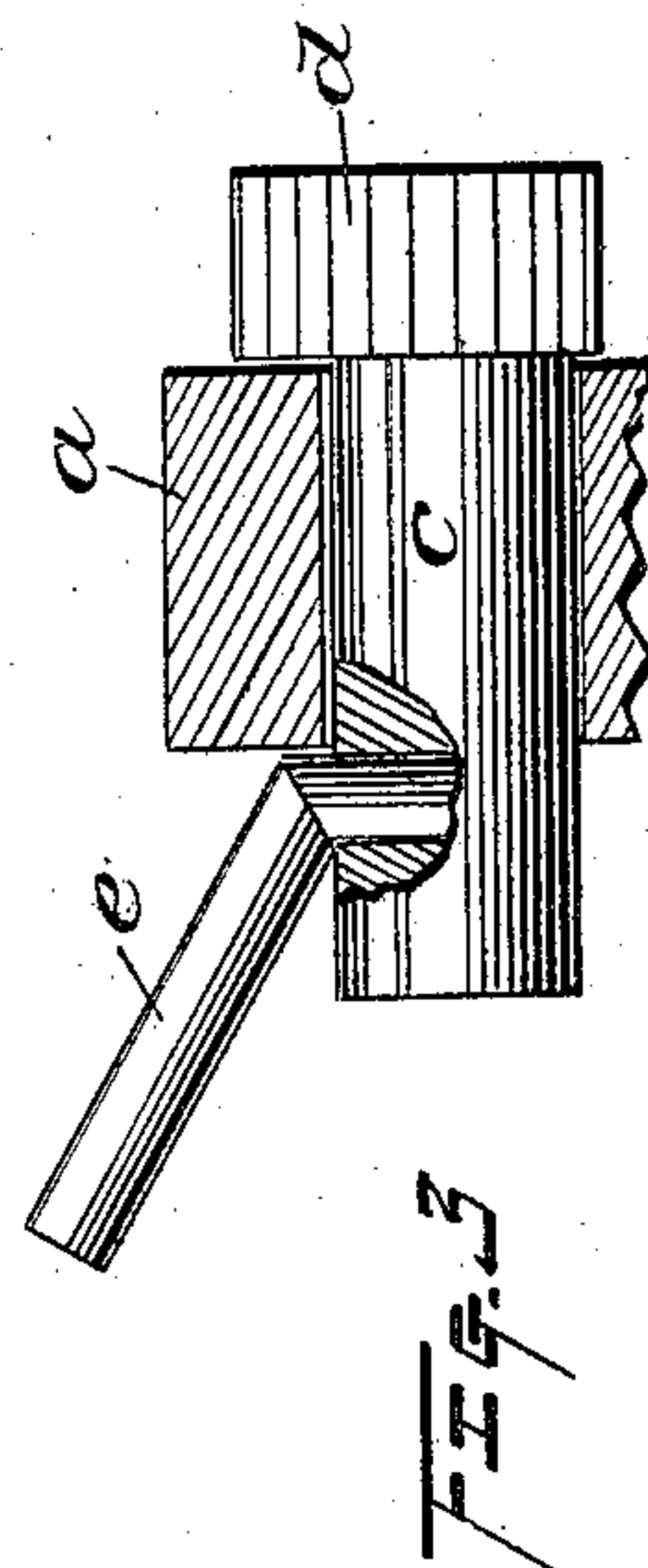
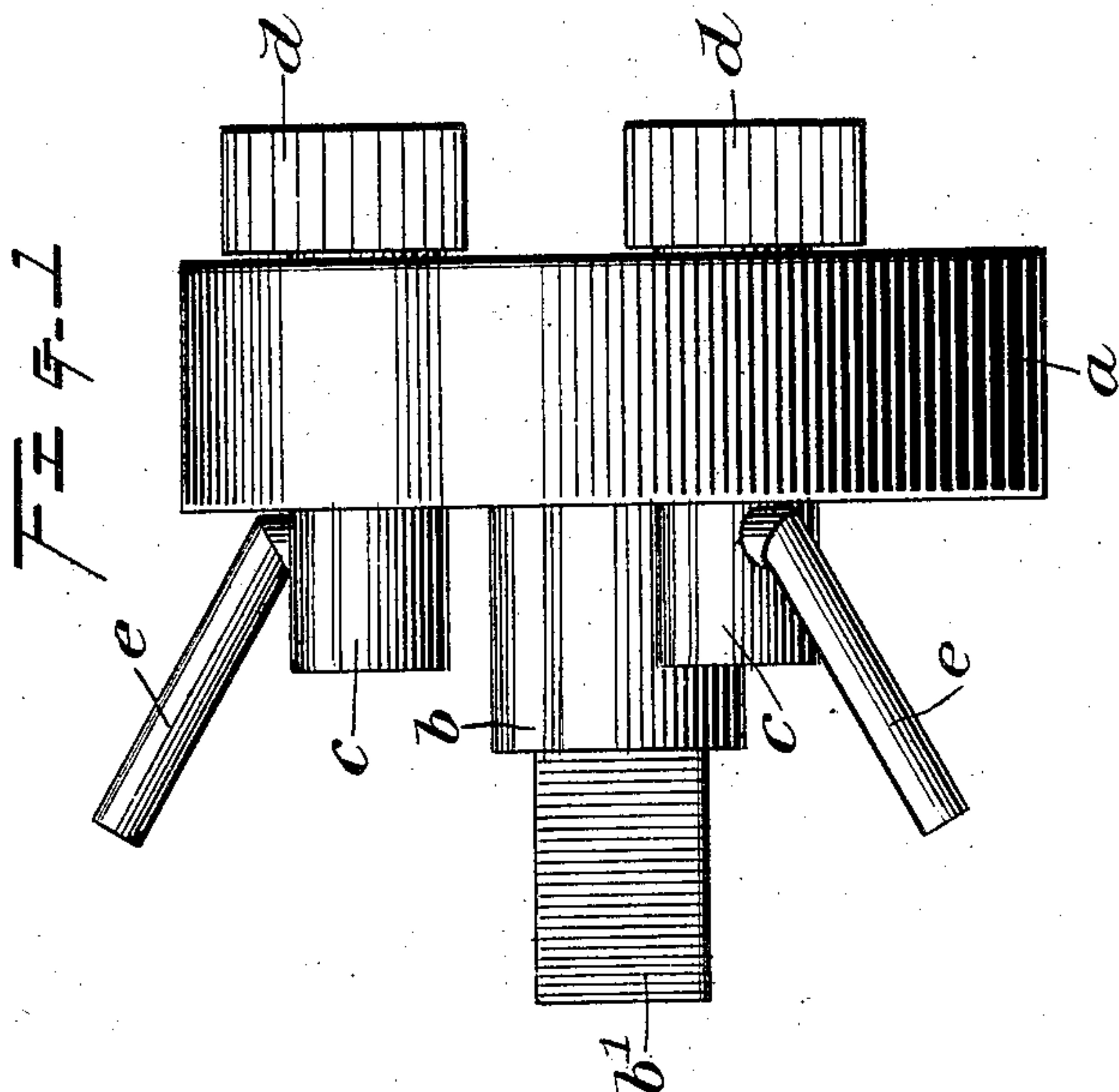
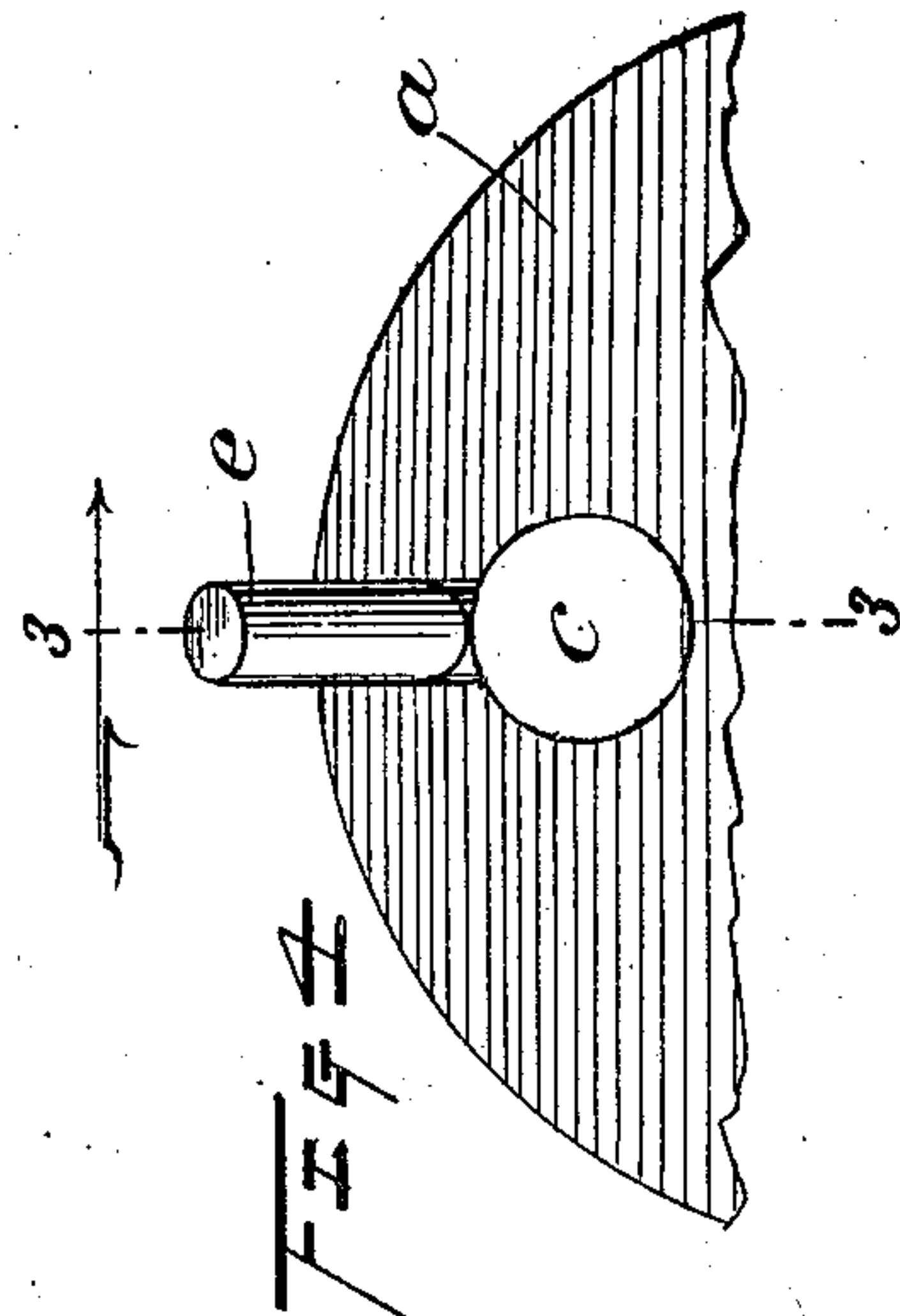
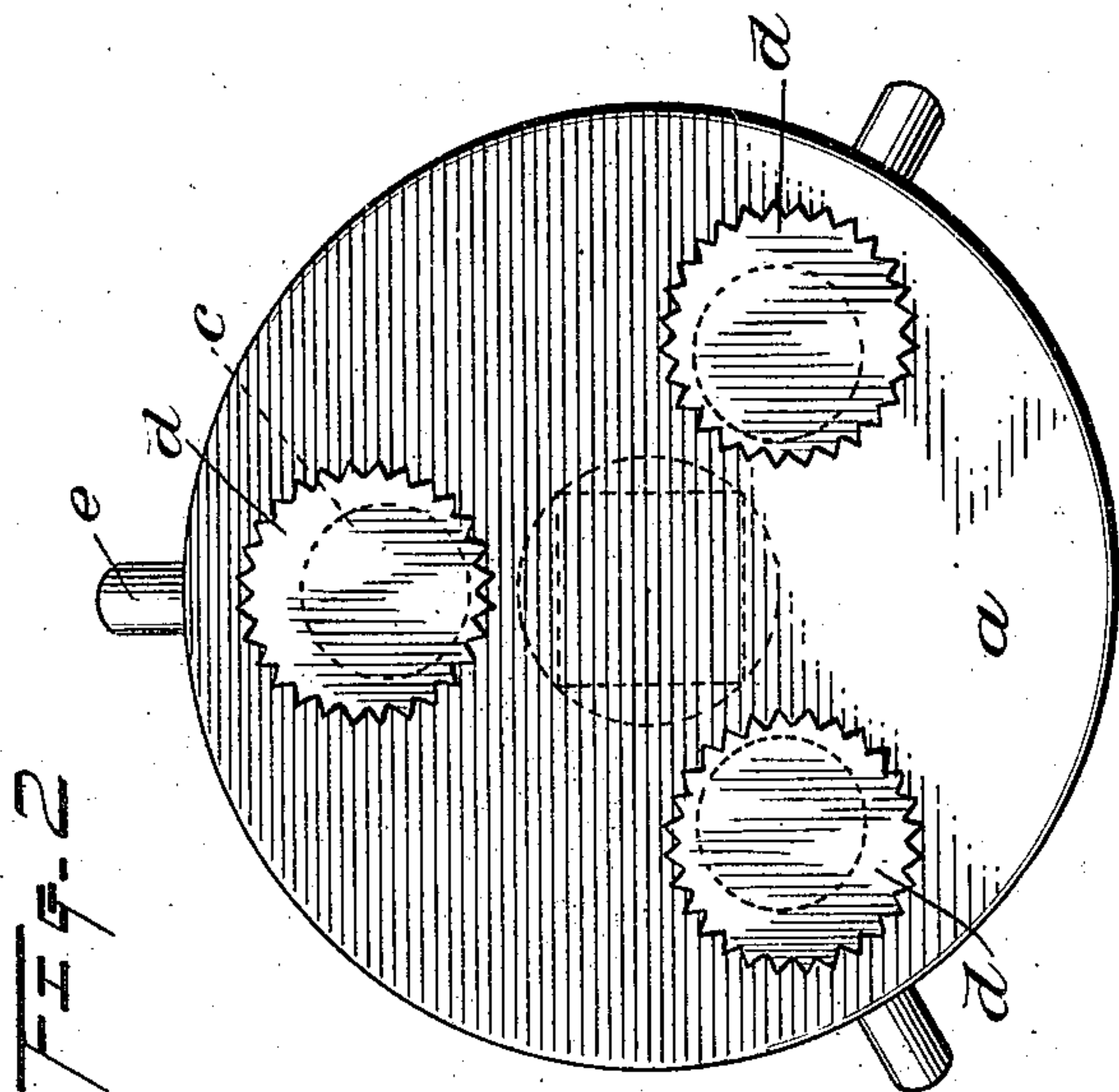


No. 847,251.

PATENTED MAR. 12, 1907.

J. HODSON.  
CHUCK.

APPLICATION FILED NOV. 10, 1905.



WITNESSES:

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BY

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# UNITED STATES PATENT OFFICE.

JAMES HODSON, OF PORTLAND, OREGON.

## CHUCK.

No. 847,251.

Specification of Letters Patent.

Patented March 12, 1907.

Application filed November 10, 1905. Serial No. 286,719.

*To all whom it may concern:*

Be it known that I, JAMES HODSON, a subject of the King of Great Britain, and a resident of Portland, in the county of Multnomah and State of Oregon, have invented a new and Improved Chuck, of which the following is a full, clear, and exact description.

The invention relates to a chuck or gripper intended to hold various devices of round or other form not conveniently held by wrenches and like tools.

It is particularly intended for use in manipulating stay-bolts of boilers, the object being to permit these devices to be placed on or removed from the boiler without necessitating squaring the end of the stay-bolt and to enable the stay-bolt to be screwed up so far as to render it unnecessary, in some instances at least, to cut off the projecting end of the bolt.

The invention resides in a certain peculiar arrangement of eccentric grippers mounted on a suitable body or carrier to which a wrench may be applied, all of which will be fully set forth hereinafter and particularly pointed out in the claims.

Reference is to be had to the accompanying drawings, which illustrate, as an example, the preferred embodiment of my invention, in which drawings—

Figure 1 is a side view of the invention. Fig. 2 is a front elevation thereof. Fig. 3 is a detail section on the line 3 3 of Fig. 4, and Fig. 4 is a detail rear elevation of one of the gripper-shafts and the manipulating device or handle applied thereto.

*a* indicates the body of the device, which constitutes the aforesaid carrier and which is formed of metal, preferably in the circular shape illustrated. Said body *a* has a stud *b* centrally located and projecting from its rear face, this stud being formed with a squared end *b'*, which facilitates the application of a wrench or other tool by means of which the body *a* may be turned.

Revolubly mounted on the body are a number, preferably three, of stud-shafts *c*, which extend beyond each side of the body *a* and carry at their front ends eccentric disks *d*, provided with serrated or toothed peripheries, as shown. At their rear ends the shafts *c* are provided with pins *e*, which facilitate the manual operation of the shafts. Preferably these pins project diagonally from the shafts, so that they will not interfere with the

projecting parts of the boiler or other apparatus in connection with which the instrument may be employed.

In the use of the invention the part to be gripped is introduced between the disks *d*, said disks having been turned to the positions shown in Fig. 1, in which the spaces between the disks is increased to a maximum. The handles or pins *e* are then turned in one direction or the other, according to the direction in which the article gripped is to be turned—that is to say, referring to Fig. 2, in the event that the stay-bolt is to be turned from right to left the handles *e* should be turned in the same direction until the serrated peripheries of the disks *d* engage the work. A suitable tool should then be applied to the stud *b*, and the carrier or body *a* is turned from right to left, which will bind the eccentric disks against the work, firmly gripping the same and enabling it to be turned. To disengage the tool from the work, it is only necessary to slightly reverse the direction of rotation of the body *a*, which will relax the hold of the eccentric disks on the work and enable the tool to be easily withdrawn.

It will be observed that this device enables the stay-bolt or other tool to be firmly gripped, notwithstanding the cross-sectional form of the bolt, and by means of the improvement the stay-bolt may be screwed up until its end projects but slightly from the surface with which the bolt is engaged. Conversely, the tool may be engaged with a bolt the end of which projects but slightly from the part in which it is placed.

Having thus described the preferred form of my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The combination of a body, a plurality of shafts loosely mounted thereon, eccentric disks secured to the shafts and adapted to receive the work between them, for the purpose specified, each of said shafts being provided with an operating device.

2. The combination of a body, a plurality of shafts loosely mounted thereon, eccentric disks secured to the shafts and adapted to receive the work between them, for the purpose specified, and operating devices in connection with said shafts, said operating devices comprising pins projecting diagonally from the shafts.

3. The combination of a body, having a



flat front face, a plurality of eccentric gripping-disks mounted to turn on the front face of the body and adapted to receive the work between them, whereby upon turning the body in either direction the disks are rolled into firm engagement with the work connecting it with the body, and a rigid stud projecting from the body and having a squared end adapted to be engaged by an operating-tool.

4. The combination of a body, a plurality of shafts revolubly mounted thereon, eccentric disks secured to the shafts at one end and lying at one side of the body, said disks being adapted to receive the work between them, for the purpose specified, operating-pins secured to the opposite ends of the shafts and projecting diagonally from the shafts, and a rigid stud projecting from the body and adapted to be engaged by the tool.

5. The combination with a body having flat front and rear faces, and a centrally-located stud projecting from the rear face of the body, of a plurality of shafts revolubly mounted in the body and projecting beyond the front and rear faces thereof, and eccentric grippers secured to the projecting front

ends of the shafts, and adapted to receive the work between them.

6. The combination with a circular body having flat faces, and a centrally-located stud projecting from one face of the body and adapted to be engaged by a tool, of a plurality of stud-shafts revolubly mounted in the body and projecting beyond the faces thereof, eccentric disks secured to the projecting ends of the shafts at one face of the body and adapted to receive the work between them, and operating devices connected with the other ends of said shafts.

7. The combination with a body having a flat front face, of a plurality of shafts revolubly mounted in the body and projecting beyond the front face thereof, and eccentric grippers at the front face of the body and carried by the projecting ends of said shafts.

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

JAMES HODSON.

Witnesses:

ARTHUR J. DREWS,  
THOMAS HODSON.