

No. 753,061.

PATENTED FEB. 23, 1904.

J. A. GATES.
PRINTING PRESS.

APPLICATION FILED SEPT. 5, 1903.

NO MODEL.

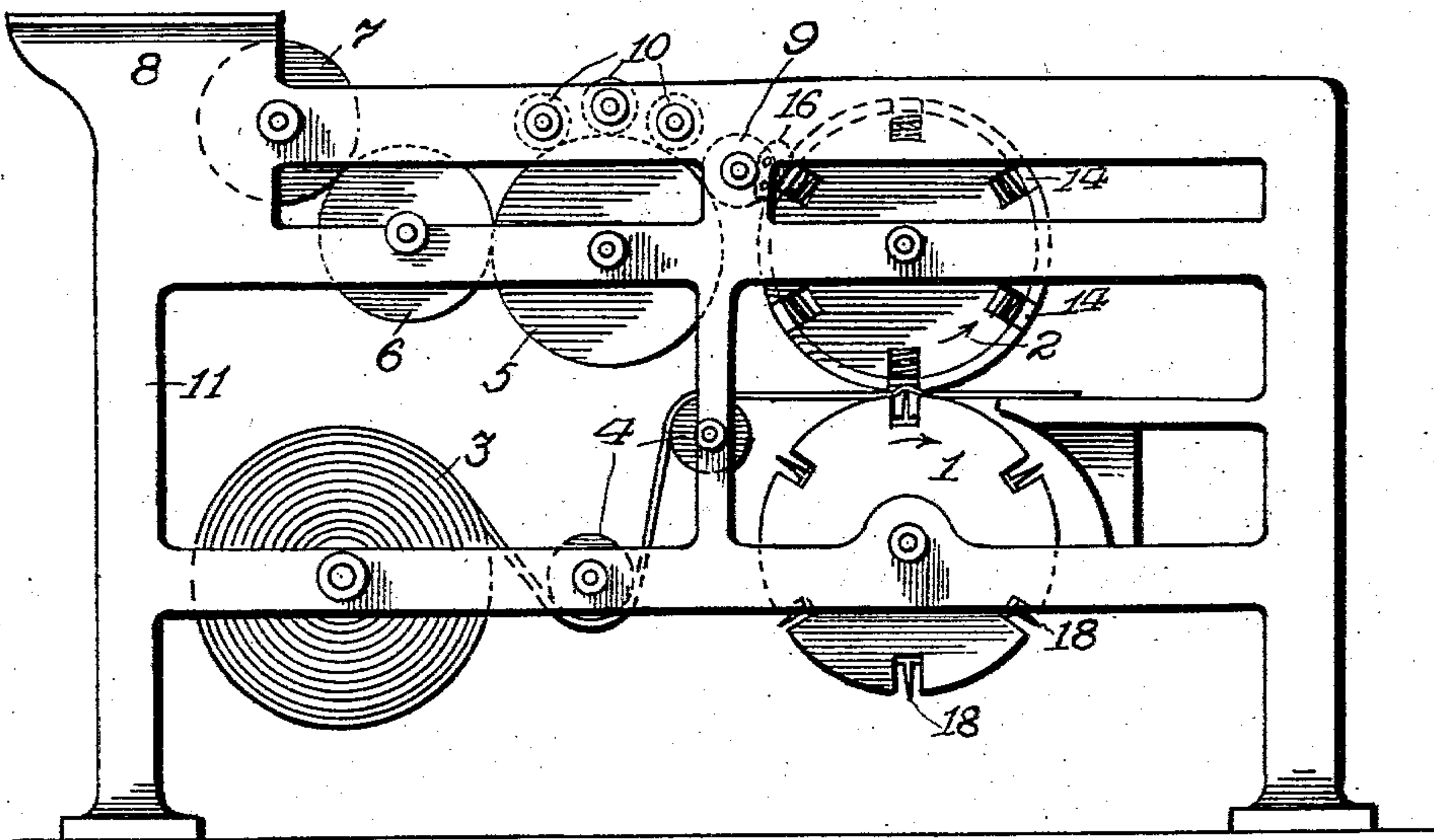


Fig. 1.

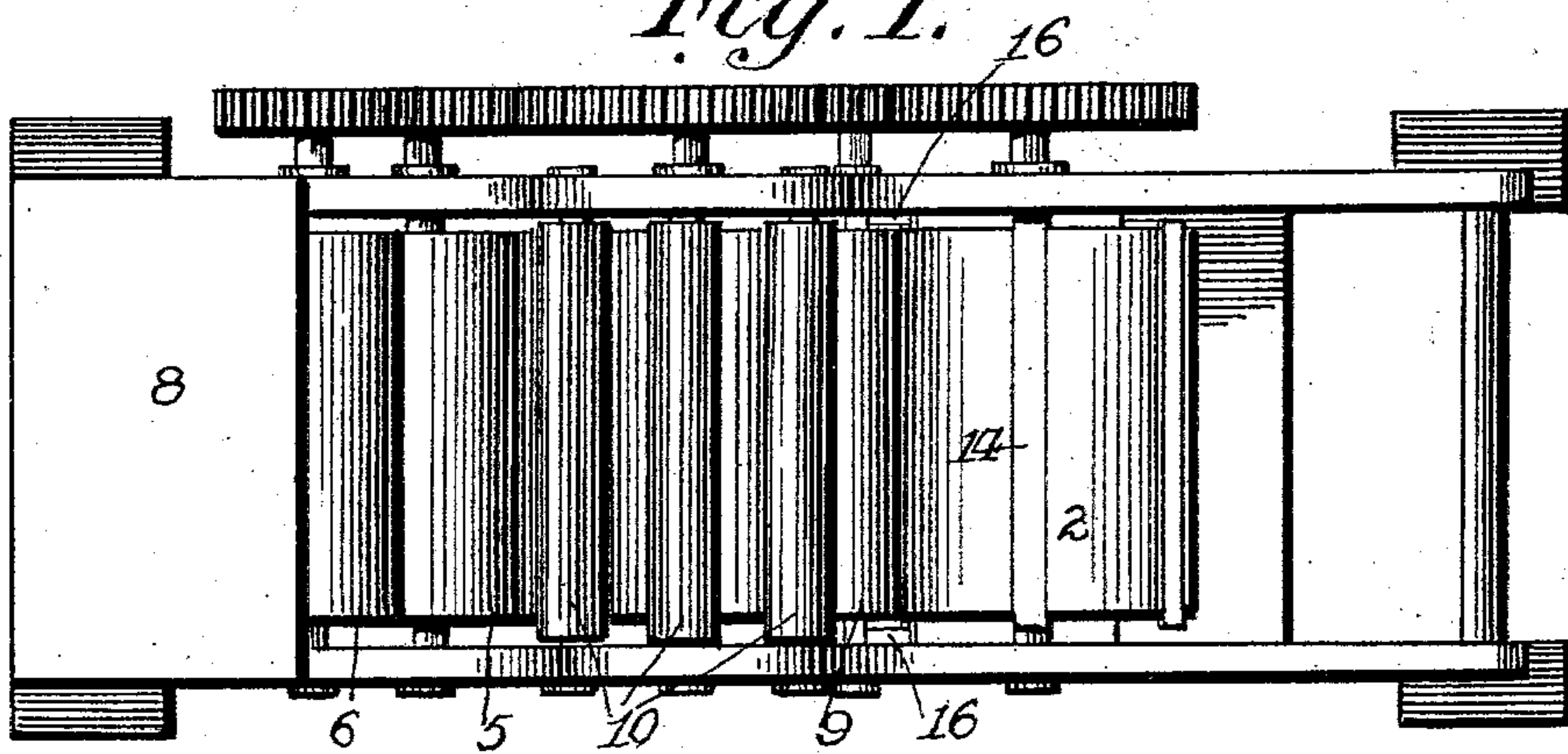


Fig. 2.

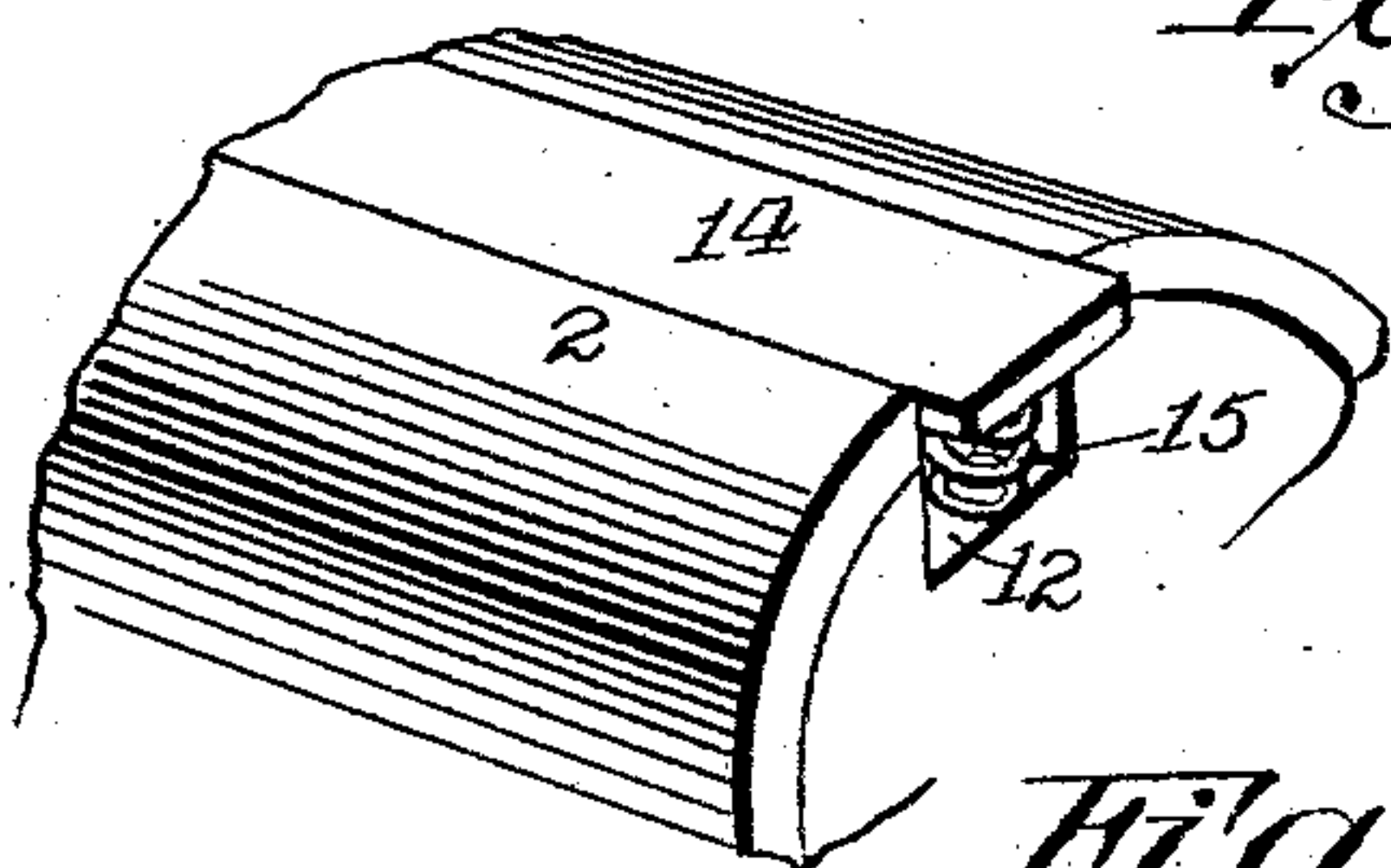


Fig. 3.

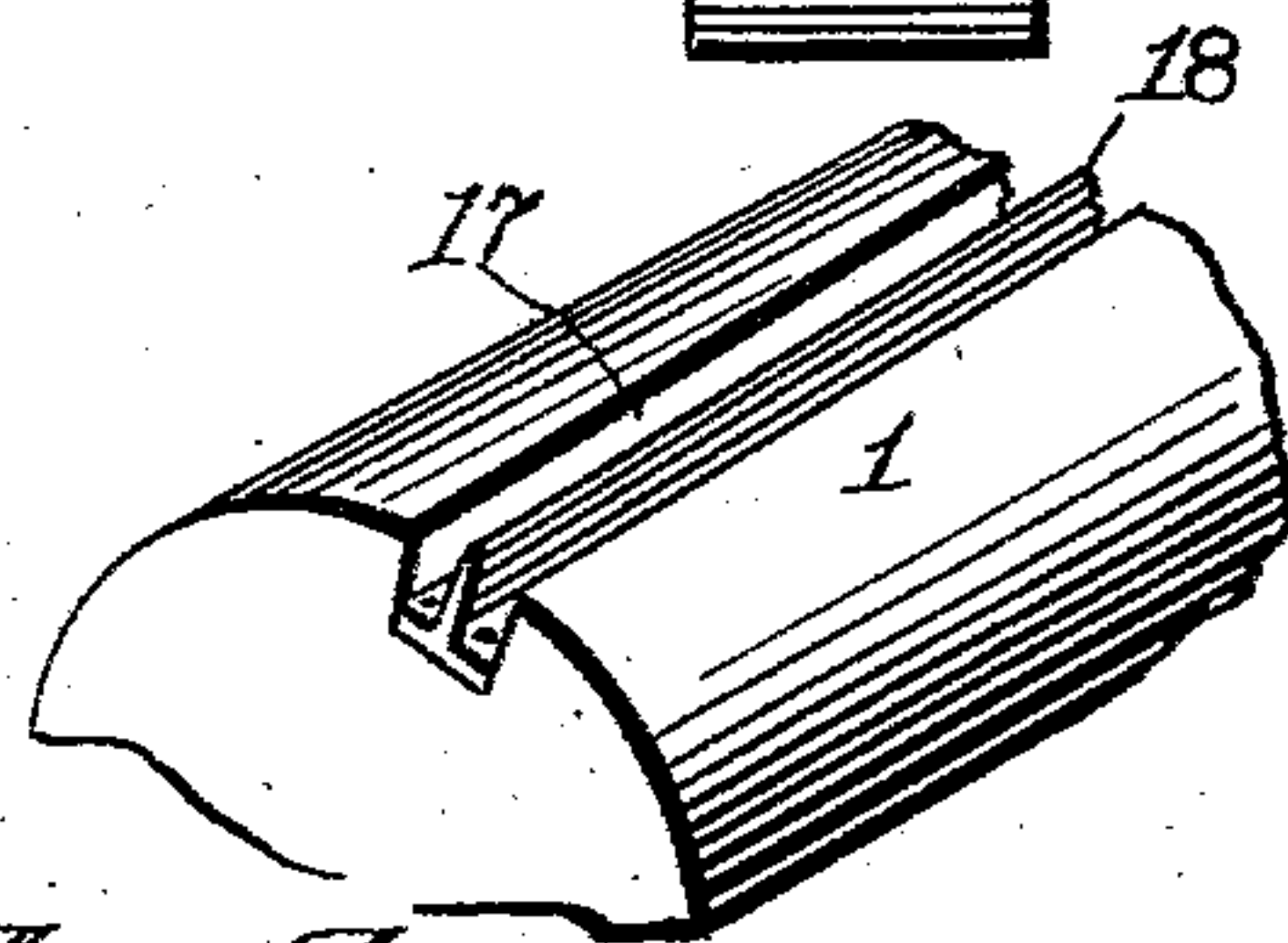


Fig. 4.

Witnesses:
H. H. Butler,
A. Girard.

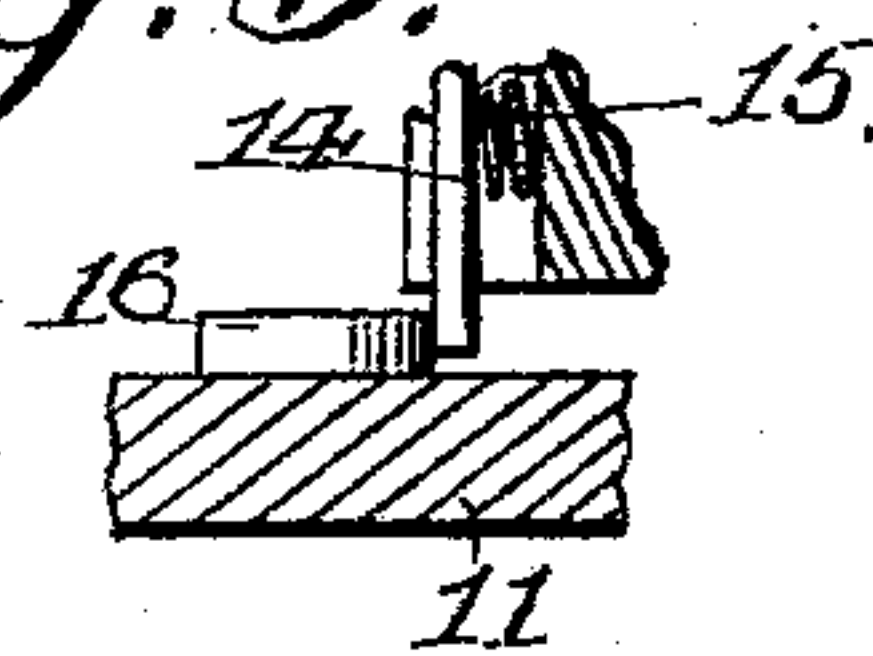


Fig. 5.

Inventor,
J. A. Gates.
By H. C. Everett & Co.
Attorneys.

UNITED STATES PATENT OFFICE.

JOHN A. GATES, OF ALLEGHENY, PENNSYLVANIA.

PRINTING-PRESS.

SPECIFICATION forming part of Letters Patent No. 753,061, dated February 23, 1904.

Application filed September 5, 1903. Serial No. 172,131. (No model.)

To all whom it may concern:

Be it known that I, JOHN A. GATES, a citizen of the United States of America, residing at Allegheny, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Printing-Presses, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to certain new and useful improvements in attachments for printing-presses; and the primary object of the invention is to provide means for the automatic perforating or cutting off of the paper into predetermined lengths with the printing thereof.

Briefly described, the invention involves the providing of the impression roller or cylinder with a plurality of knives or perforators and providing the type roll or cylinder with a plurality of spring-pressed strips spaced to conform to the spacing of the knives or perforators carried by the impression roll or cylinder. Means is provided for applying the ink to the type roll or cylinder and for depressing the spring-pressed strips while they are passing the inking-roller in order that said spring-pressed strips may be kept free of ink.

The construction will be hereinafter more specifically described in detail and then particularly pointed out in the accompanying claims, and in describing the invention reference will be had to the accompanying drawings, forming a part of this application, and wherein like numerals of reference will be employed for designating like parts throughout the different views, in which—

Figure 1 is a side elevation of a part of a printing-press with my improvements applied thereto. Fig. 2 is a top plan view thereof. Fig. 3 is a detail perspective view of a part of the type roll or cylinder. Fig. 4 is a like view of the impression roll or cylinder, and Fig. 5 is a detail sectional view showing the depressor for engagement with the spring-pressed strips.

In the drawings, 1 indicates the impression roll or cylinder.

2 is the type roll or cylinder.

3 indicates the roll of paper to be printed, and 4 4 guide-rolls for same.

5, 6, and 7 are the ink-feeding rolls, the roll 7 receiving the ink from tank 8 and transmitting the ink to rolls 5 and 6.

9 is the inking-roller, which receives the ink from roller 5 and applies the same to the type on cylinder 2.

10 10 10 indicate spreading-rollers for thinning the ink.

The rolls above designated are all suitably journaled in the supporting-frame 11 and geared so as to revolve in the desired directions.

My invention is confined to improvements in the type-cylinder and in the impression cylinder or roll and will now be particularly described.

The type cylinder or roll 2 is provided with recesses 12, arranged circumferentially in the periphery of the roll or cylinder, either equidistant or any desired distance apart. These recesses extend the length of the roll or cylinder, and fitted to work in the recesses are strips 14, held by springs 15, fastened to the under faces of the strips and to the bottom of the recesses. The ends of the strips 14 extend beyond the ends of the roll or cylinder 2, as seen in Figs. 2, 3, and 5, whereby to be engaged by depressors 16, as seen in Fig. 5, in order to depress the strips 14 as they are passing the inking-roller 9 to prevent said roller inking said strips. These depressors are ordinarily attached at a suitable point to the inside of the frame supporting the different rolls. The impression-cylinder 1 is also provided with peripheral recesses 17, extending the length of the roll or cylinder and arranged either equidistant or any desired distance apart in accordance with the arrangement of the spring-strips in the type-cylinder. In these recesses 17 are secured cutters 18, as shown in Fig. 4, or a perforator to engage with the paper in a manner as seen in Fig. 1. These cutters are preferably removably secured in order that they may be removed for any desired purpose, such as the replacing, sharpening, or desired change from a knife to a perforator.

The type in practice are in an electroplate

which is secured upon the type-cylinder or roll on the periphery thereof between the spring-pressed strips. As the spring-pressed strips are engaged by the knives or perforators, as seen in Fig. 1, the paper is cut or perforated in sheets of equal length simultaneously with the printing thereof. The depression of the spring-pressed strips while passing the inking-roller keeps these strips free of ink, so that no ink-marks will be made on the paper at the point of cutting or perforation.

By the term "cutters" as herein employed I desire to be understood as referring to either a knife to cut the papers into sheets or to perforate the same, as the device is particularly adapted for printing on extremely thin paper, such as tissue paper and the like, to be cut or perforated into small sheets.

While I have herein shown and described a practical embodiment of my invention as it has been practiced by me, yet it will be evident that various changes may be made in the details of construction without departing from the general spirit of the invention.

Having fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a printing-press, a type-cylinder, spring-pressed strips arranged in the periphery thereof, means for inking said cylinder, and an impression-cylinder with cutters arranged in its periphery to engage with the spring-pressed strips of the type-cylinder, as and for the purpose described.

2. In a printing-press, a type-cylinder, spring-pressed strips arranged in the periphery of said cylinder, an inking-roller, means for depressing the strips while passing the inking-cylinder to keep the same free of ink, and an impression-cylinder carrying cutters to engage the spring-pressed strips, as and for the purpose described.

In testimony whereof I affix my signature in the presence of two witnesses.

JOHN A. GATES.

Witnesses:

H. C. EVERT,
A. M. WILSON.