

No. 812,870.

PATENTED FEB. 20, 1906.

H. W. OSTER.
DIE STOCK.
APPLICATION FILED FEB. 6, 1905.

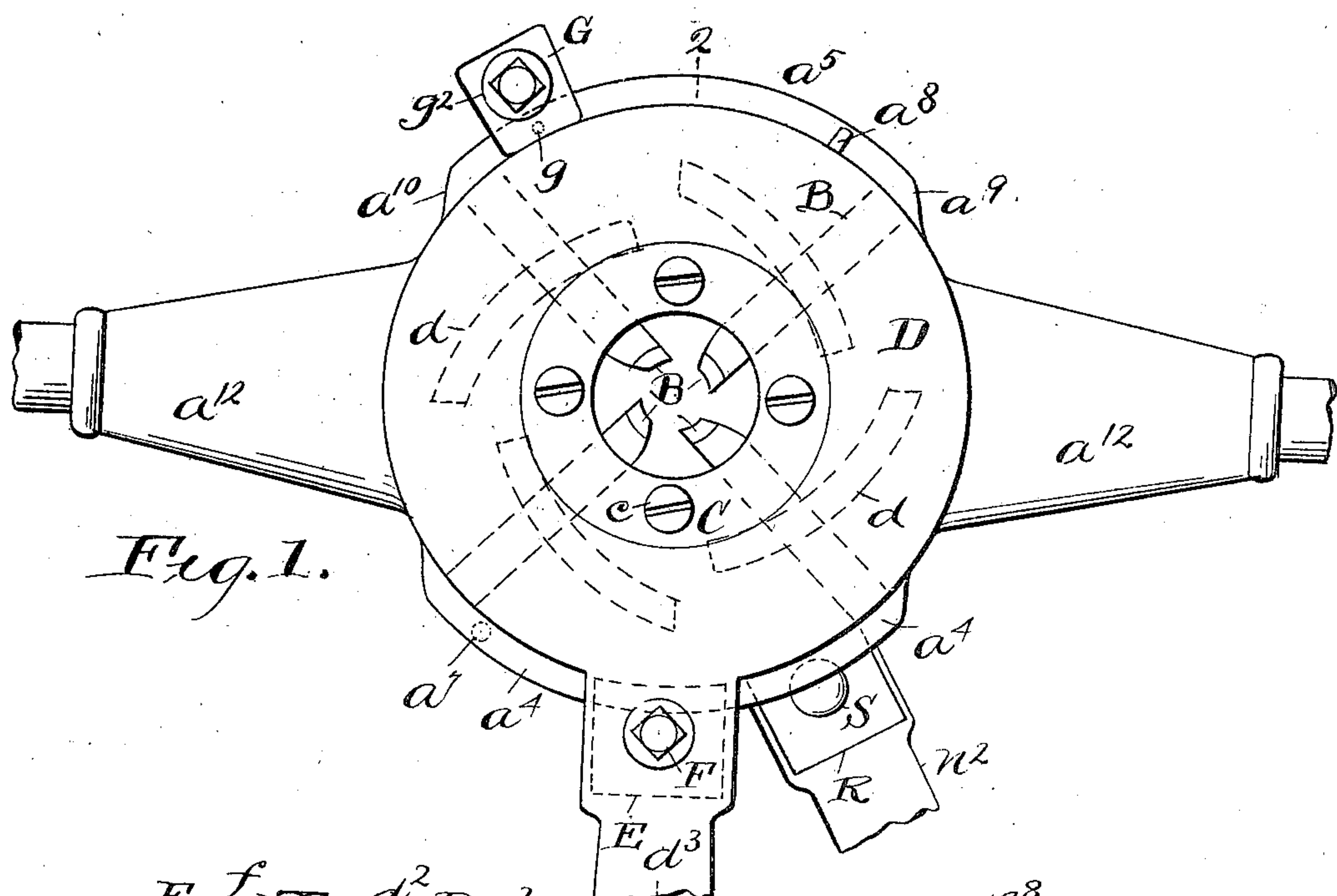


Fig. 1.

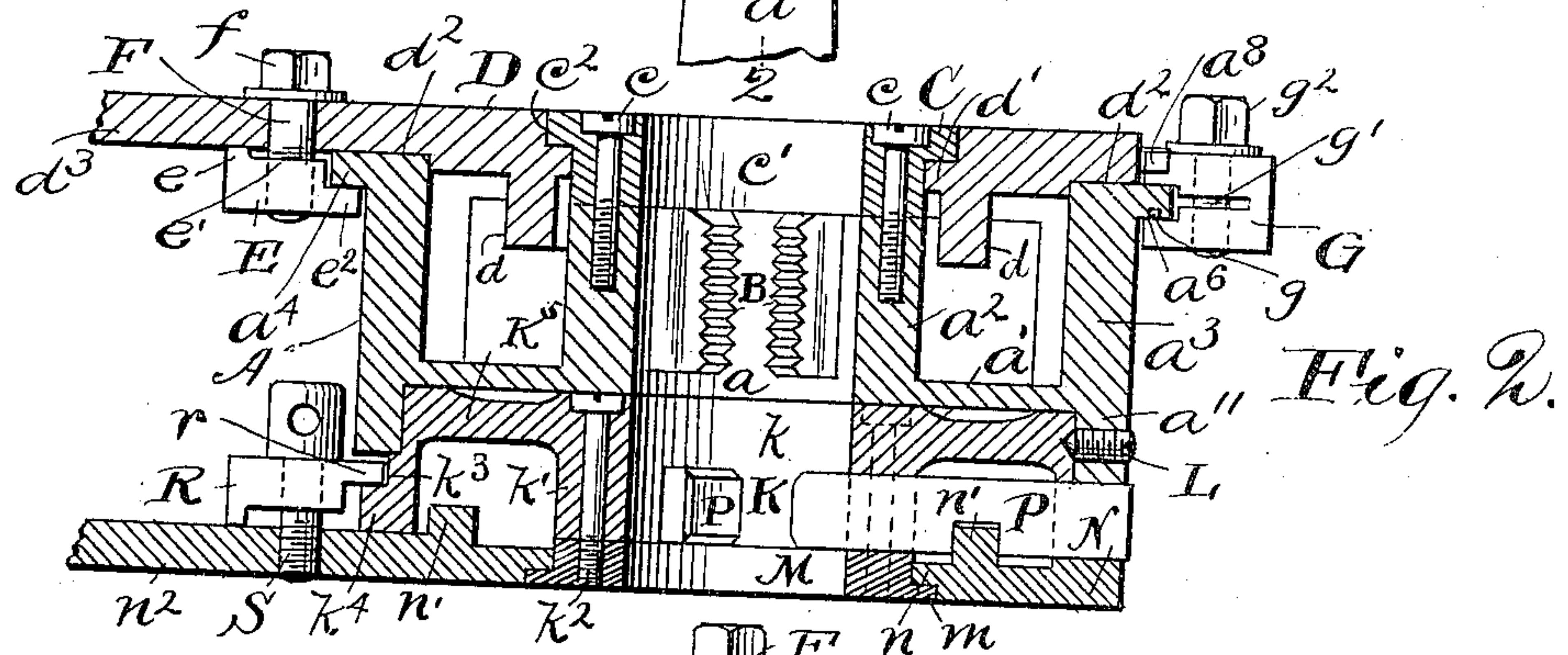


Fig. 2.

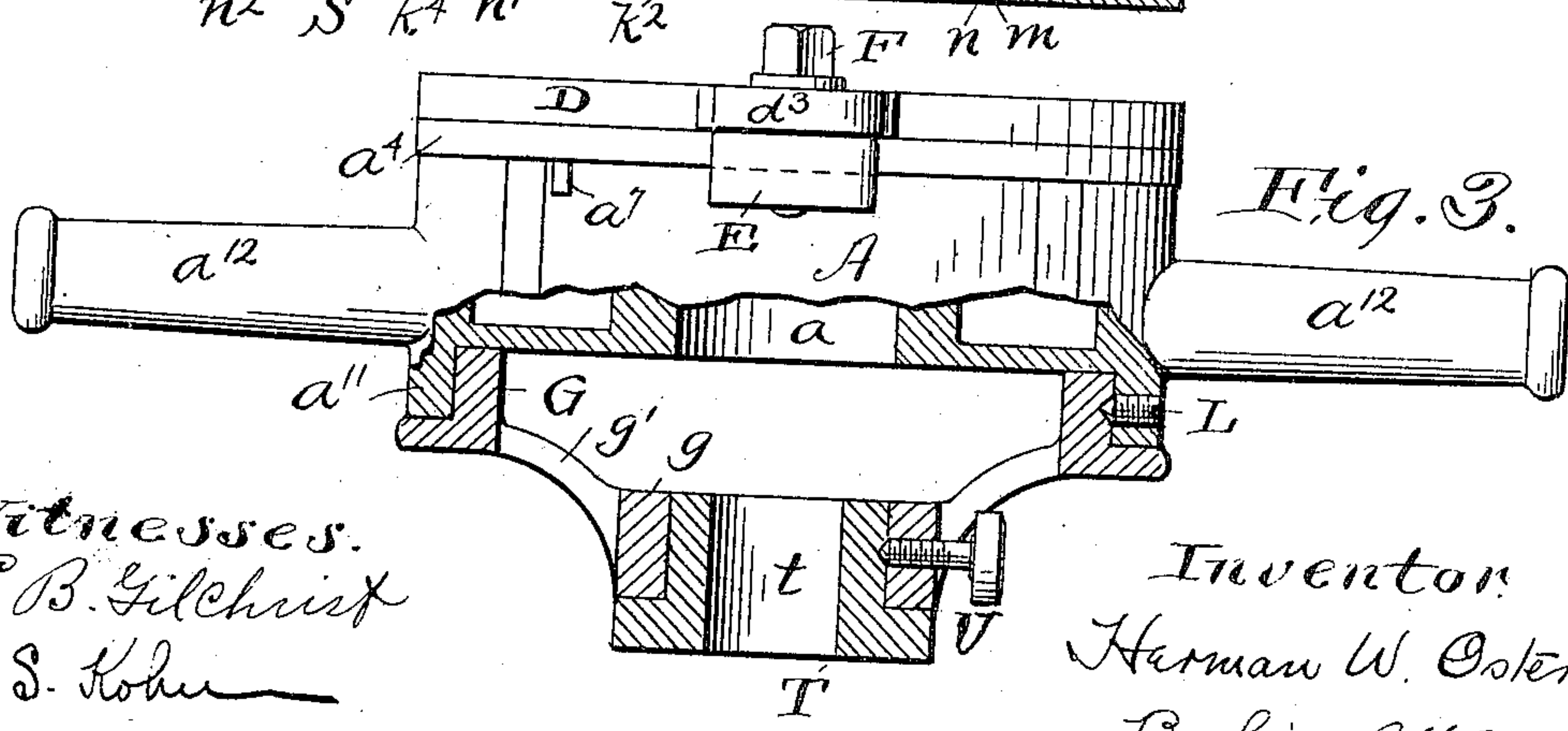


Fig. 3.

Witnesses.
E. B. Gilchrist
J. S. Kohn

Inventor:
Herman W. Oster,
By his Attorneys,
Thurston & Bates.

UNITED STATES PATENT OFFICE.

HERMAN W. OSTER, OF CLEVELAND, OHIO, ASSIGNOR TO THE OSTER MANUFACTURING COMPANY, OF CLEVELAND, OHIO, A CORPORATION OF OHIO.

DIE-STOCK.

No. 812,870.

Specification of Letters Patent.

Patented Feb. 20, 1906.

Application filed February 6, 1905. Serial No. 244,365.

To all whom it may concern:

Be it known that I, HERMAN W. OSTER, a citizen of the United States, residing at Cleveland, in the county of Cuyahoga and State of Ohio, have invented a certain new and useful Improvement in Die-Stocks, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings.

One object of the invention is to provide a die-stock which is easily and quickly adaptable to various specific uses.

Further objects of the invention are to provide suitable and efficient means for locking the dies and guide-bars in any desired position and to provide a simple and effective means for indicating and limiting at will the adjustment of the dies.

The invention may be conveniently summarized as consisting of the combinations of parts shown in the drawings and hereinafter described, as definitely set forth in the claims.

In the drawings, Figure 1 represents a top plan of my improved die-stock. Fig. 2 is a central sectional view substantially on the line 2 2 of Fig. 1, the handle of the cam-plate which adjusts the guide-bars being assumed as directly beneath the handle of the upper cam-plate. Fig. 3 represents a view, partly in elevation and partly in section, showing the die-stock equipped with a form of guide-plate particularly adapted for the reception of bolts or other analogous devices having heads or stop shoulders.

Referring to the parts by letters, A represents the die-stock body. This body consists of an inner ring or annulus a^2 and an outer ring or annulus a^3 , connected by a web a' . The inner ring is provided with a central bore a for the reception of the work, and the outer ring is provided with laterally-projecting handles a^{12} for rotating the body. Projecting through radial holes formed in said body are the dies B. Supported by the inner ring a^2 is the retaining-ring C, said ring being removably secured to said ring a^2 by the bolts c and being provided with a bore c' corresponding to the bore a . The purpose of the ring C is to retain the cam-plate D on top of the die-stock body.

Depending from the cam-plate D are the cam-ribs d , which engage corresponding notches in the upper edges of the dies. The cam-plate is provided with an inwardly-ex-

tending flange d' for engagement by a corresponding flange c^2 on the ring or bushing C and with an annular peripheral recess d^2 in its lower surface which engages the upper inner surface of the external ring a^3 of the stock-body. So much of the device as is above described is an old and well-known construction.

Projecting from opposite portions of the external ring of the stock-body, at the upper edge thereof, are the flanges a^4 and a^5 . These flanges are preferably integral with said body. The handle d^3 of the cam-plate extends over the flange a^4 and in contact with the upper edge of the same, said flange being of a length to permit the full range of movement of the handle necessary to adjust the dies. On the under side of the handle is a clamping-block E, said block being of stepped form, as shown, having the outer portion or step e of the same engaging the handle, the intermediate step or portion e' for the passage of the bolt F, and the inner step or portion e^2 extending under the flange a^4 . The bolt may be provided with a squared head f for operation by a wrench.

The flange a^5 is similar in shape and length to the flange a^4 , but is provided on the under surface with a slot a^6 . A stop member G is carried by said flange. The said stop member consists of a two-part spring-clamp having its upper portion adapted to engage the upper surface of the flange and its lower portion adapted to engage the lower surface of said flange. A bolt g' is employed for securing this stop member on the flange, said bolt having a squared head g^2 for operating by a wrench. The lower member of the clamp is pivoted with a pin g , projecting into the slot a^6 . The purpose of the pin g and the slot a^6 is to prevent the stop member slipping off the flange when the nut is slackened to permit adjustment of the clamp on the flange.

A pin a^7 projects downwardly from the flange a^4 and forms a stop for the clamp E and handle d^3 , which carries the same. This pin is so located as to permit the withdrawal of the dies B as far as the inner surface of the bore a by the time that the clamp has engaged the pin. Projecting from the cam-plate D over the flange a^5 is the pin a^8 . The purpose of this pin is to engage the stop member G and form with it a convenient means for limiting and indicating the adjustment of

the dies to cut a thread of the same depth on different pipes or bolts. The location of the pin is such as to permit the stop member to be clamped near the edge a^9 for the cutting
 5 of a thread on the largest-sized pipe or bolt for which the stock is adapted. In threading smaller-sized objects the stop member may be clamped nearer the edge a^{10} of the flange. The above construction provides a
 10 very simple and effective means for insuring the uniformity of depth in the thread cut on different articles.

At the opposite end of the body—that is to say, at the bottom end—as shown, there is
 15 provided a depending cylindrical flange a^{11} . This is adapted to receive and fit over the member K (see Fig. 2) or the member G, (see Fig. 3,) both of said plates being secured in place by means of a set-screw L. The mem-
 20 ber K consists of an inner ring or annulus k' and an outer ring or annulus k^4 , connected by a web k^5 . The inner ring has a central bore k , preferably of the same diameter as the bore a . A bushing M, having a bore corre-
 25 sponding to the bore k , is removably secured to the inner ring k' of the member K by means of bolts k^2 . Projecting outwardly from the lower surface of the bushing M is the flange m , said flange engaging a correspond-
 30 ing inwardly-projecting flange n of the plate N. This plate is provided with ribs n' for adjusting the work-guides P through the radial openings in the inner ring k' . These ribs are similar to the ribs d , carried by the
 35 cam-plate D.

The plate N is provided with a handle n^2 , and said handle carries a clamp R similar to the clamp E, which is carried by the handle d^3 , the inwardly-extending flange or step r of
 40 said clamp engaging a recess k^3 in the outer annular wall of the ring K. A clamping-bolt S, extending through said clamp and the handle n^2 , retains the plate N and the guides P in any desired position.

45 The member G (shown in Fig. 3) may be secured to the flange a^{11} by means of the said screw L in place of the member K. This plate member G may be in the form of a spider and comprises an outer ring for engage-
 50 ment by said flange and an inner ring g , con-

nected by arms g' with said outer ring. A bushing T, having a bore t therein for the work, is removably secured to said ring g , as by means of a set-screw U. A die-stock ar-
 55 ranged as shown in Fig. 3 is especially adapted for threading bolts or other devices having heads or projections which engage the end of the bushing T when a thread of sufficient length has been cut.

It will be understood that the internal di- 60 ameter of the bushing T corresponds with the diameter of the device to be threaded and that this bushing may be easily changed for another having a larger or smaller bore, as may be necessary. 65

Having described my invention, I claim—

1. In a die-stock, the combination of a body having an outwardly-projecting flange, adjustable dies in said body, a plate having means thereon for adjusting said dies and a 70 portion extending over said flange, a clamp beneath such portion of the plate, said clamp having an outer end engaging said plate, an intermediate portion for the reception of a bolt, and an inner end portion adapted to en- 75 gage said flange, and a bolt extending through the portion of the plate adjacent to said flange and threaded into the intermediate portion of said clamp, substantially as speci- 80 fied.

2. In a die-stock, the combination of the body having a pair of flanges thereon, said flanges projecting outwardly from opposite portions of said body, adjustable dies within said body, a plate rotatably fitted on said 85 body and having means for adjusting said dies, said plate having a handle extending over one of said flanges, a clamp carried by said handle for engaging the proximate flange, a projection from said plate above the 90 other flange, and an adjustable stop member carried by the last-mentioned flange for engagement by said projection, substantially as specified.

In testimony whereof I hereunto affix my 95 signature in the presence of two witnesses.

HERMAN W. OSTER.

Witnesses:

J. L. KOHN,

E. L. THURSTON.