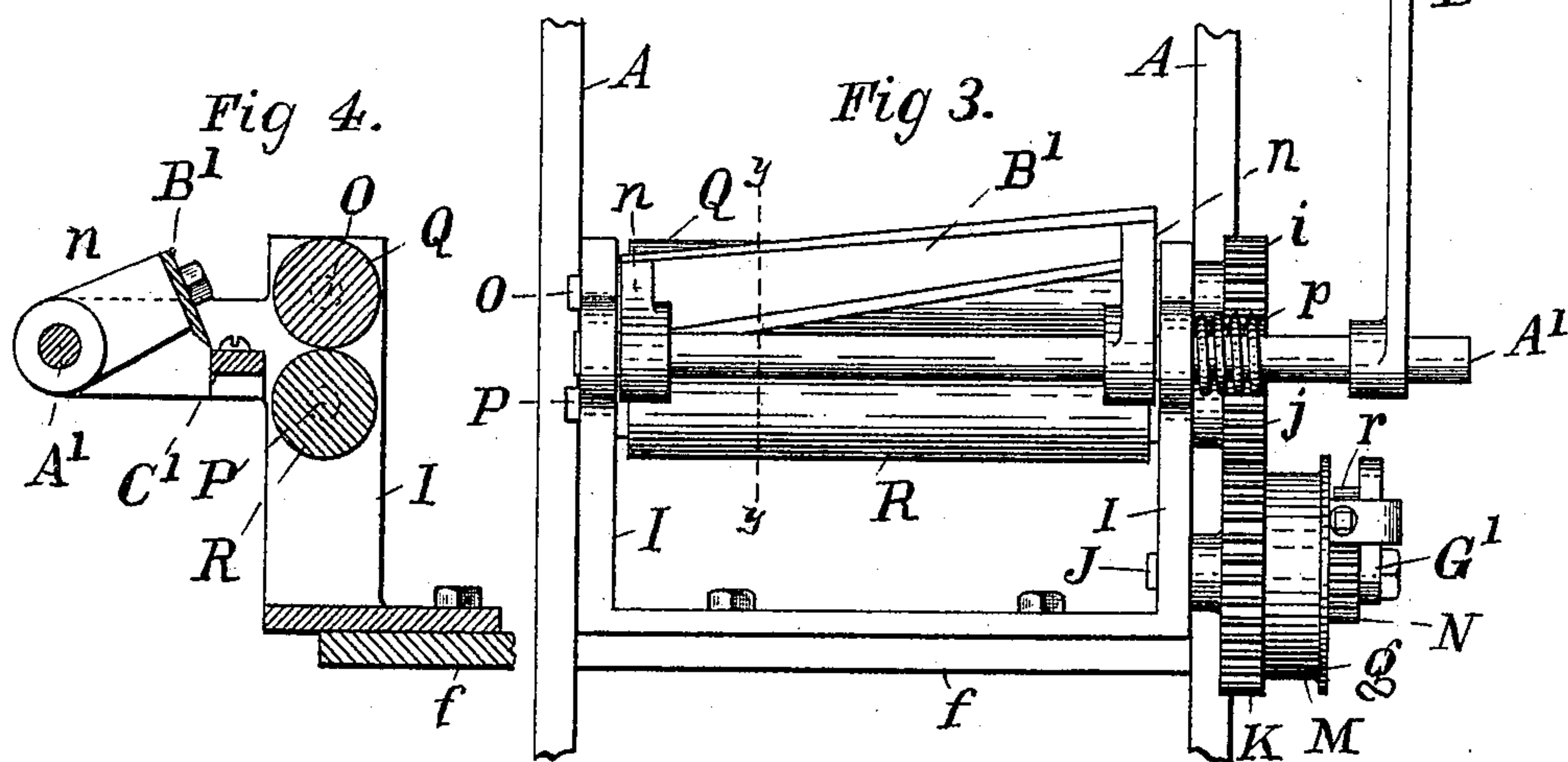
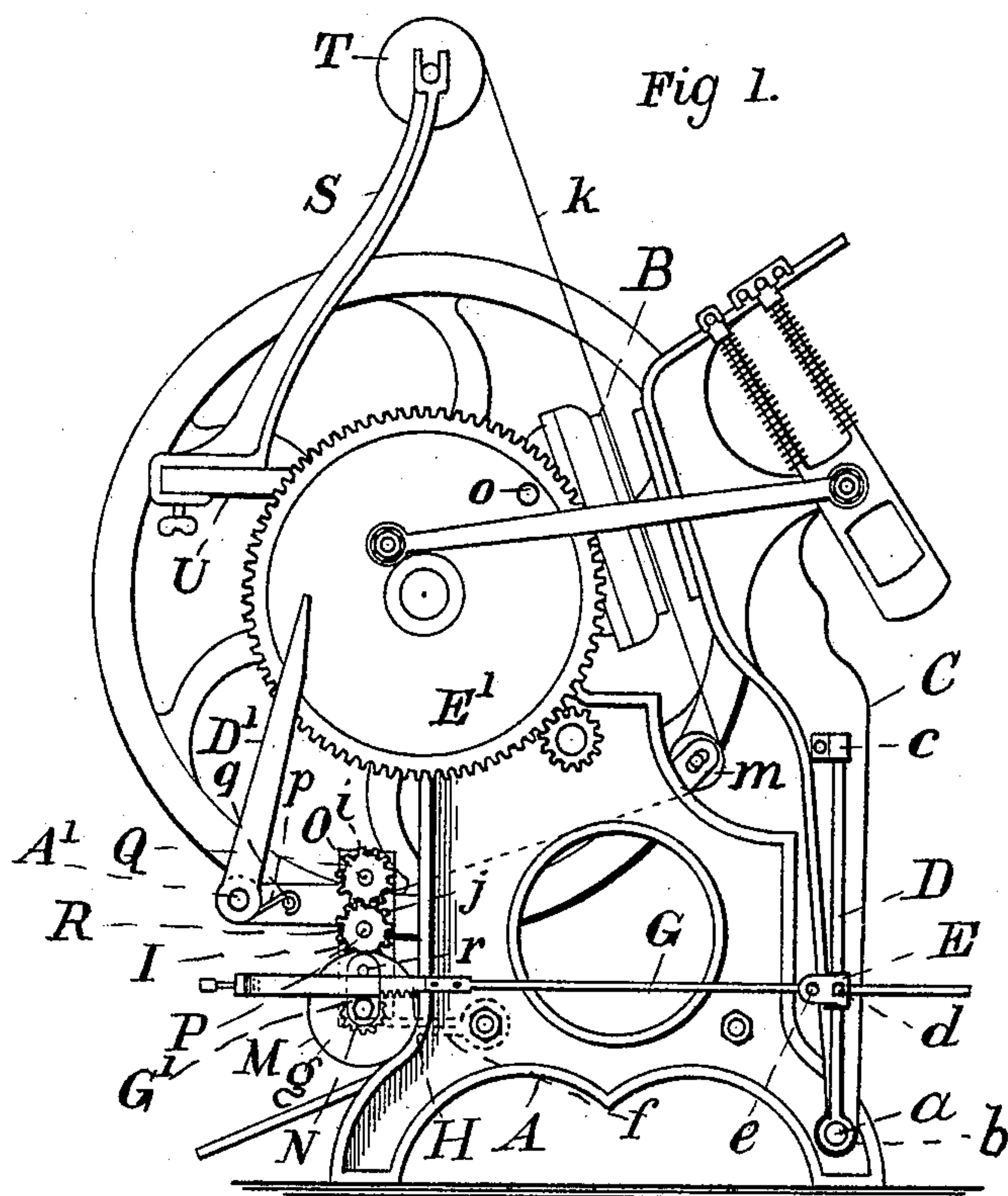
(No Model.)

2 Sheets—Sheet 1.

J. R. KOFFENBERGER.  
PRINTING PRESS.

No. 583,199.

Patented May 25, 1897.



-WITNESSES-

Dan'l Fisher  
 Harry Constantine.

-INVENTOR-

Jacob R. Koffenberger,  
by G.H.N.T. Mead,  
Atty.

(No Model.)

2 Sheets—Sheet 2.

J. R. KOFFENBERGER.  
PRINTING PRESS.

No. 583,199.

Patented May 25, 1897.

Fig 2.

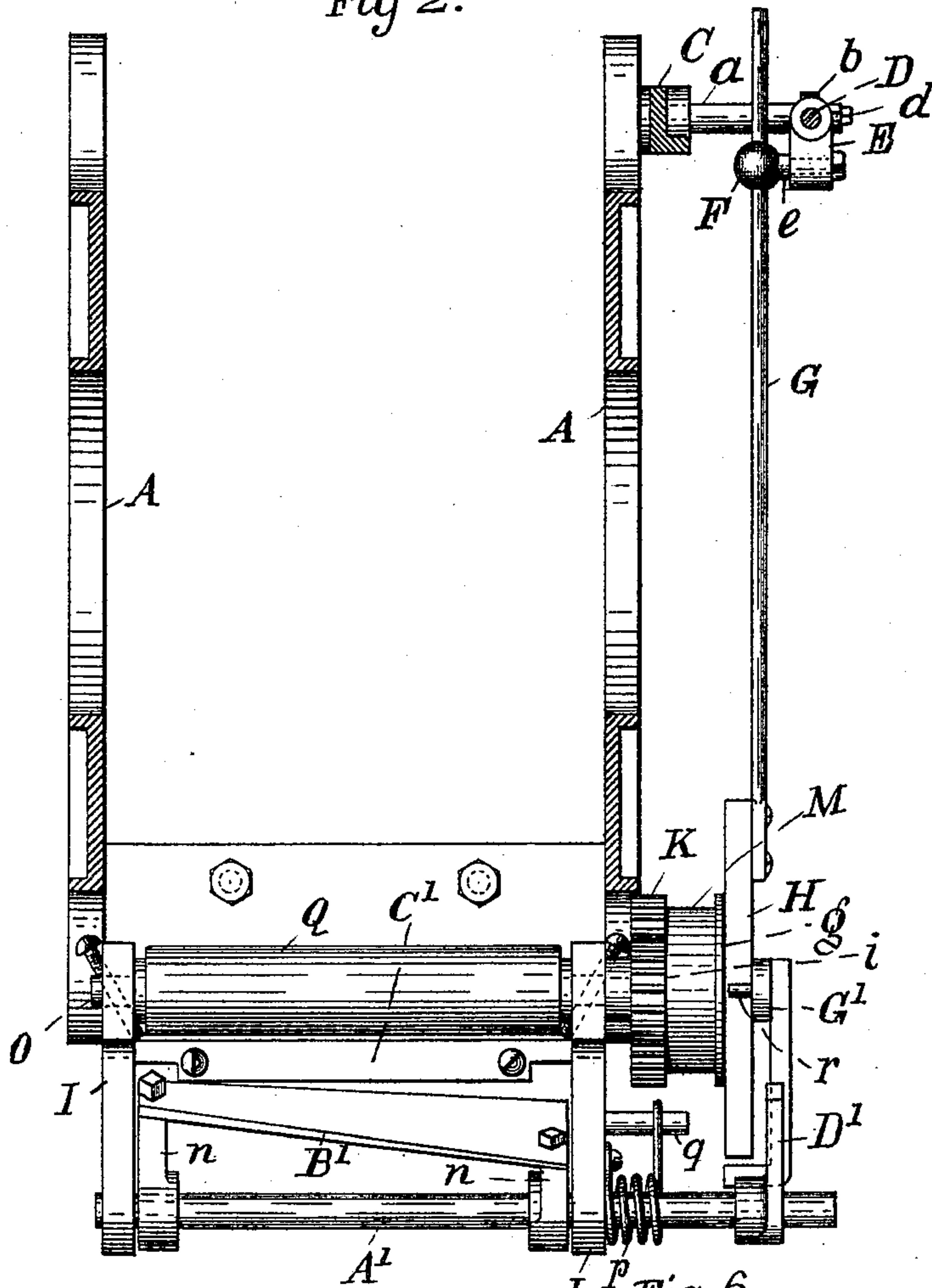


Fig 5.

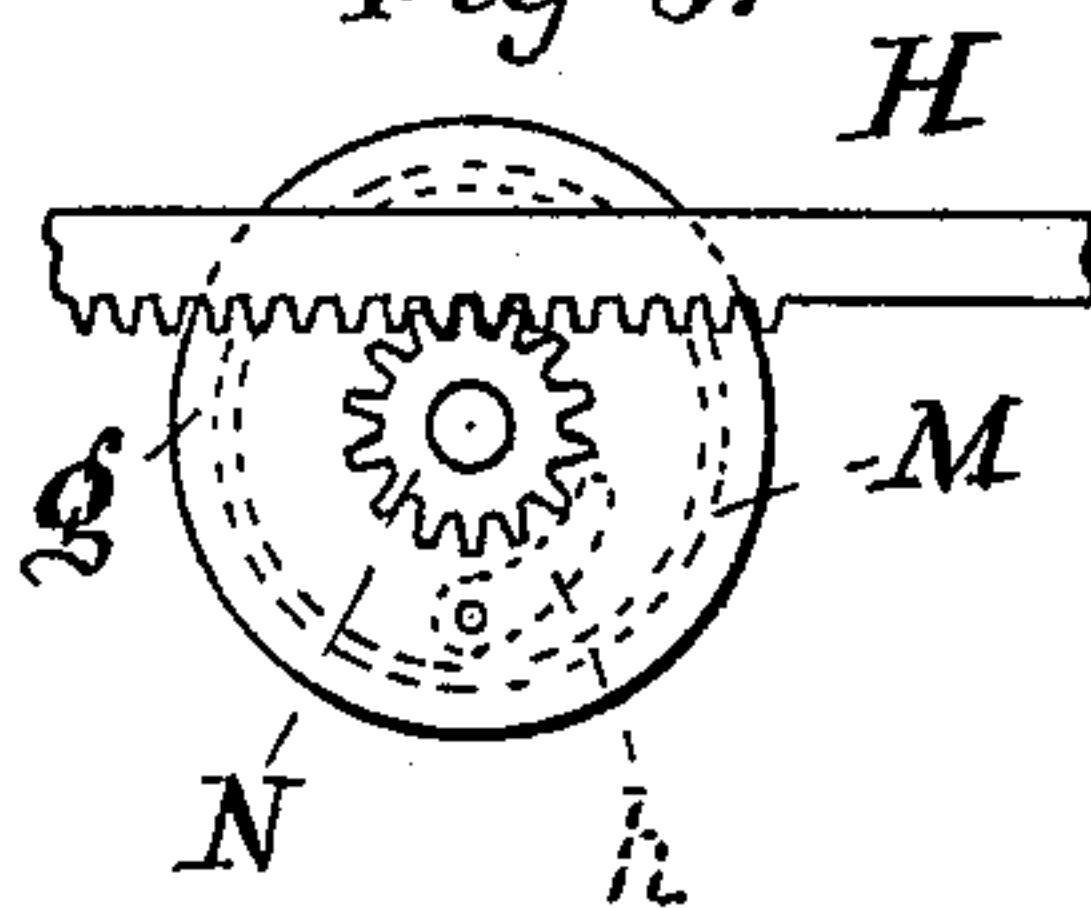


Fig 6.

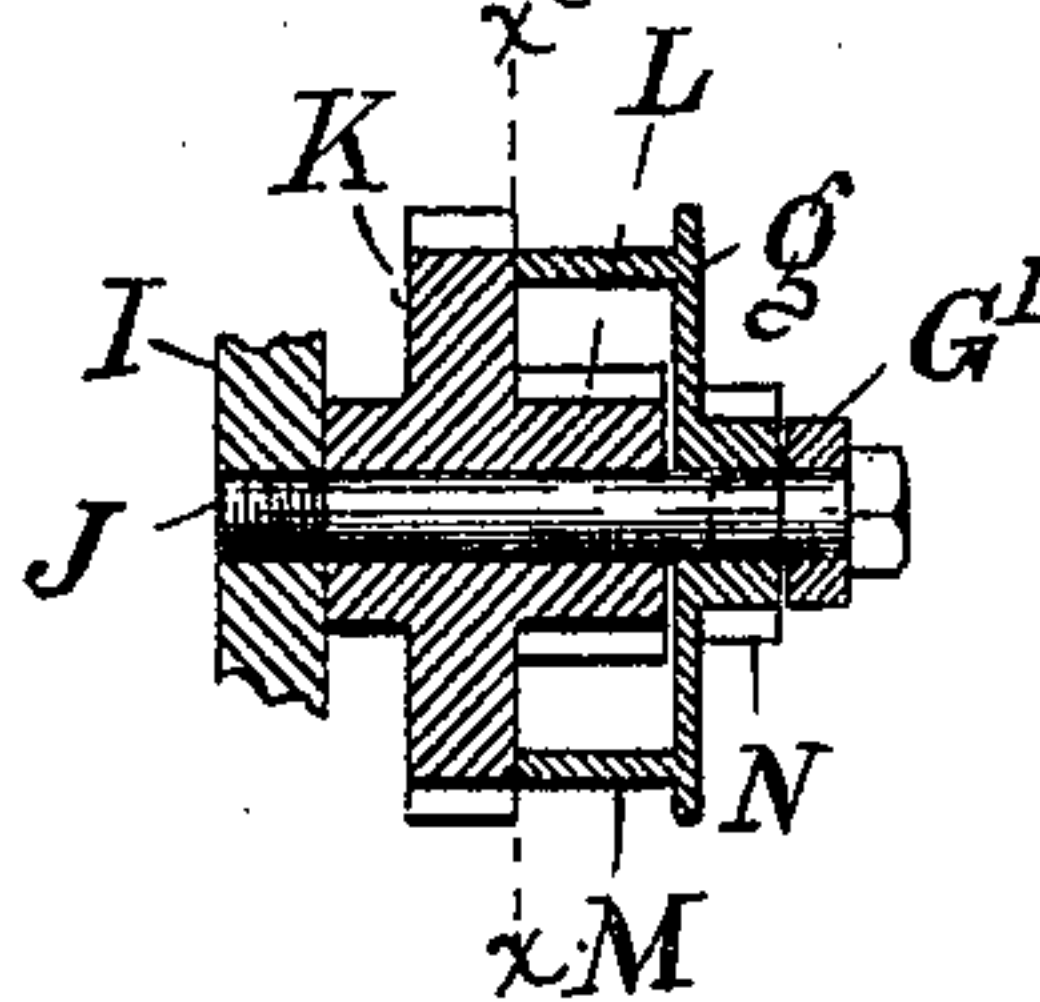


Fig 7.

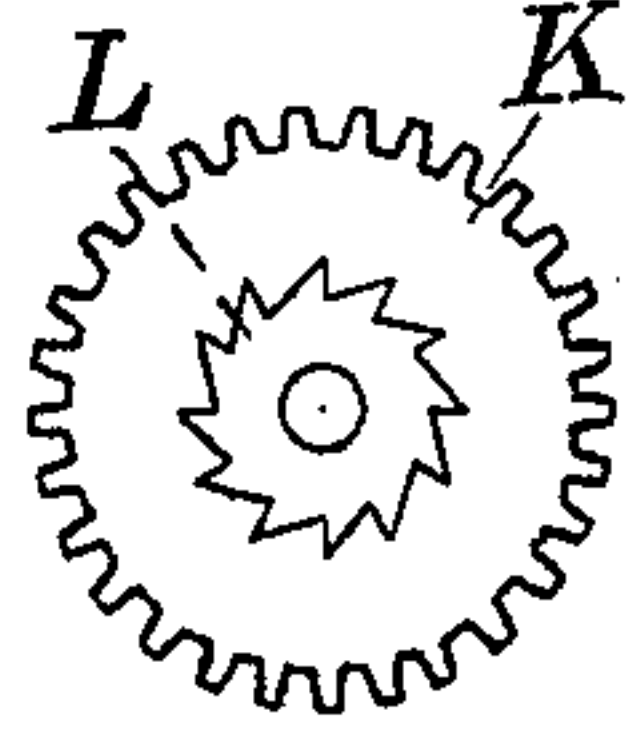
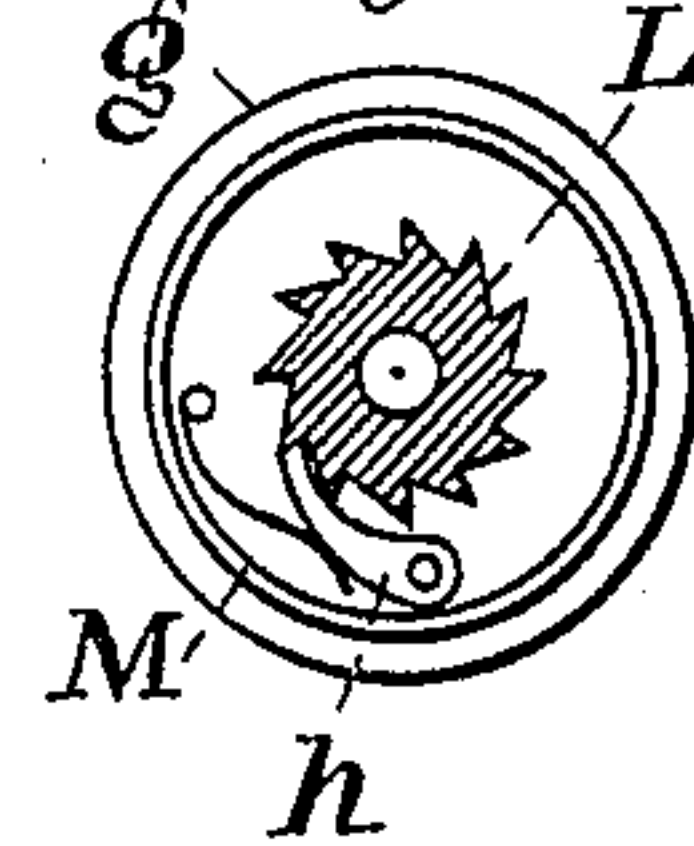


Fig 8.



-WITNESSES-

Dan'l Fisher  
Harry Constanline

-INVENTOR-

Jacob R. Koffenberger,  
by W. H. T. Meade,  
att'y.



# UNITED STATES PATENT OFFICE.

JACOB R. KOFFENBERGER, OF BALTIMORE, MARYLAND, ASSIGNOR OF TWO-THIRDS TO HARRY A. DEMUTH AND GEORGE C. POTTERFIELD, OF SAME PLACE.

## PRINTING-PRESS.

SPECIFICATION forming part of Letters Patent No. 583,199, dated May 25, 1897.

Application filed July 24, 1896. Serial No. 600,353. (No model.)

*To all whom it may concern:*

Be it known that I, JACOB R. KOFFENBERGER, of the city of Baltimore, in the State of Maryland, have invented certain Improvements in Printing-Presses, of which the following is a specification.

This invention relates to an improved apparatus adapted for attachment to any oscillating printing-press whereby circulars may be printed from a roll of paper, the printed matter or circular being cut off at each operation of the press, as will hereinafter fully appear.

In the further description of the said invention which follows reference is made to the accompanying drawings, forming a part hereof, and in which—

Figure 1 is a side elevation of an ordinary printing-press having applied thereto the apparatus forming the subject of the present invention. Fig. 2 is an enlarged plan of the attachment, together with a part of the frame of the press. Fig. 3 is a rear view of Fig. 2. Fig. 4 is a section of Fig. 3, taken on the dotted line *y y*. Figs. 5, 6, 7, and 8 are details of the attachment on the same scale as Figs. 2, 3, and 4, Fig. 8 being a section of Fig. 6, taken on the dotted line *x x*.

Referring now to the drawings, A is the frame of an ordinary printing-press of the oscillating type, and B the platen.

C is the oscillating bed, adapted to swing on the studs *a*. The stud *a* at one side of the machine is extended or lengthened, (see Fig. 2,) and over it is placed the eye *b* of a rod D, the other end of which is attached to the bed C by a bracket *c*. With this construction the rod swings or oscillates with the bed.

E is a block on the rod D, adjustable in position longitudinally of the rod and held, when set, by the screw *d*.

F is a ball having a stem *e*, which turns loosely in the block E. The ball F is bored to receive the rod G, which is fastened therein by a set-screw, (not shown,) and its end is secured to a rack-bar H, the teeth of which are at its under side and in engagement with a gear-wheel, hereinafter described.

I I are brackets bolted to a strut *f*, extending between the two sides of the frame A. The strut is shown in dotted lines only in Fig.

1 and together with the bracket I in full lines in Figs. 3 and 4.

J is a stud screwed into one of the brackets I, on which turns loosely a spur gear-wheel K, carrying a ratchet-wheel L.

M is an annular casing which surrounds the ratchet-wheel L and carries on its head *g* a small spur gear-wheel N, with which the rack-bar H, before referred to, engages. The casing M and its gear-wheel N are loose on the stud J, and the casing is provided with a pawl *h*, (see Fig. 8,) which rests on the ratchet-wheel.

From the above description it will be understood that in the oscillation of the bed the small gear-wheel N is revolved backward and forward by the rack-bar, but motion is communicated to the gear-wheel K in one direction only.

O and P are revoluble shafts supported by the brackets I, on which are secured the upper and lower paper-feeding rolls Q and R. The said shafts are geared together by the spur gear-wheels *i* and *j*, and the lower gear *j* is in mesh with the spur-gear K.

S S are stands erected on the table U to sustain the roll of paper T, and the paper *k* of the roll passes over the bed B, around the idle-roll *m*, and between the rolls Q and R.

A' is a vibratory shaft supported by the brackets I, having arms *n*, which carry an inclined knife-blade B', and between the brackets is situated the stationary shear-blade C'.

The printed paper, after passing between the rolls, is cut off by the knife and shear-blade, and the printed sheet falls to the floor or to any suitable receptacle placed thereon underneath the knife.

The vibratory movement of the shaft A' is effected by an arm D' and a pin *o* in the main gear-wheel E' of the press, the pin striking the arm at each revolution of the gear-wheel. The backward or return movement of the arm D' is effected by a spring *p*, coiled about the shaft A', one end of which spring is caught or held by a pin *q* on the bracket.

G' is a guard applied to the end of the stud J to prevent the rack-bar moving longitudinally from the gear-wheel, and a pin *r* in the guard keeps the said rack-bar down on the teeth of the gear-wheel. It will be seen that

when loose sheets are to be printed instead of paper from a roll it is only necessary to remove the stands S and the roll of paper, as the other elements of the invention do not interfere in any manner with the ordinary feeding of the press.

The length of paper fed through and cut off at each vibratory motion of the press is governed by the position of the block E on the rod D, which may be raised or lowered to suit the width of the circular or printed sheet or the form.

I claim as my invention—

In a printing-press, the combination with the oscillating bed thereof, of a bar having an oscillating motion in common with the bed, a block on the said bar arranged to be slid thereon and secured at any distance from the

point of oscillation, a ball having a stem adapted to turn loosely in the said block, paper-feed rolls with ratchet mechanism, a rack-bar to operate the ratchet mechanism, the said rack-bar terminating in a rod which passes through and is secured in the vibratory ball, means to hold a roll of paper in such position that the paper will be drawn over the platen by the action of the feed-rolls, and a knife mechanism so arranged as to make a cut at each oscillation of the bed and thereby sever a printed sheet from the continuous roll of paper, substantially as specified.

JACOB R. KOFFENBERGER.

Witnesses:

DANL. FISHER,

HARRY CONSTANTINE.