

W. B. COGGER.
STANDARD FOR SCHOOL DESKS AND OTHER OBJECTS.
APPLICATION FILED APR. 3, 1911.

998,074.

Patented July 18, 1911.

2 SHEETS—SHEET 1.

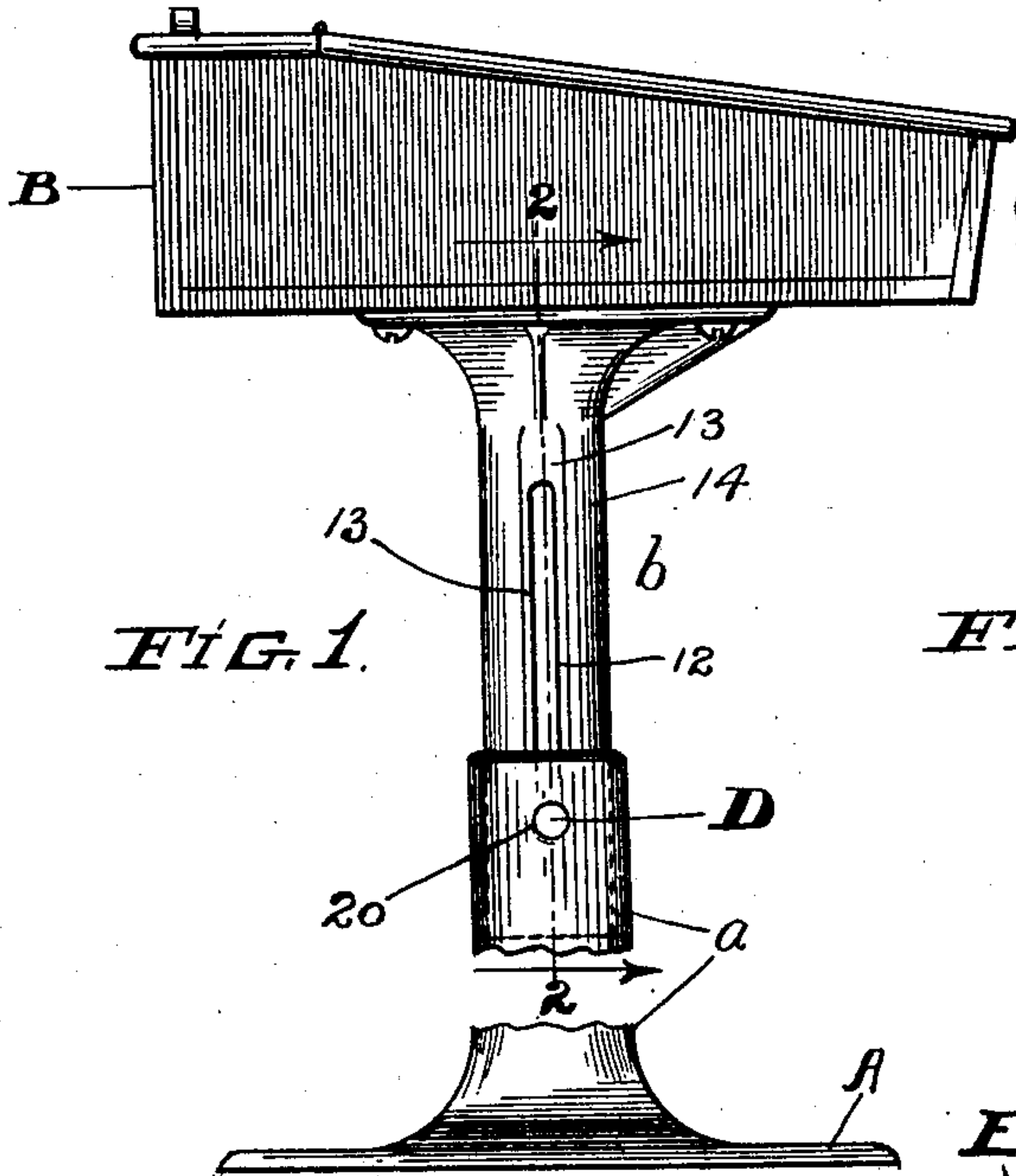


FIG. 1.

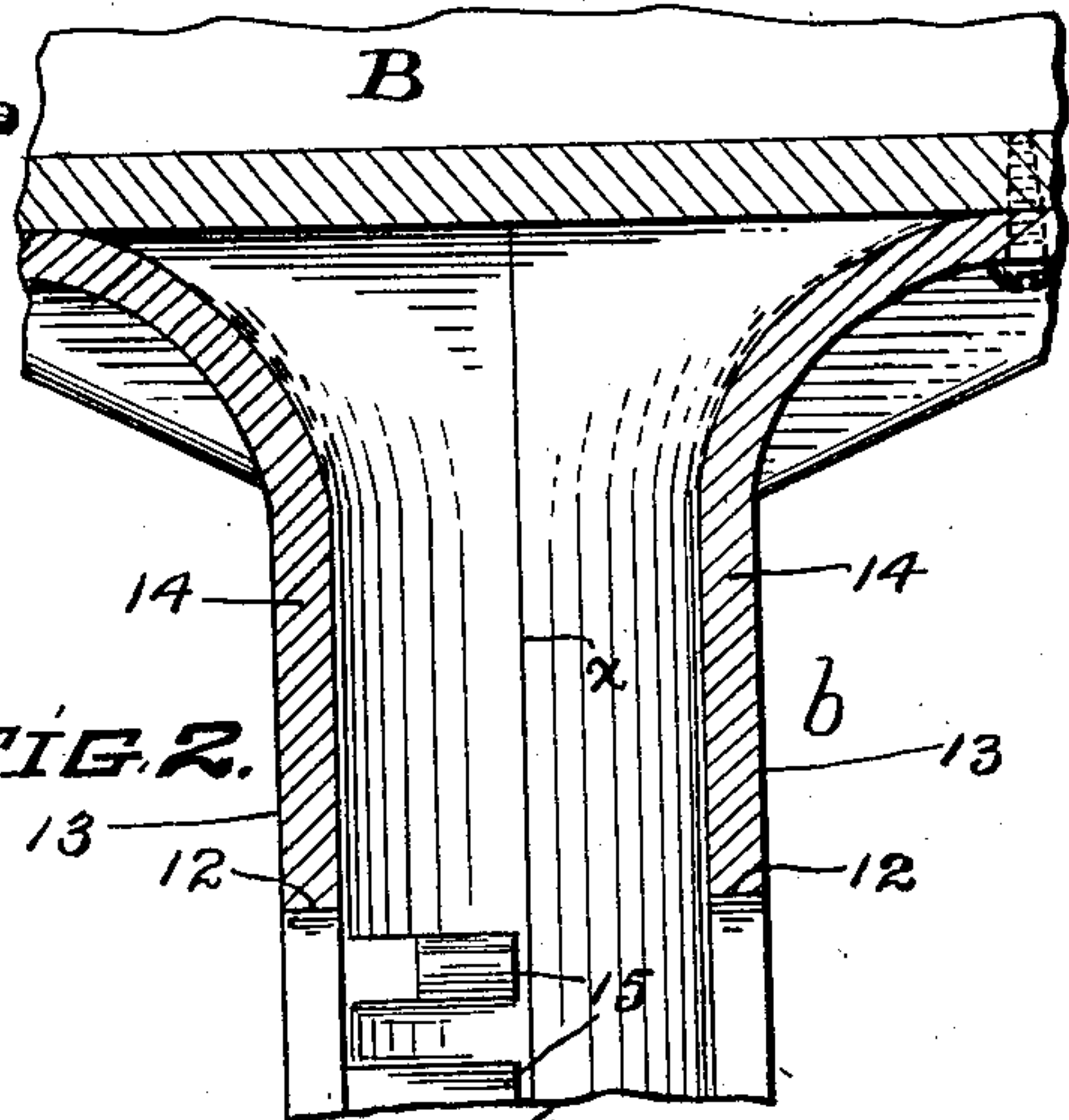


FIG. 2.

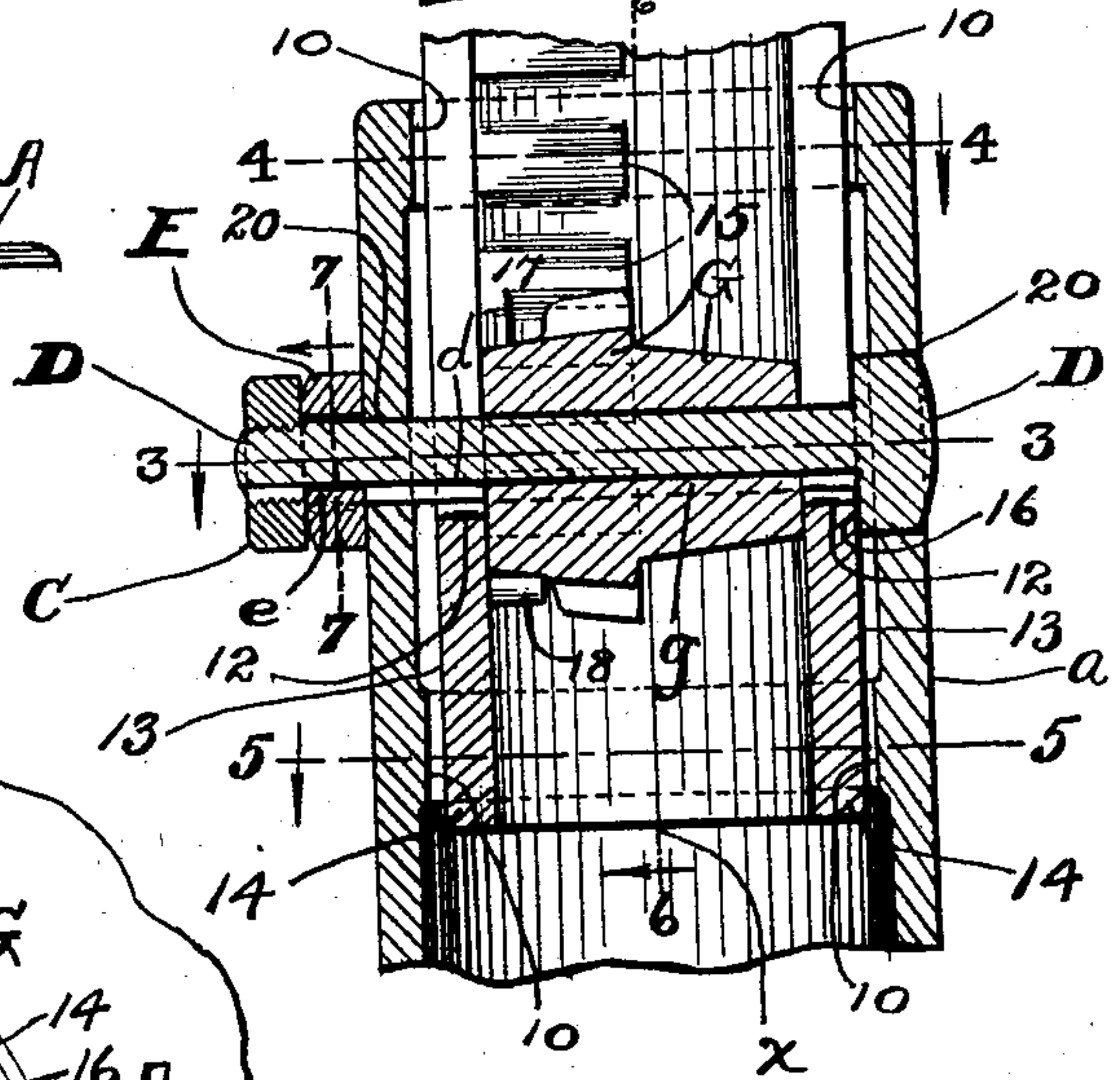
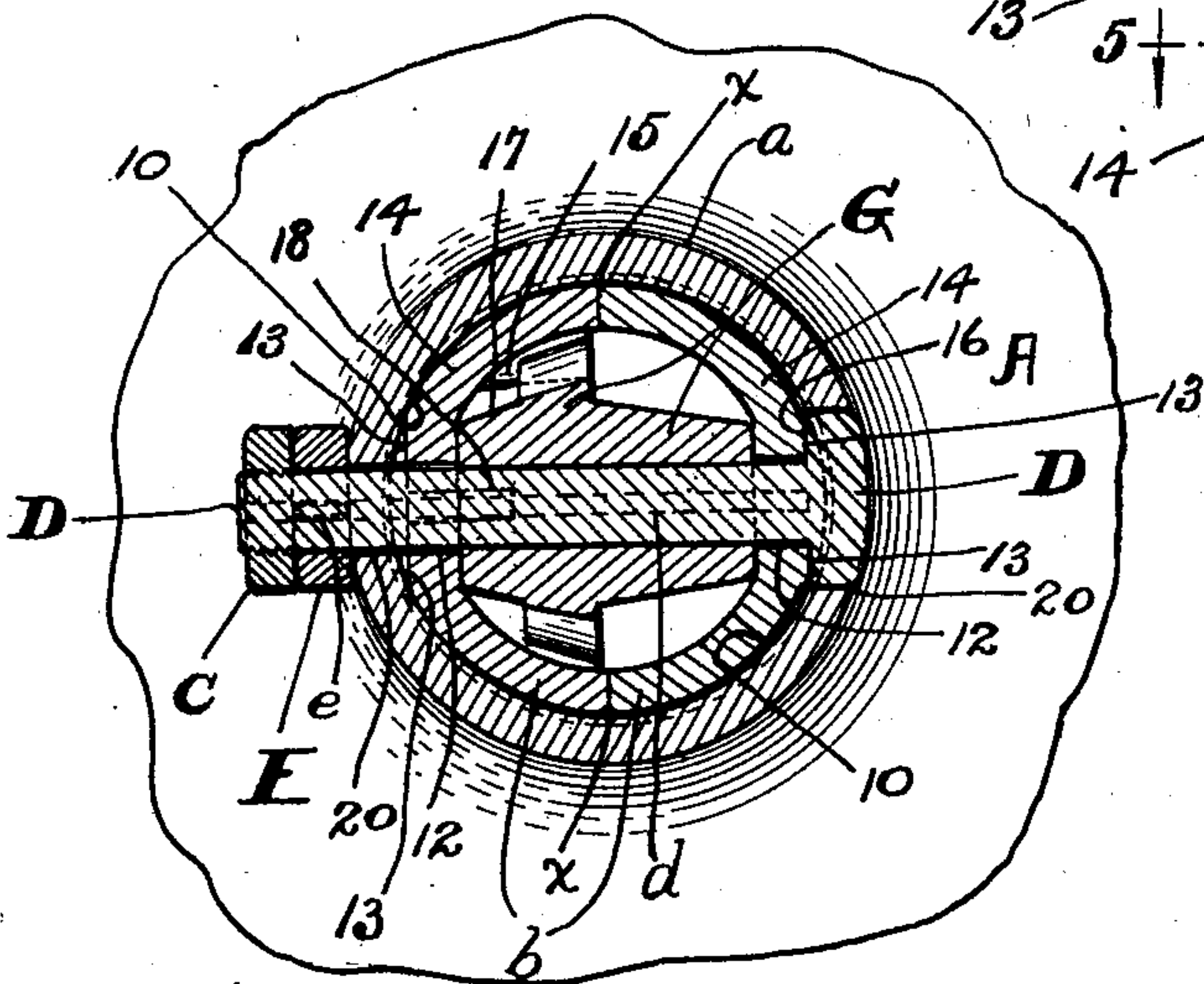


FIG. 3.



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2 SHEETS—SHEET 2.

FIG. 4.

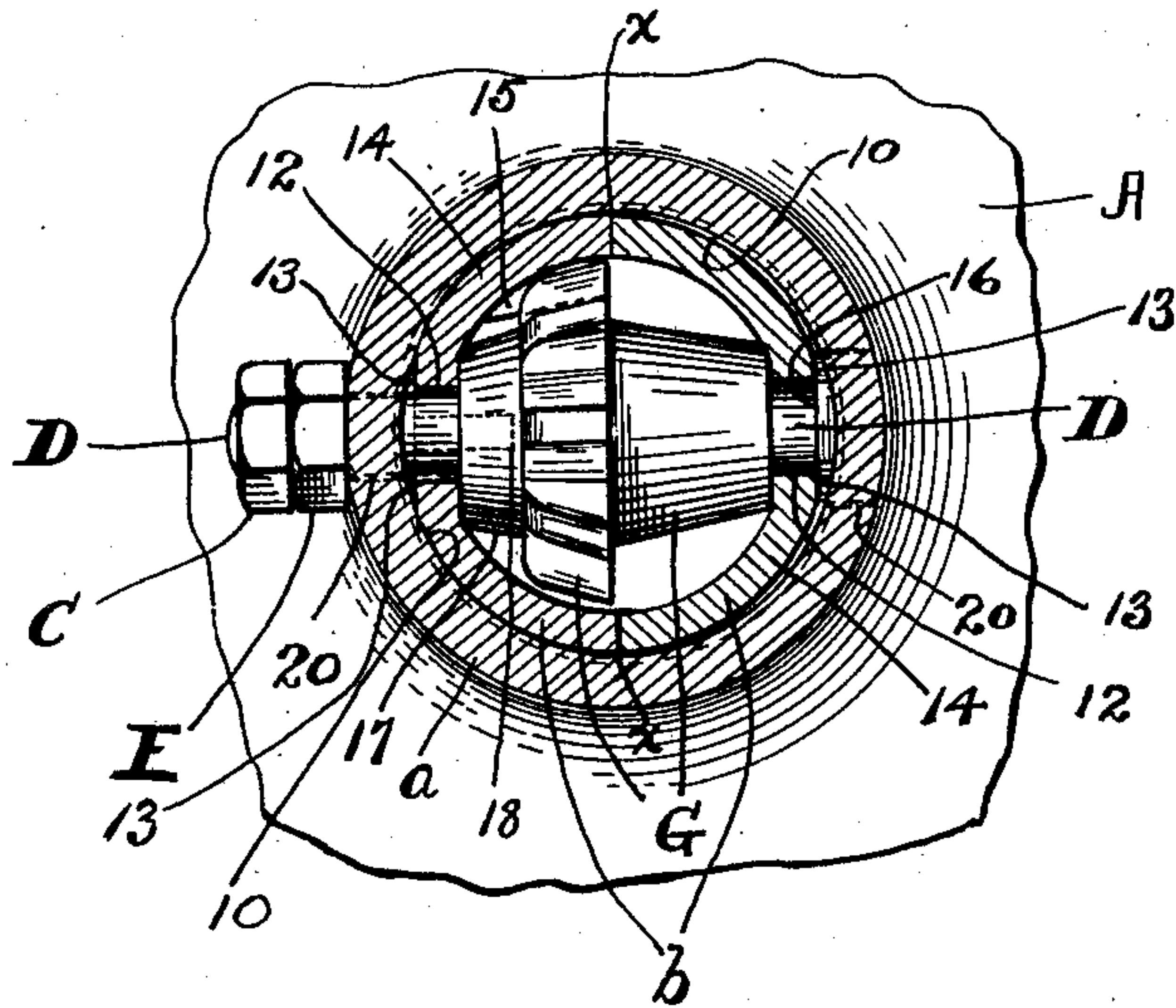


FIG. 5.

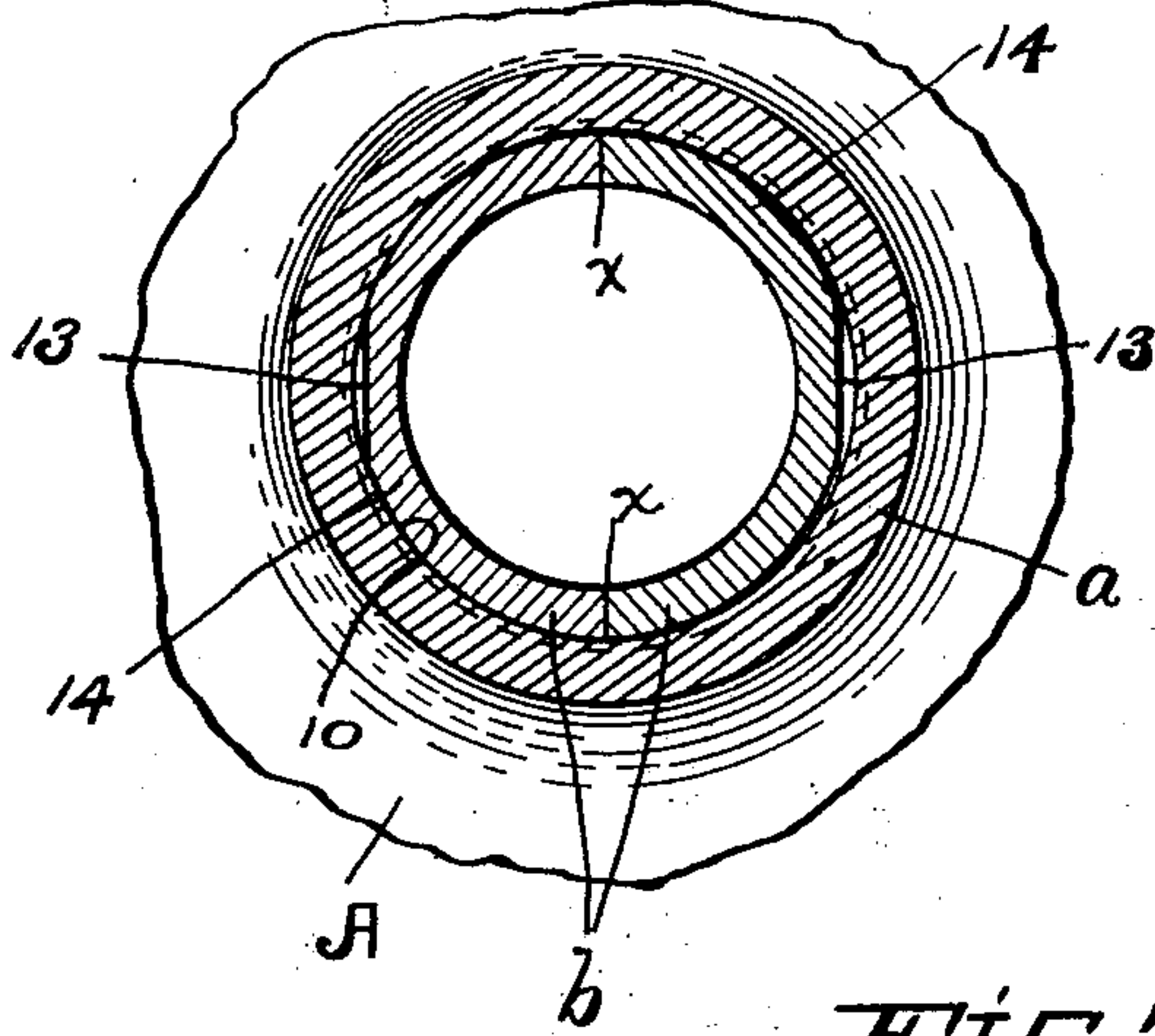


FIG. 6.

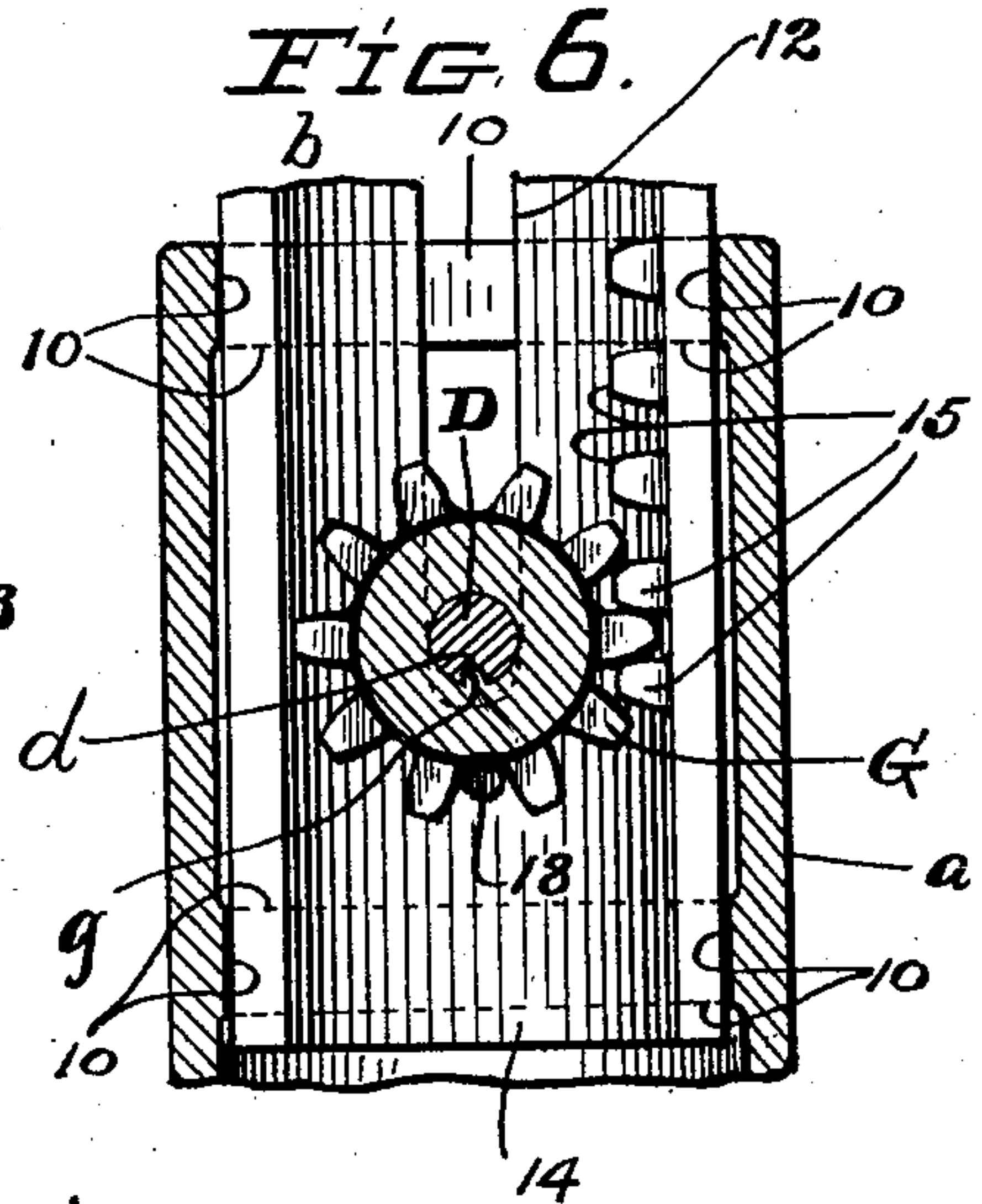
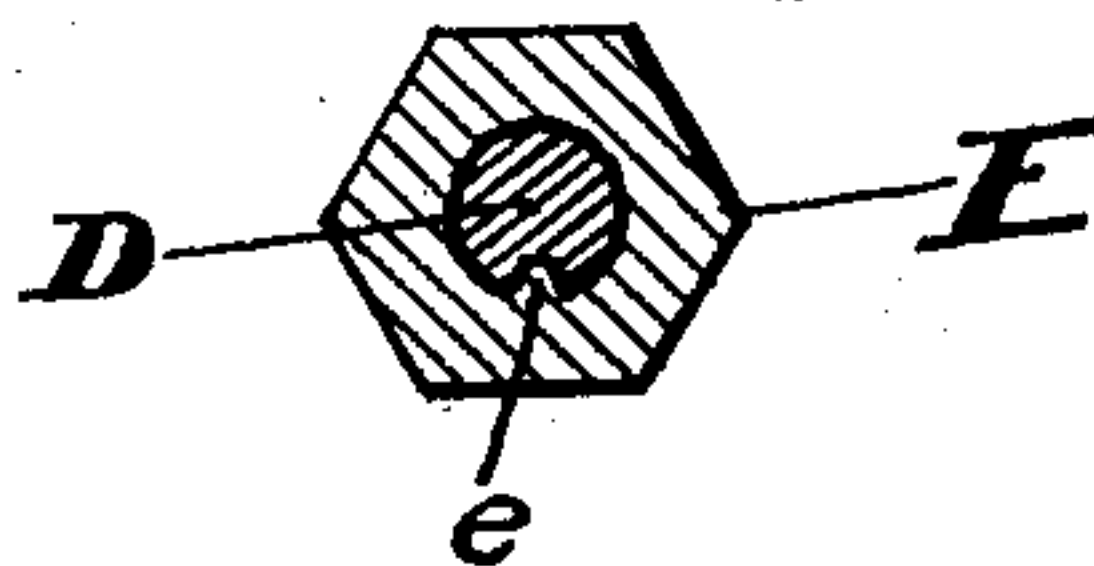


FIG. 7.



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UNITED STATES PATENT OFFICE.

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STANDARD FOR SCHOOL-DESKS AND OTHER OBJECTS.

998,074.

Specification of Letters Patent.

Patented July 18, 1911.

Application filed April 3, 1911. Serial No. 618,695.

To all whom it may concern:

Be it known that I, WILLIAM B. COGGER, a citizen of the United States of America, residing at Cleveland, in the county of Cuyahoga and State of Ohio, have invented certain new and useful Improvements in Standards for School-Desks or other Objects; and I 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 pertains to make and use the same.

This invention relates to improvements in standards for school-desks or other objects, and pertains more especially to a standard of the character indicated which comprises a base provided with an upwardly projecting tubular stem which surrounds a stem adapted to bear a desk-proper or other object and depends into and is adjustable up and down the first-mentioned stem and suitably secured in the desired adjustment, which adjustable stem is not only provided with two slots which are arranged at opposite sides respectively of the adjustable stem and extend laterally from the interior to the exterior and endwise of the stem but divided between its slots into two upright sections and provided internally of one of the said sections between the joint between the said sections and one of the said slots with teeth which are spaced endwise of the adjustable stem and form a rack which is arranged internally of the adjustable stem and in mesh with a pinion mounted on and operatively connected with a horizontally arranged shaft which extends through the adjustable stem at the slots in the stem and has bearing in the relatively stationary stem of the base.

The primary object of this invention is to provide a standard of the character indicated whose component parts are readily assembled, and which is exceedingly simple and durable in construction.

With this object in view, and to the end of attaining any other advantage hereinafter appearing, this invention consists in certain features of construction, and combinations and arrangement of parts, hereinafter described, pointed out in the claims, and illustrated in the accompanying drawings.

In the said drawings, Figure 1 is a side elevation of a school-desk comprising a standard embodying my invention. Fig. 2

is a vertical section on line 2—2, Fig. 1, looking in the direction indicated by the arrow. Figs. 3, 4, and 5 are horizontal sections on lines 3—3, 4—4 and 5—5, respectively, Fig. 2, looking downwardly. Fig. 6 is a vertical section on line 6—6, Fig. 2, looking in the direction indicated by the arrow. Fig. 7 is a vertical section on line 7—7, Fig. 2, looking outwardly. Portions are broken away in Figs. 1, 2, 3, 4, and 5 to reduce the size of the figures.

My improved standard comprises a base A adapted to be secured to a floor not shown. The said base is provided centrally with a vertically upwardly projecting tubular stem *a* which is cylindrical in cross-section and provided interiorly of its upper portion with two vertically spaced annular projections 10 and 10 which project laterally and inwardly.

A vertically adjustable stem *b*, which is adapted to bear a desk-proper B or other object at the upper end of the stem, depends into the relatively stationary stem *a*. The stem *b* is adjustable therefore up and down the stem *a* and secured in the desired adjustment as will hereinafter appear. The stem *b* is approximately cylindrical in cross-section and provided with two vertically arranged slots 12 and 12 which are arranged at opposite sides respectively of the stem and extend endwise or longitudinally of the stem and laterally from the interior to the exterior of the stem. The slotted portion of the stem *b* extends a suitable distance into the stem *a*.

The adjustable stem *b* is provided exteriorly with flat surfaces 13 which extend up and down the said stem at the sides of and above and below the slots 12, and consequently extend longitudinally or endwise of the said stem, and obviously the provision of the flat surfaces 13 prevent contact with the projections 10 by the said stem next the said slots.

The stem *b* is divided vertically and centrally between its slots 12 and 12, as at *x*, into two vertically arranged or upright sections 14 and 14. The stem *b* is provided internally of one of its said sections between the joint between the sections and one of the slots 12 with teeth 15 which are spaced vertically or endwise of the said stem and form a vertically arranged rack internally of the stem.

A horizontally arranged shaft D extends through the adjustable stem *b* at and through the slots 12 in the said stem and has bearing in the relatively stationary stem *a* centrally between the projections 10 and 10 of the last-mentioned stem. The shaft D is provided at one end thereof with a laterally and inwardly facing shoulder 16 arranged to bear against the adjacent flat surface or surfaces 13 of the adjustable stem, and has its opposite end extending externally of the stem *a* of the base A. The shaft D is provided with a groove *d* extending from the shoulder 16 at one end of the shaft to the opposite extremity of the shaft, and a nut C is screwed onto the shaft at the last-mentioned extremity of the shaft and spaced from the stem *a* of the base A. A collar E is loosely mounted on the shaft D between the nut C and the stem *a* of the base A and provided internally with an inwardly projecting tongue or member *e* engaging the groove *d*. A pinion G is mounted on the shaft between the slots 12 and 12 in the stem *b*, which pinion meshes with the rack formed by the teeth 15 and is provided internally with an inwardly projecting tongue or member *g* engaging the groove *d* in the shaft. It will be observed therefore that the pinion G and the collar E are operatively connected with the shaft, and the said collar is loose relative to the stem *a* of the base A when the nut C is loose relative to the said collar, and the said collar is employed as a wheel or member which, when it is loose between the said stem and the nut, may be rotated in any approved manner to rotate the shaft and thereby adjust the stem *b* vertically and thereby vertically adjust the desk-proper or object B mounted on the upper end of the said stem. Upon manipulating the nut C to cause it to clamp the collar E against the stem *a* of the base A the shaft is shifted endwise in the direction required to cause its shoulder 16 to clamp the flat surface or surfaces 13 formed on the adjacent side of the adjustable stem *b* and thereby clamp the latter adjacent the flat surface or surfaces 13 formed on the other side of the adjustable stem against the projections 10 and 10 of the relatively stationary stem *a*. It will be observed therefore that the adjustable stem *b* and any object carried thereby are not only secured in the desired vertical adjustment by manipulating the nut as required to clamp the collar against the stem *a* of the base A, but the adjustable stem is clamped against each projection 10 of the relatively stationary stem at two points spaced circumferentially of the rack-bearing section of the adjustable stem. I would also remark that the pinion G is provided at one end thereof with an annular circumferential surface 17, and a pin or member 18, which is borne by one of

the sections of the adjustable stem *b* below the slot in the respective stem-section, is arranged or extends under and affords bearing to the said annular surface.

The stem *a* is of course provided with two holes 20 and 20 which are formed at opposite sides respectively of the stem *a* of the base A and are arranged in line endwise and extend from the interior to the exterior of the said stem, which holes are arranged to receive the shaft and are large enough diametrically to accommodate the rotation of the shaft which has bearing at the surrounding walls of the said holes in the stem *a* of the base A. In assembling the parts therefore the pinion is placed on the pin or member 18 of the adjustable stem *b* and in mesh with the rack formed on and internally of the said stem before the latter is applied to the relatively stationary stem *a*, whereupon the pinion-bearing adjustable stem *b* is lowered into the relatively stationary stem *a* far enough to bring the lower end portions of the slots in the adjustable stem into registry with the shaft-receiving holes 20 in the relatively stationary stem, and thereupon the shaft is inserted endwise into the said stems at the said holes and slots and so placed that its groove will receive the tongue or inwardly projecting member *g* of the pinion, whereupon the collar E is placed in position to enable its tongue or inwardly projecting member *e* to enter the said groove and thereupon the collar is slid into place on the shaft, whereupon the nut is applied, and after the collar has been rotated to rotate the shaft and thereby place the adjustable stem *b* in the desired adjustment the nut is tightened to effect the clamping of the adjustable stem to the relatively stationary stem *a*.

What I claim is:—

1. In a standard for a school-desk or other object, a base provided with an upwardly projecting tubular stem; a stem adapted to bear a desk-proper or other object and depending into and adjustable up and down the stem of the base and provided with two slots which are arranged at opposite sides respectively of the stem and extend endwise of the stem and laterally from the interior to the exterior of the stem, said adjustable stem being divided between its slots into two upright sections and provided internally of one of the said sections between the joint between the sections and one of the said slots with teeth which are spaced endwise of the said stem and form a rack internally of the stem; a suitably rotated horizontally arranged shaft extending through the adjustable stem and through the slots in the said stem and having bearing in the stem of the base; means whereby the adjustable stem may be secured in the desired adjustment, and a pinion mounted

on and operatively connected with the shaft between the aforesaid slots, which pinion meshes with the aforesaid rack.

2. In a standard for a school-desk or other object, a base provided with an upwardly projecting tubular stem which is cylindrical in cross-section; a stem adapted to bear a desk-proper or other object and depending into and adjustable endwise of the stem of the base and being approximately cylindrical in cross-section, which adjustable stem is provided with two slots formed at opposite sides respectively and extending endwise of the stem and laterally from the interior to the exterior of the stem and has flat surfaces which are arranged next adjacent and extend endwise of the slots, said adjustable stem being divided centrally between its slots into two upright sections and provided internally of one of the said sections between the joint between the sections and one of the said slots with teeth which are spaced endwise of the said stem and form a rack internally of the stem; a horizontally arranged shaft extending through the adjustable stem and through the slots in the said stem and having bearing in the stem of the base; means whereby the adjustable stem is clamped in the desired adjustment of the said stem to the stem of the base adjacent the flat surface or surfaces on one side of the adjustable stem, and a pinion mounted on and operatively connected with the shaft between the aforesaid slots, which pinion meshes with the aforesaid rack.

3. In a standard for a school-desk or other object, a base provided with an upwardly projecting tubular stem which is cylindrical in cross-section and provided interiorly of its upper portion with two ver-

tically spaced annular projections which project laterally and inwardly; a stem adapted to bear a desk-proper or other object and depending into and adjustable endwise of the stem of the base and being approximately cylindrical in cross-section, which adjustable stem is provided with two slots formed at opposite sides respectively and extending endwise of the stem and laterally from the interior to the exterior of the stem and has flat surfaces which are arranged next adjacent and extend endwise of the slots, said adjustable stem being divided centrally between its slots into two upright sections and provided internally of one of the said sections between the joint between the sections and one of the said slots with teeth which are spaced endwise of the said stem and form a rack internally of the stem; a horizontally arranged shaft extending through the adjustable stem and through the slots in the said stem and having bearing in the stem of the base between the aforesaid projections; means whereby the adjustable stem is clamped in the desired adjustment of the said stem to the said projections adjacent the flat surface or surfaces on one side of the said stem, and a pinion mounted on and operatively connected with the shaft between the aforesaid slots, which pinion meshes with the aforesaid rack.

In testimony whereof, I sign the foregoing specification, in the presence of two witnesses.

WILLIAM B. COGGER.

Witnesses:

B. C. BROWN,
N. L. McDONNELL.