

No. 772,337.

PATENTED OCT. 18, 1904.

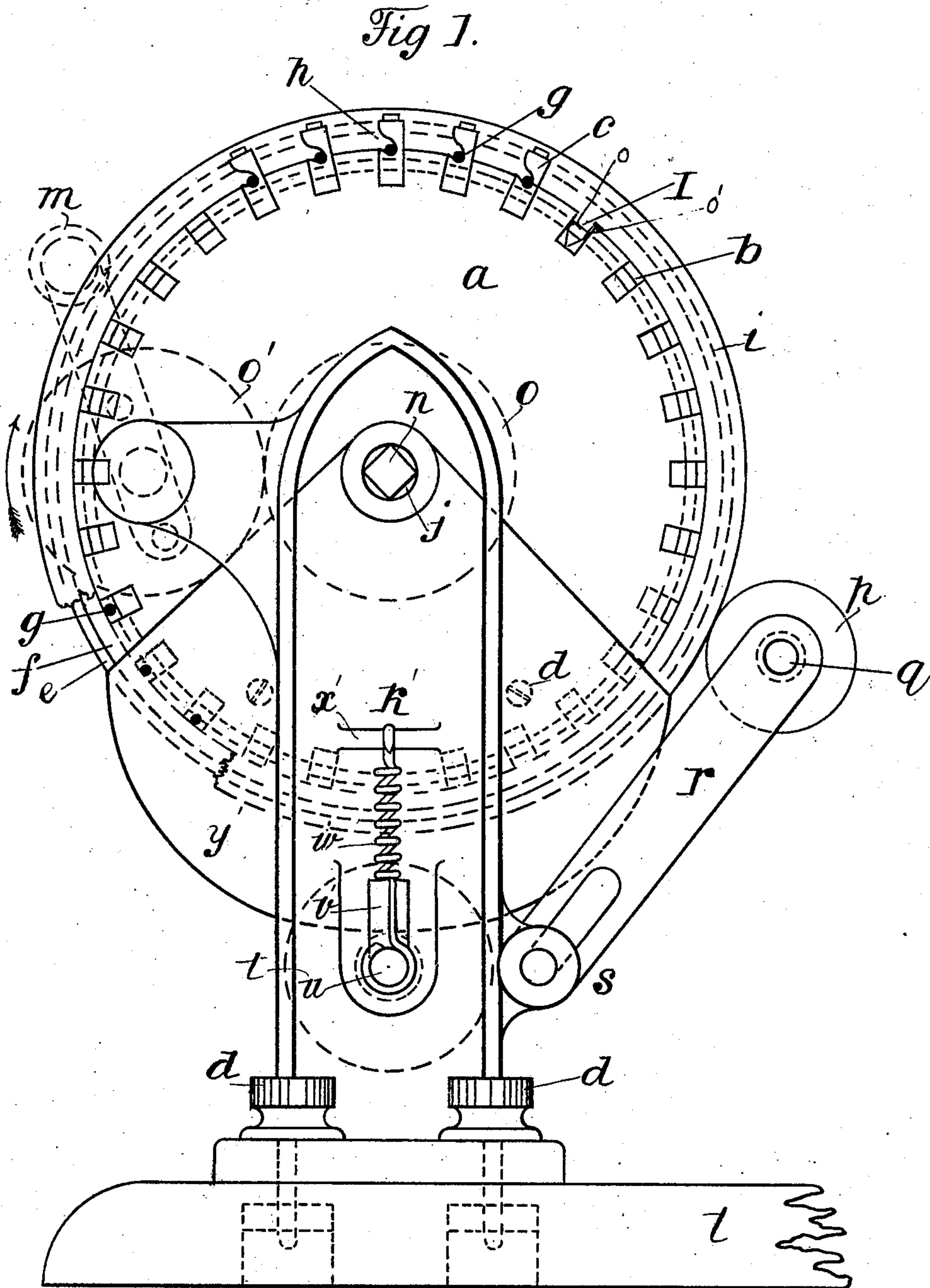
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APPARATUS AND MEANS FOR SETTING TYPE AND PRINTING THEREFROM.

APPLICATION FILED MAY 31, 1904.

NO MODEL.

2 SHEETS—SHEET 1.



Witnesses
James C. Babcock
Wm S. Babcock

Inventor
Sumner Brown
per Wm H. Babcock
Attorney

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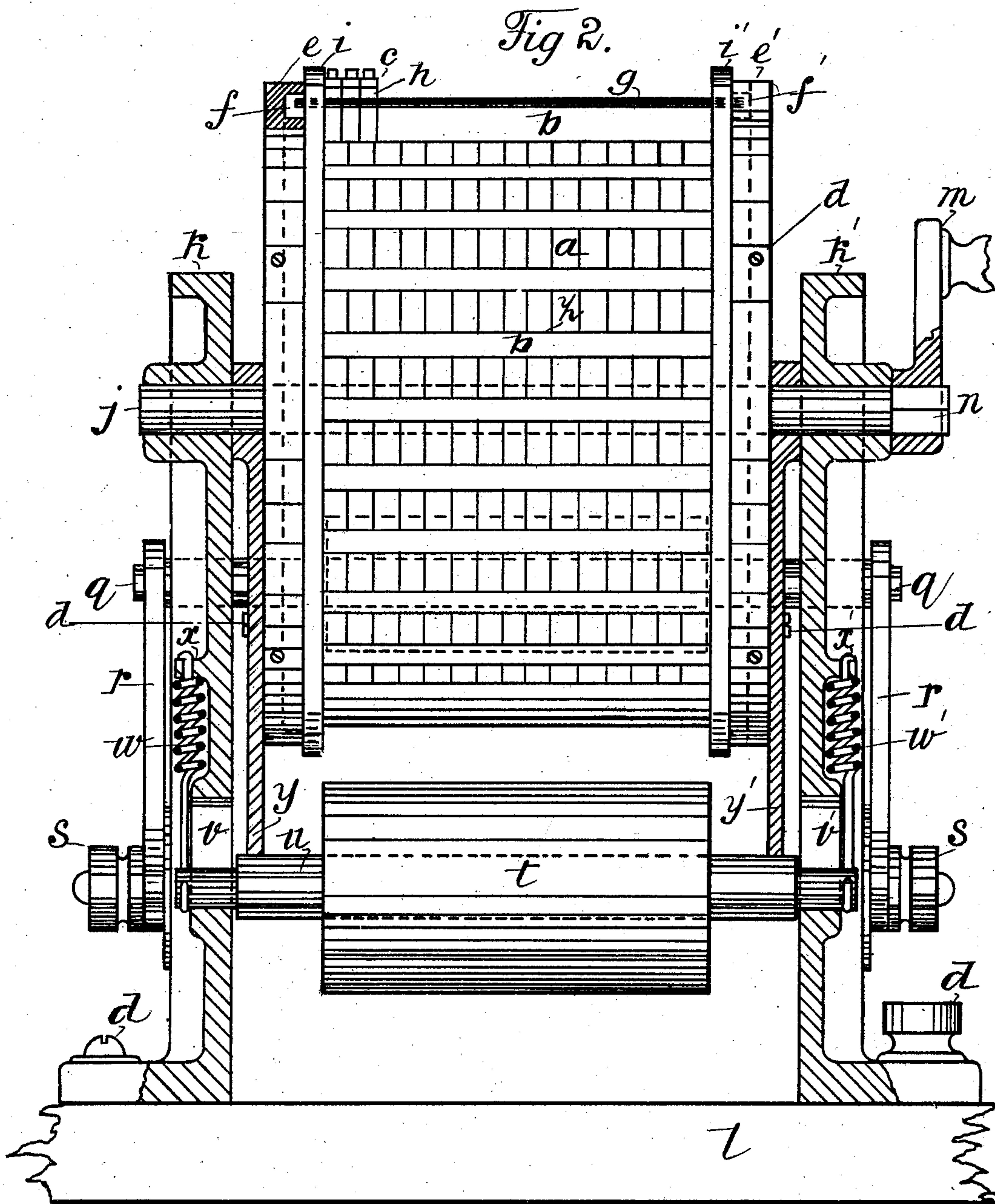
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W H Babcock
Attorney

UNITED STATES PATENT OFFICE.

SUMMERS BROWN, OF LONDON, ENGLAND.

APPARATUS AND MEANS FOR SETTING TYPE AND PRINTING THEREFROM.

SPECIFICATION forming part of Letters Patent No. 772,337, dated October 18, 1904.

Application filed May 31, 1904. Serial No. 210,526. (No model.)

To all whom it may concern:

Be it known that I, SUMMERS BROWN, residing at 10 Lymington road, West Hampstead, London, in the county of Middlesex, England, have invented certain new and useful Improvements in Apparatus and Means for Setting Type and Printing Therefrom; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention consists in improved apparatus and means for expeditiously setting up type and printing therefrom.

The construction and operation of my invention will be readily understood by means of the accompanying drawings, in which—

Figure 1 is an end view, part being in section. Fig. 2 is a front view, part being in section.

In the drawings, Figs. 1 and 2, *a* is a cylinder. This may be constructed from any suitable material, such as wood, metal, or the like. The face of the cylinder is turned or otherwise tooled and a series of longitudinal grooves *b* formed therein. These grooves are preferably of square, rectangular, or other suitable section or shape which will enable the type *c*, placed therein, to be held securely. At either end of the cylinder I mount, by means of screws *d* or the like, two preferably metallic rings *e e'*, a groove *f f'* being turned out of the inner side of each ring in the manner shown. These two grooves carry a series of metallic rods *g*, which engage with grooves or notches *h*, cut out of each letter-space or the like composing the word forming the line of type for the purpose of preventing their falling out when the cylinder is rotated, the rods being retained in their normal position when out of use at the base of the cylinder or when locking each line of type in the manner described by means of two elastic bands of rubber or other suitable material having the same effect, *i i'*. The cylinder *a* is mounted and turns upon a square or other shaped metallic spindle *j*, journaled in the standards *k k'*, which are secured to a wooden or other base *l* by screws *d*, and to enable the same to be

turned round I employ a cranked handle *m*, which may be attached to the spindle *j* by means of a pin, key, or square *n*, or I may employ (see dotted lines, Fig. 1) a spur-wheel *o*, keyed to the spindle *j*, and drive the same by means of another wheel, *o*, to which a cranked handle *m* is fitted. For the purpose of inking the type I employ an inking roller or pad *p*, carried by a spindle *q*, supported by adjustable links *r*, which are clamped to the frames *k k'* by milled or similar nuts or set-screws *s*. Beneath the printing-cylinder I mount a pressure-roller *t*. This is supported by a spindle *u* in slotted bearings *v v*, formed in the sides of the frame, and in order to maintain a yielding pressure I employ two spiral or equivalent springs *w w'*, one end of each spring encircling the spindle *u*, the other being fastened to the bracket *x x'*.

I provide two adjustable cams *y y'*, which are free to turn on the shaft *j*, carrying the drum, but can be fixed in any desired position, depending upon the amount of type matter set up upon the face of the drum, by means of screws or the like *d* passing into the cylinder or equivalent means. I provide a series of lines *z* upon the cylinder, which enable the operator to space up the copy set up. I may in some cases secure the type by means of rods passed underneath the rubber bands. These engage with notches cut in the type in the manner already described; but in this case I can dispense with the grooves in the rings *f f'*. To keep the type in the grooves in contact laterally, I employ the form of spring-clip I shown in Fig. 1. Each of these clips, as illustrated in the upper part of the said figure on the right side, is approximately V-shaped, with the apex pointing toward the axis of the cylinder. One of the diverging ends may be slightly curved inwardly at *o* to facilitate the removal of the clip, and the other end, *o'*, may be straight and radial, extending outward to be more easily grasped.

The operation of my invention is as follows: The respective letters, spaces, figures, or stops formed of type grooved in the manner described are selected by the operator from an ordinary font and placed in the groove. So

soon as the line is complete one of the metallic rods is slid upward under the rubber bands until it engages with the notches cut in the type, as previously described. This locks the same in position and prevents its falling out when the machine is rotated. Spare rods may be kept in the empty grooves *b* at the lower part of the cylinder. In Fig. 1 a portion of the rubber band is cut away to show these rods in position when out of use. The drum is turned until the cams *y y'* force the pressure-roller away from the face of the type upon the cylinder. Paper is now fed in, and so soon as the cam has traveled over the spindle of the pressure-roller it is forced upward by the reaction of the springs and the paper gripped between the roller and the type set up in the grooves in the cylinder, the type being inked by the revolving ink roller or pad adjustably mounted, as described. The rubber bands serve to grip the paper and insure its being fed in with regularity and equalize the pressure over the entire surface of the cylinder.

What I claim, and desire to secure by Letters Patent of the United States, is—

1. A rotary cylinder and notched or slotted type carried thereby, locking-rods longitudinal of said cylinder attached thereto and fitting into the said type and rubber bands passing around the said locking-rods to hold them

in position and for other purposes substantially as set forth.

2. A longitudinally-grooved rotary cylinder having grooved flanges at its ends in combination with notched or slotted type set in said grooves of the cylinder, longitudinal rods which are mounted at their ends in the grooves of said flanges and fit into the said type, rubber bands passing around the cylinder and said rods, an adjustable inking pad or roller and a pressure-roller substantially as set forth.

3. In combination with a rotary cylinder and type laterally notched and carried thereby, a series of locking-rods removably attached to the said cylinder and entering the notches of said type for fastening the same to the cylinder substantially as set forth.

4. In combination with a rotary longitudinally-grooved cylinder, a series of type carried thereby, means for locking said type to said cylinder and spring-clips set into said grooves for keeping the type in contact laterally substantially as set forth.

In witness whereof I have hereunto signed my name in the presence of two subscribing witnesses.

SUMMERS BROWN.

Witnesses:

HUBERT D. JAMESON,
ALFRED NUTTING.