

(No Model.)

J. POWELL.

GLAND ADJUSTER FOR STUFFING BOXES.

No. 326,522.

Patented Sept. 15, 1885.

FIG. 1.

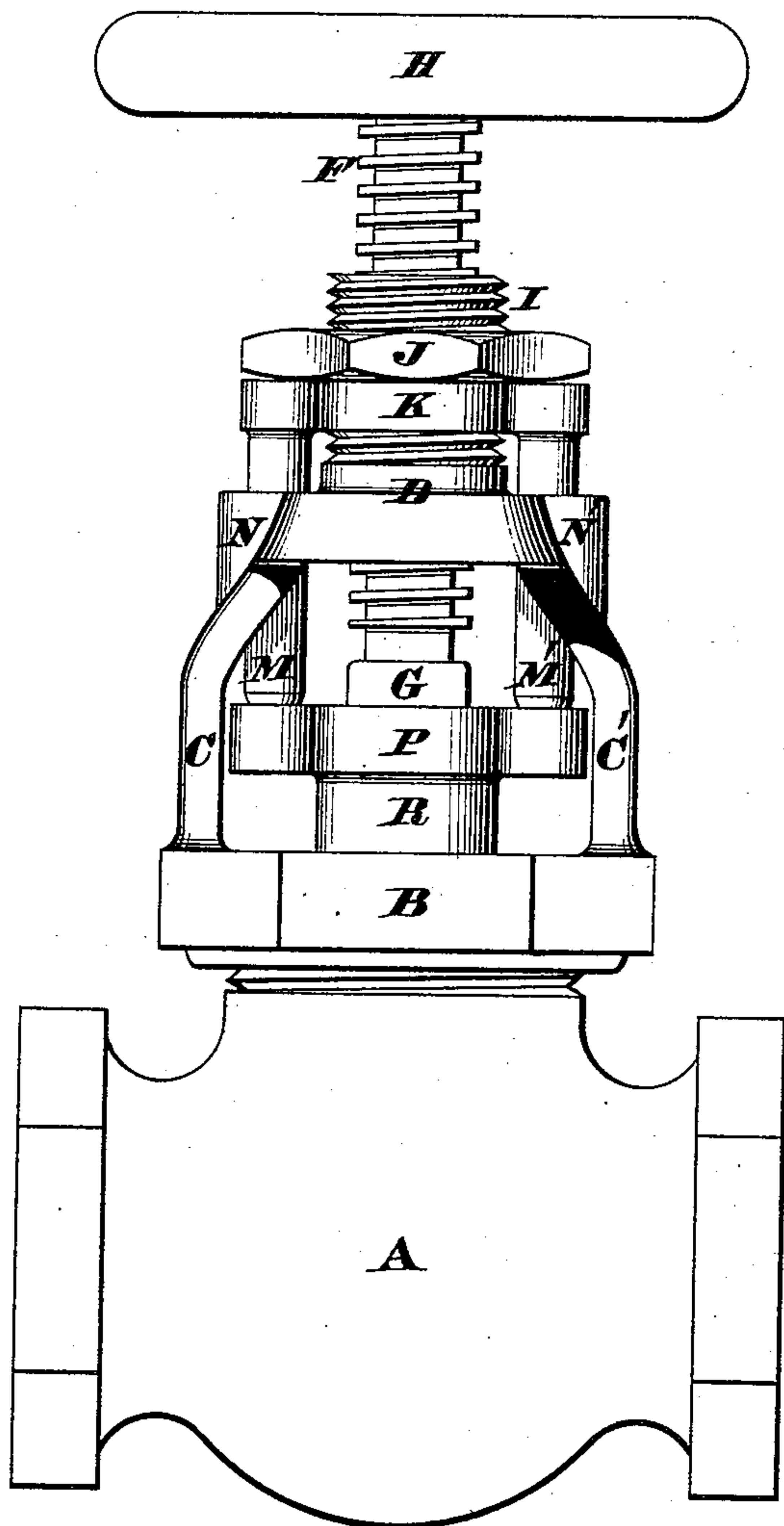


FIG. 2.

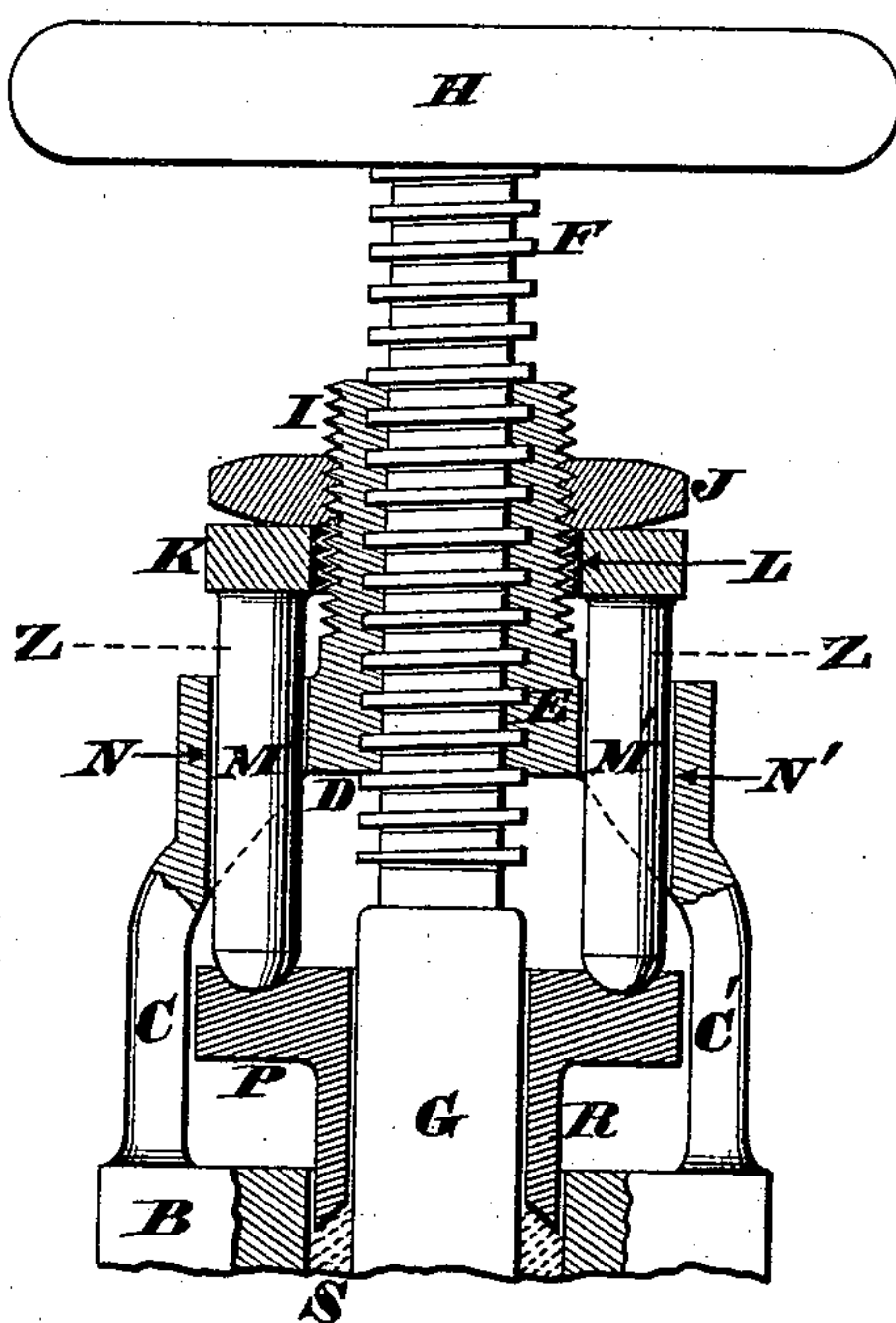


FIG. 3.

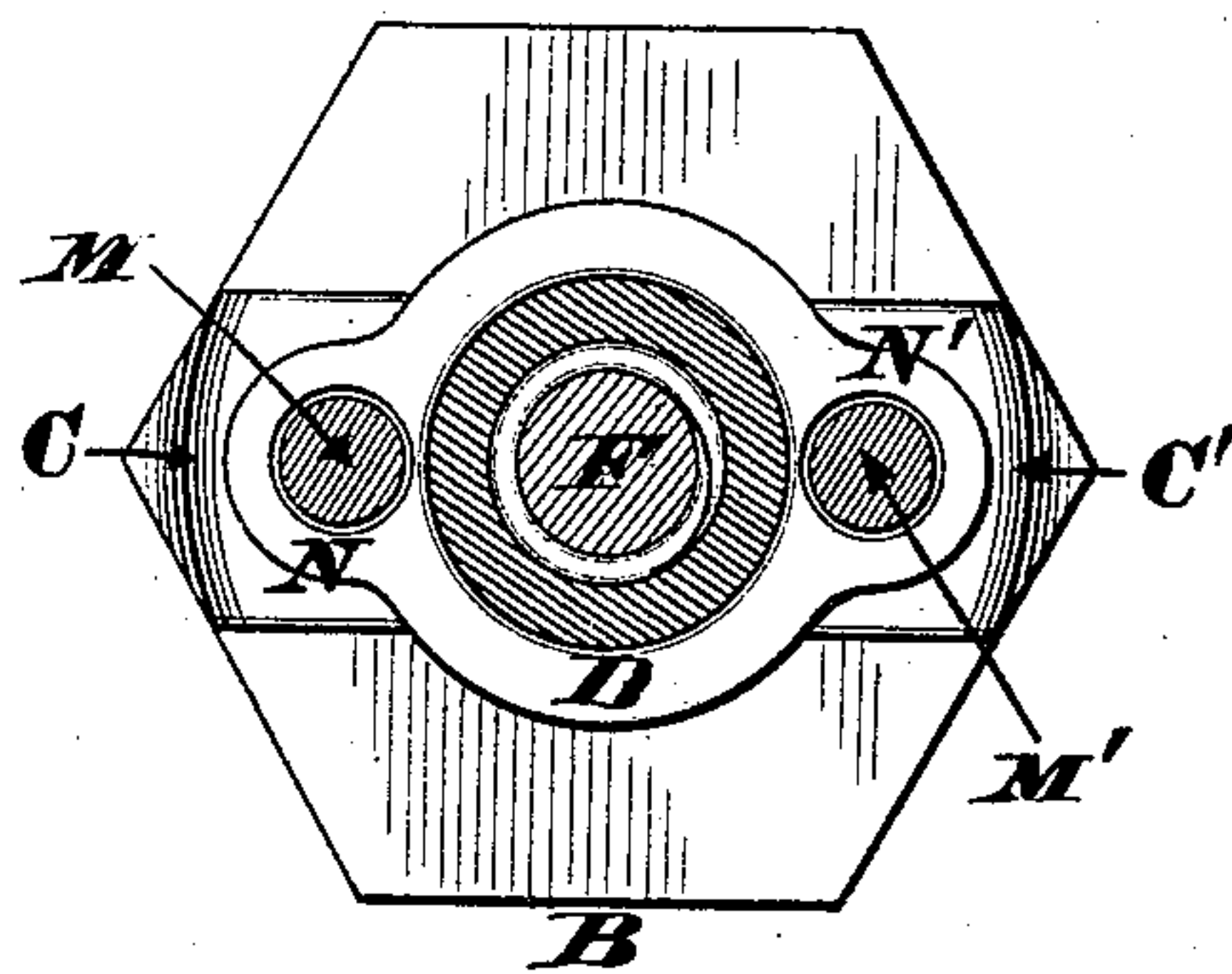


FIG. 5.

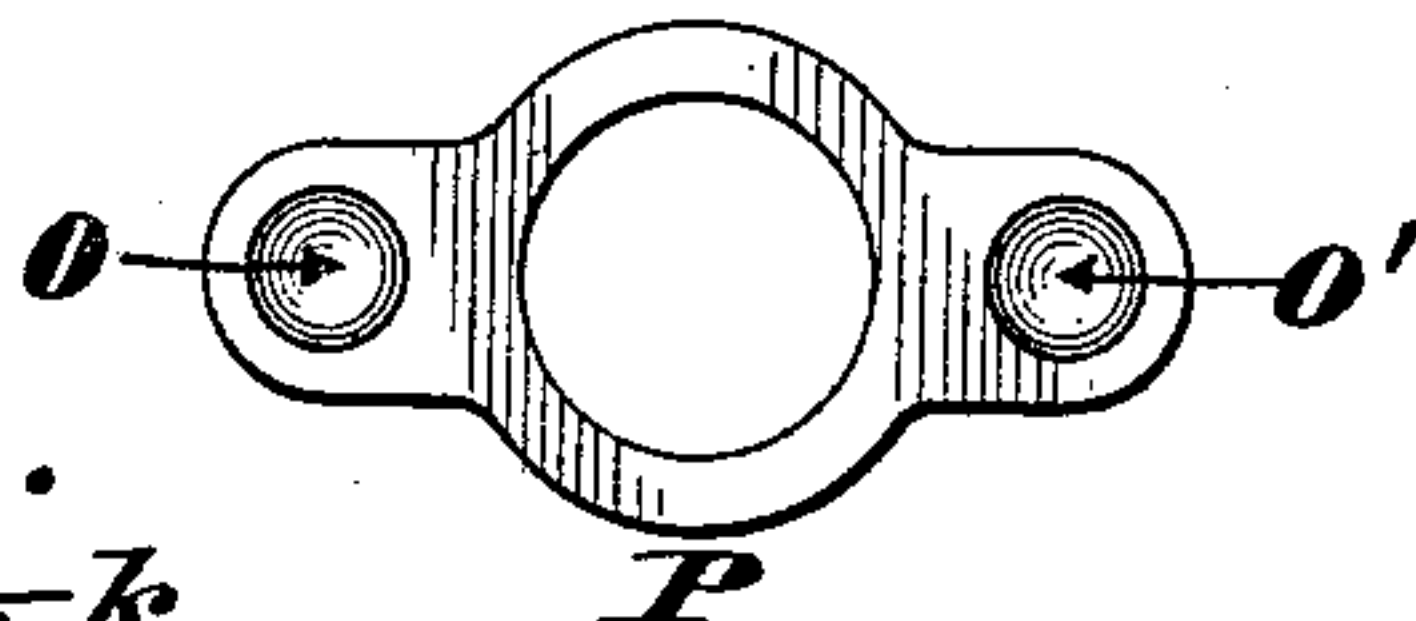


FIG. 4.

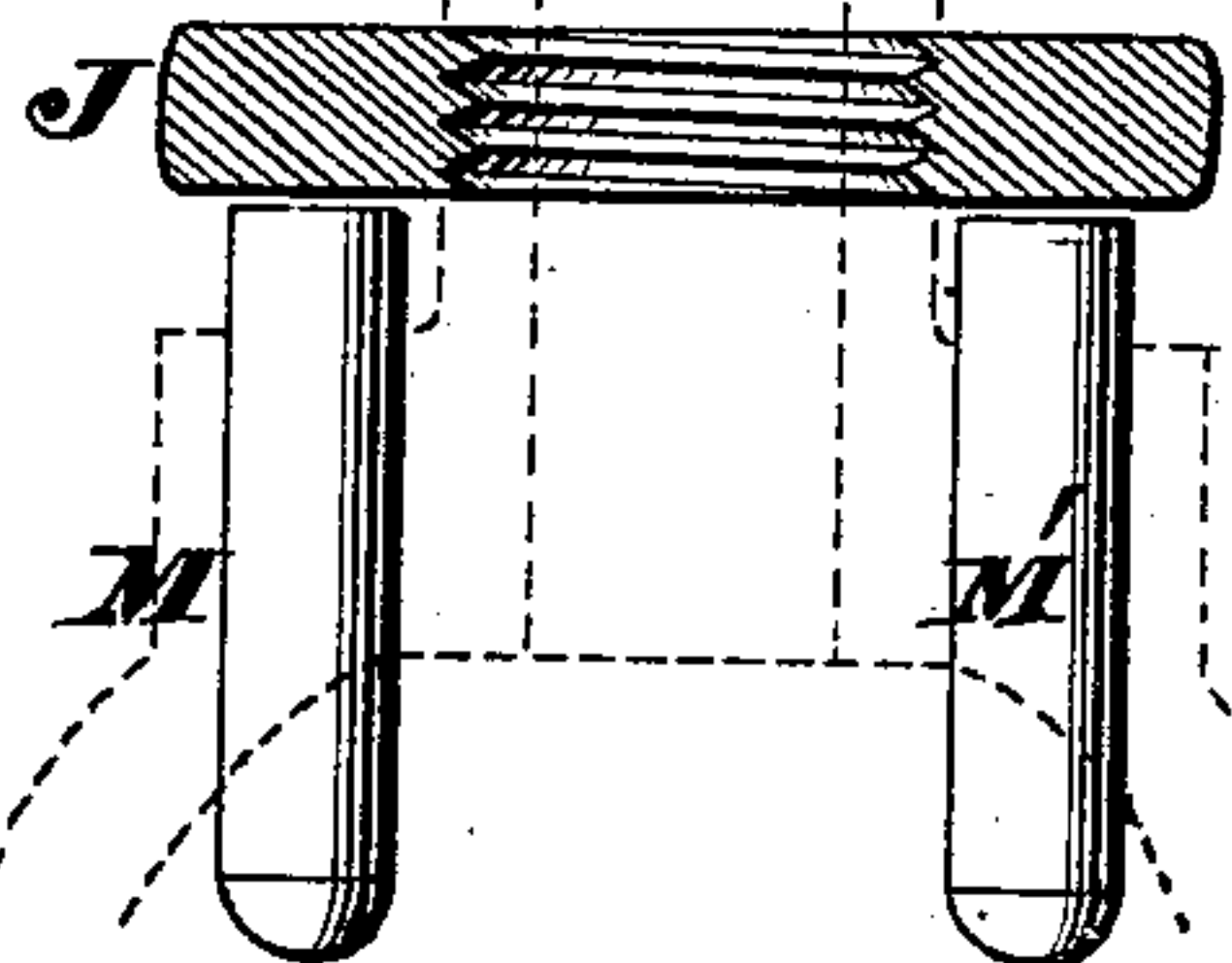
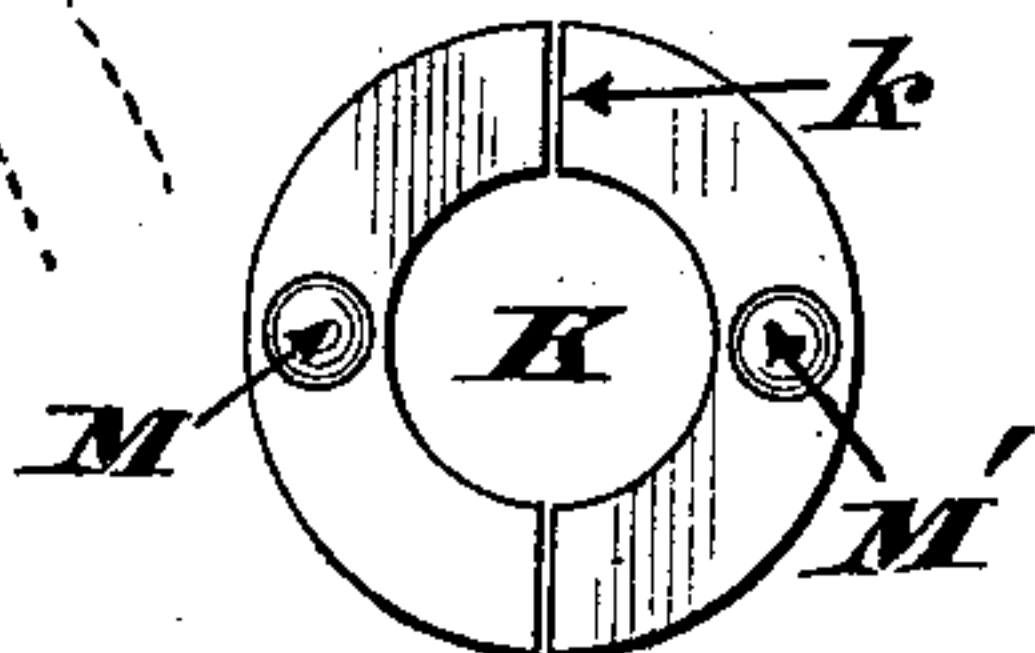


FIG. 6.



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GLAND-ADJUSTER FOR STUFFING-BOXES.

SPECIFICATION forming part of Letters Patent No. 326,522, dated September 15, 1885.

Application filed April 6, 1885. (No model.)

To all whom it may concern:

Be it known that I, JAMES POWELL, a citizen of the United States, residing at Cincinnati, in the county of Hamilton and State of Ohio, have invented certain new and useful Improvements in Gland-Adjusters for Stuffing-Boxes, of which the following is a specification, reference being had therein to the accompanying drawings.

10 The object of my invention is to provide a device wherewith stuffing-box glands can be adjusted in the most convenient and expeditious manner, the improvement being adapted to the piston-rods of engines and pumps
15 and the stems of valves, cocks, or other appliances that necessitate the use of stuffing-boxes of any kind. In carrying this improvement into practice I avail myself of the leading feature of the invention seen in Letters
20 Patent No. 192,658, granted to me July 3, 1877, but modify the device shown in said patent so as to allow a greater range of utility. I accordingly provide a head or cap of the engine or cock or other appliance with a yoke or pair
25 of united standards having a prolongation or neck traversed by the piston-rod or valve-stem or other member that plays within the stuffing-box, said neck being screw-threaded exteriorly for the engagement of a nut, the
30 latter being preferably adapted to bear against an annular collar or ring that travels freely along said neck. Furthermore, this traveling collar has two or more push-pieces, stumps, pins, or other projections that bear against
35 the outer end of the gland in order that said gland may be forced into the stuffing-box when the aforesaid nut is screwed against the collar, thereby compressing the packing to any desired extent, as hereinafter more fully de-
40 scribed.

In the annexed drawings, Figure 1 is a side elevation showing my improved gland-adjusting device applied to an ordinary globe valve or cock. Fig. 2 is an axial section of said device. Fig. 3 is a horizontal section of said device, taken at the line Z Z of the preceding illustration. Fig. 4 is a section of a modification of the invention. Fig. 5 is a plan of the stuffing-box gland. Fig. 6 is a plan of an-
50 other modification.

The cock or valve A, which may be of any desired construction, has attached to it a cap,

head, or nut, B, that carries a pair of standards, C C', the latter being united at top to form a neck or prolongation, D, whose inter-
55 nal thread, E, serves as a nut for the screw F of the valve stem or rod G, said stem being surmounted with an ordinary hand-wheel or other convenient turning appliance, H. The neck D is screw-threaded exteriorly at I to re-
60 ceive a nut, J, that bears upon the upper surface of a ring or collar, K, whose central opening, L, is sufficiently large in diameter to enable said collar to travel along said neck with-
65 out coming in contact with the threads I. Projecting rigidly from the under side of this traveling collar are push-pieces M M', adapted to traverse suitable guides, N N', of the stand-
ards C C', the lower ends of said pins being inserted in pits or sockets O O' near the op-
70 posite ends of the flange P of the gland R. This gland surrounds the piston-rod or valve-stem G, and fits snugly within the stuffing-box S in the usual manner. To compress the pack-
75 ing in the aforesaid stuffing-box it is necessary only to turn the nut J around the screw I, so as to depress the collar K, which act causes the push-pieces M M' to force the gland R down upon said packing with any desired pressure. To repack the stuffing-box said nut is turned
80 so as to permit the collar to be elevated and the gland to be lifted out of the cap B, thereby affording the most convenient access to said box.

From the above description it will be seen
85 that the present invention is possessed of all the advantages incidental to the device seen in the patent previously alluded to, while at the same time the construction of the adjuster is simplified, the cost of manufacture reduced
90 accordingly, and its range of utility greatly increased. It is to be distinctly understood, however, that the invention is not to be limited to globe valves or cocks, as it is evident the cap or head B that contains the stuffing-
95 box S may either be applied to or constitute part of a pump, engine, steam-chest, or any other machine, device, or apparatus that necessitates the use of a gland to compress the packing in such boxes.
100

Furthermore, the traveling ring K is not to be considered an essential feature of the invention, as it is evident said collar may be dispensed with, as seen in Fig. 4, where the nut

J is represented as bearing directly upon the upper ends of push-pieces M M', the shape and size of which can be modified to suit any special engine or other apparatus to which the gland-adjuster may be applied; but in Fig. 6 said push-pieces are shown projecting from a ring, K, that is divided at *k* to form two separate sections.

I claim as my invention—

10 1. The combination of a stem or rod, a pusher bearing against a gland surrounding said rod, and a nut that imparts the desired pressure to said pusher, which nut engages with and travels along a neck that guides said rod or
15 stem, substantially as herein described.

2. The combination of a stem or rod, an adjustable collar having push-pieces bearing against a gland surrounding said rod, and a nut which imparts the desired pressure against
20 the packing contained in the stuffing-box within which said gland is fitted, said push-pieces being adapted to travel within suitable guides, N N', of the yoke or other device that carries
said collar and nut, substantially as described.

3. The combination of a stem or rod, an adjustable collar having push-pieces bearing against a gland surrounding said rod, and a nut which imparts the desired pressure against the packing contained in the stuffing-box within which said gland is fitted, said push-pieces
25 30 being adapted to travel within suitable guides N N', of the yoke or other device that carries, said collar and nut, and having their unconnected ends seated in said gland, substantially as described.

4. The combination of stem or rod G, threaded neck D I, adjustable collar K L, push-pieces M M', guides N N', gland P R, and stuffing-box S, substantially as herein
35 described.

In testimony whereof I affix my signature in presence of two witnesses. 40

JAMES POWELL.

Witnesses:

JAMES H. LAYMAN,
SAML. S. CARPENTER.