

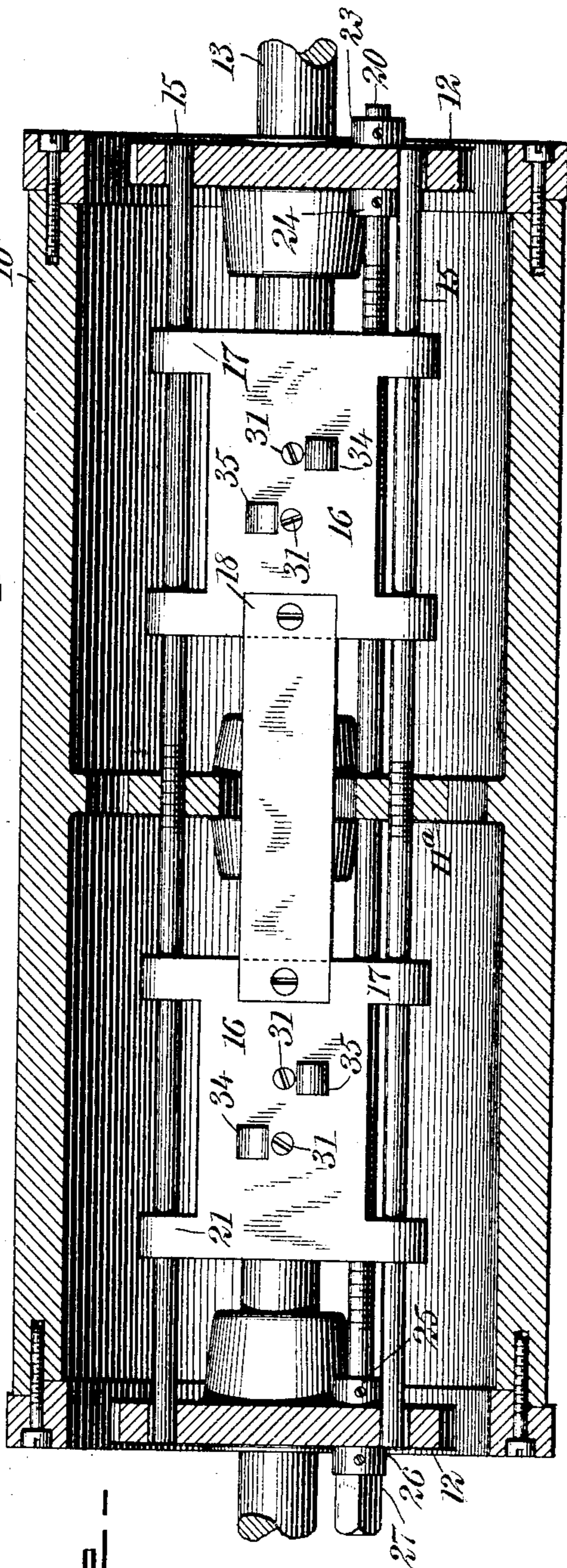
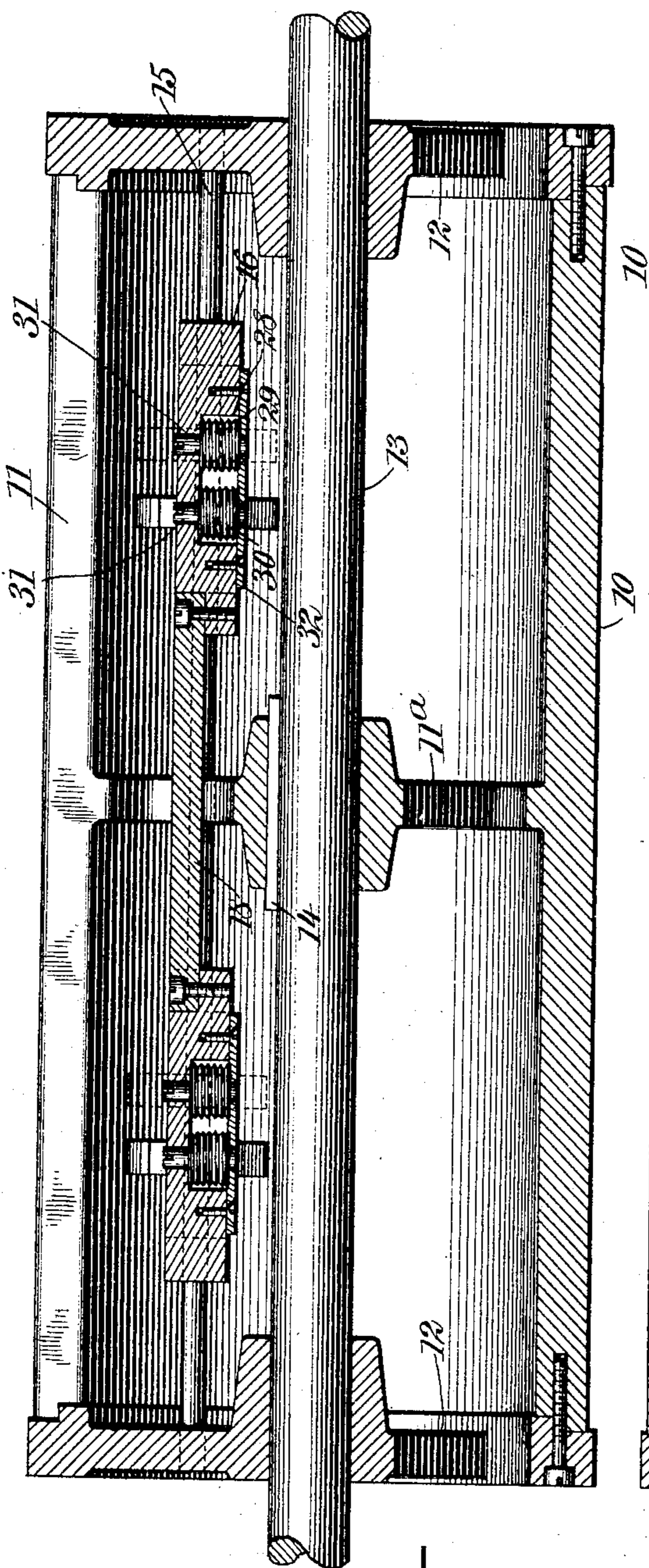
No. 786,031.

PATENTED MAR. 28, 1905.

G. K. HENDERSON.
PRINTING PRESS CYLINDER.

APPLICATION FILED MAR. 1, 1904.

2 SHEETS—SHEET 1.



WITNESSES:

H. C. Abbott
C. P. Ferguson



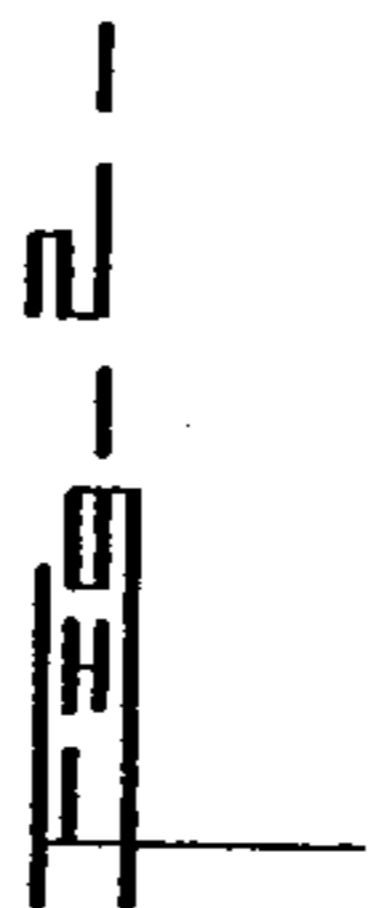
INVENTOR

George K. Henderson

BY

M. M. M.

ATTORNEYS



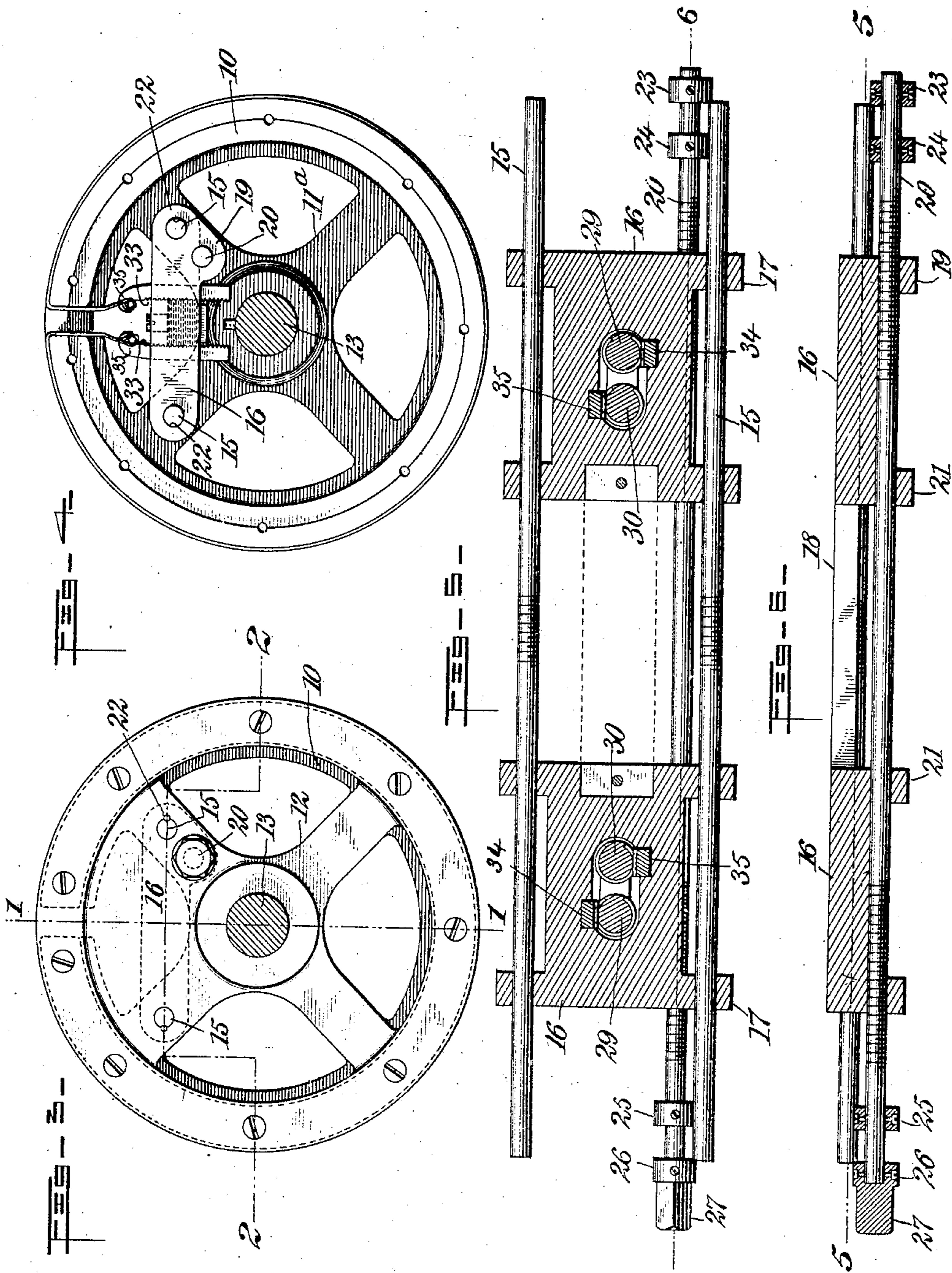
No. 786,031.

PATENTED MAR. 28, 1905.

G. K. HENDERSON.
PRINTING PRESS CYLINDER.

APPLICATION FILED MAR. 1, 1904.

2 SHEETS—SHEET 2.



WITNESSES:

W. C. Abbott
C. R. Ferguson

INVENTOR

George K. Henderson

BY

Mumford

ATTORNEYS

UNITED STATES PATENT OFFICE.

GEORGE KEVEN HENDERSON, OF NEW YORK, N. Y., ASSIGNOR OF ONE-HALF TO FREDERICK W. NERGE, OF NEW YORK, N. Y.

PRINTING-PRESS CYLINDER.

SPECIFICATION forming part of Letters Patent No. 786,031, dated March 28, 1905.

Application filed March 1, 1904. Serial No. 196,045.

To all whom it may concern:

Be it known that I, GEORGE KEVEN HENDERSON, a citizen of the United States, and a resident of the city of New York, borough of Brooklyn, in the county of Kings and State of New York, have invented a new and Improved Printing-Press Cylinder, of which the following is a full, clear, and exact description.

This invention relates to improvements in press-cylinders for printing on roll-paper. In printing on roll-paper the general method is to employ a grooved cylinder and clamps on a series of individual plates. This entails a separate register of each part of the whole form. Another method employed is to coat a tube with zinc or other composition, which requires a special transfer process and machinery therefor.

The object of my invention is to provide a cylinder for printing which will not have the undesirable features above mentioned, but will have the advantage of employing a speedy and economical system of using thin flat flexible plates of zinc or aluminium at present in use for lithographic or printing purposes and having simple and novel means for bringing the whole into exact register.

I will describe a printing-press cylinder embodying my invention and then point out the novel features in the appended claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures.

Figure 1 is a longitudinal section on the line 1 1 of Fig. 3 of a printing-press cylinder embodying my invention. Fig. 2 is a longitudinal section thereof on the line 2 2 of Fig. 3. Fig. 3 is an end view. Fig. 4 is an end view with one end ring removed. Fig. 5 is a section on the line 5 5 of Fig. 6, and Fig. 6 is a section on the line 6 6 of Fig. 5.

Referring to the drawings, 10 designates a cylinder having a longitudinal slot 11, through which the ends of the plate or plates are to be turned in the usual manner. At the center of the cylinder is a spider 11^a, and removably connected to the ends are spiders or rings 12. The supporting-shaft 13 for the cylinder ex-

tends through these several spiders, and, as here shown, it is keyed to the spider 11^a by the key 14. Extended longitudinally through the cylinder are guide-rods 15. These guide-rods pass loosely through openings in the end spiders and have screw-thread engagement with the center spider.

Mounted to slide on the guide-rods 15 at opposite sides of the center spider are carrier-plates 16. As here shown, these plates 16 have outwardly-extended lugs 17, having perforations through which the rods 15 pass, and the two plates are connected, so as to move in unison, by means of a bridge-plate 18, this bridge-plate being arranged to pass between the spokes of the center spider, and it is made removable from the plates 16, so that the several parts may be conveniently assembled. Each plate 16 has on its under side an interiorly-threaded lug 19 for engaging the threaded portion of a screw-rod 20. The plates are also provided with lugs 21, having perforations through which the rod 20 usually passes.

The rods 15 are prevented from rotary movement by means of keys 22, which engage in depressions at the ends of the rods and also in recesses formed in the wall of the perforations through which the ends of the rods pass. The screw-rod 20 passes through openings in spokes of the end spiders and has collars 23 24 at one end for engaging, respectively, at the outer and inner sides of one end spider, and at the opposite end there are collars 25 26 for engaging with the opposite sides of the other end spider. As here shown, the collar 26 is provided with an extension 27, angular in cross-section and designed to be engaged by a wrench or other instrument for rotating the screw-rod.

Each plate 16 is provided at its under side with a recess 28, in which worms 29 30 are arranged. These worms have upward extensions 31, which have bearings in openings in the upper portions of the plates 16, and the upper exposed ends of these projections 31 are provided with slots in which a screw-driver may be engaged for turning the worms. The lower portions of the worms have bearings in

plates 32, removably attached to the plates 16. The worms 29 and 30 engage, respectively, with rack portions 33 of tension-hooks 34 35, movable vertically through the plates 16 and
5 designed to engage with the plate supported on the cylinder.

In the operation the carrier-plates 16 may be adjusted to any desired position within the cylinder by manipulating the screw-rod 20,
10 and after engaging the tension-hooks with the plate on the cylinder they may be moved downward to tighten the plate by rotating the worms.

Having thus described my invention, I claim
15 as new and desire to secure by Letters Patent—

1. A printing-press cylinder having a longitudinal slot, guide-rods extended lengthwise in the cylinder, carrier-plates adjustable on said guide-rods, tension-hooks movable ver-
20 tically in the carrier-plates and having rack portions, and worms supported in the plates and engaging with said rack portions.

2. A printing-press cylinder having a longitudinal slot, guide-rods extended lengthwise
25 in said cylinder, carrier-plates movable on said guide-rods and detachably connected one with the other, tension-hooks movable in the plates, and worm-gearing for adjusting the hooks.

30 3. A printing-press cylinder having a longitudinal slot, guide-rods extended lengthwise of said cylinder, carrier-plates movable on said rods, a screw-rod for causing the movements of the plates, a bridge-plate removably
35 connected to the carrier-plates, and tension-hooks carried by the carrier-plates.

4. A printing-press cylinder having a longitudinal slot, a central spider in the cylinder, removable end spiders, a shaft extended through the several spiders, guide-rods ex- 40 tended through the several spiders and having threaded connection with the center spider, carrier-plates movable on said rods, means for causing the movements of said plates, and tension-hooks carried by the plates. 45

5. A printing-press cylinder having a longitudinal slot, guide-rods extended lengthwise through the cylinder, carrier-plates movable on said rods, the said carrier-plates being recessed at the under side, tension-hooks mov- 50 able vertically through said plates and having rack portions, worms arranged in the recesses and engaging with the rack portions of the hooks, the said worms having upwardly-extended bearings adapted to be engaged by a 55 turning tool, and means for moving the carrier-plates on the guide-rods.

6. The combination with a printing-press cylinder, of a printing-plate tension device comprising a plate, a plurality of tension- 60 hooks movable lengthwise in said plate, and worm mechanism carried by the plate for adjusting the hooks independently one of another.

In testimony whereof I have signed my name 65 to this specification in the presence of two subscribing witnesses.

GEORGE KEVEN HENDERSON.

Witnesses:

TIMOTHY BARRY,
W. H. McBEATH.