

No. 772,305.

PATENTED OCT. 11, 1904.

W. H. WILLIAMS.
SHARPENING KNIVES OF VENEER OR OTHER MACHINES.

APPLICATION FILED FEB. 6, 1904.

NO MODEL.

2 SHEETS—SHEET 1.

Fig. 2.

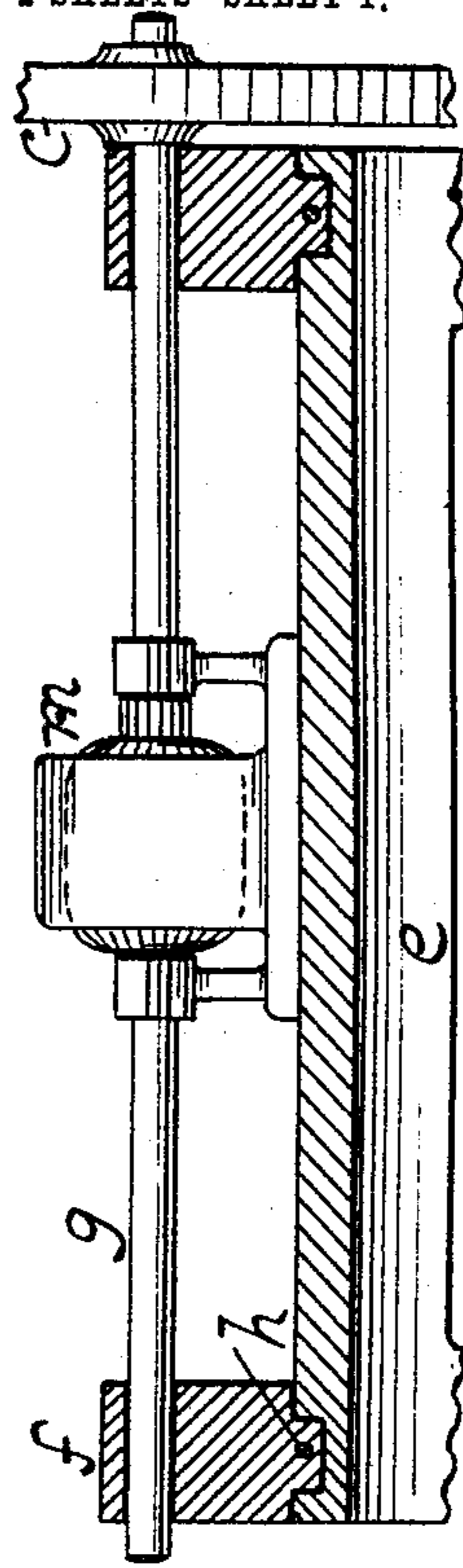
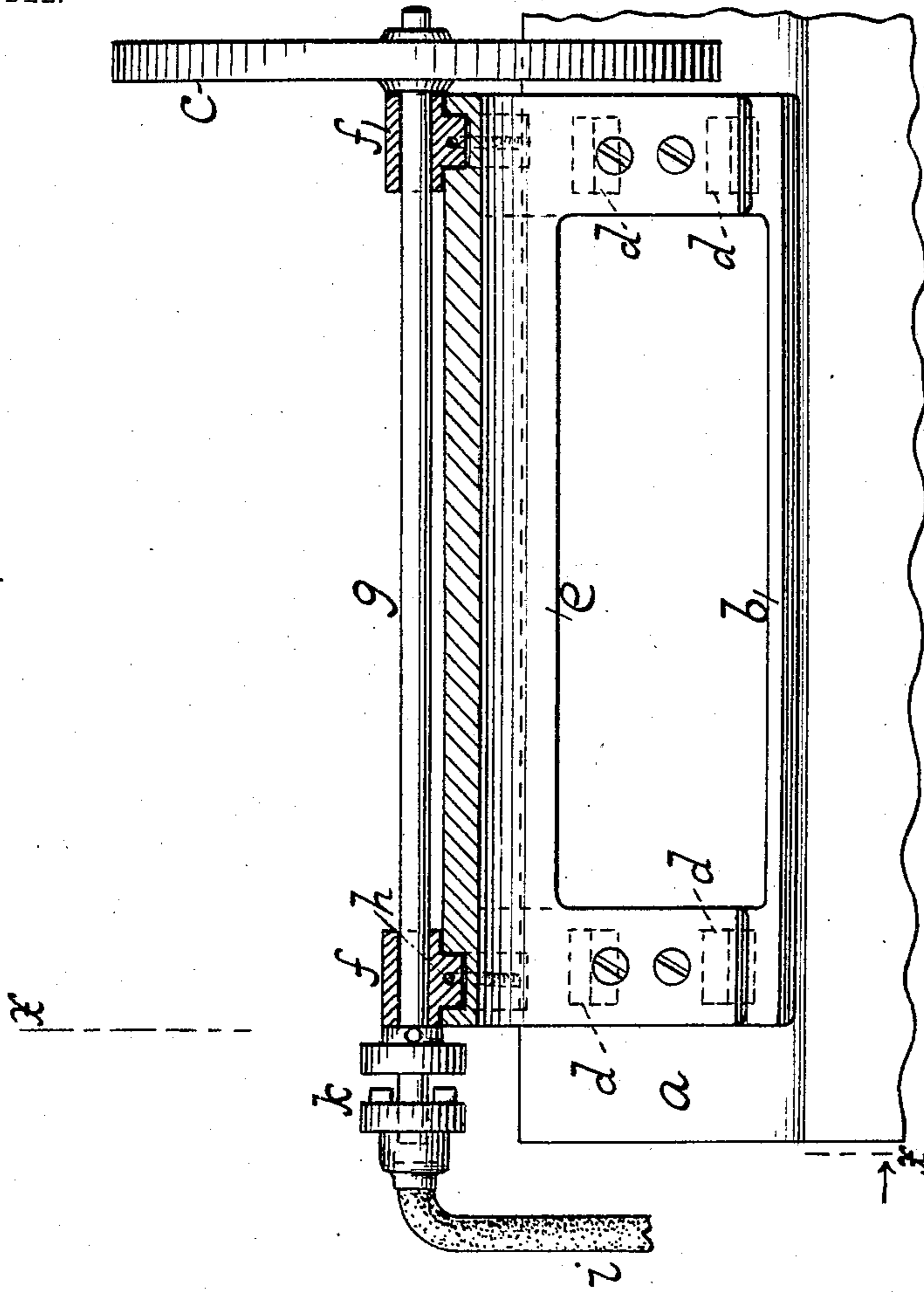
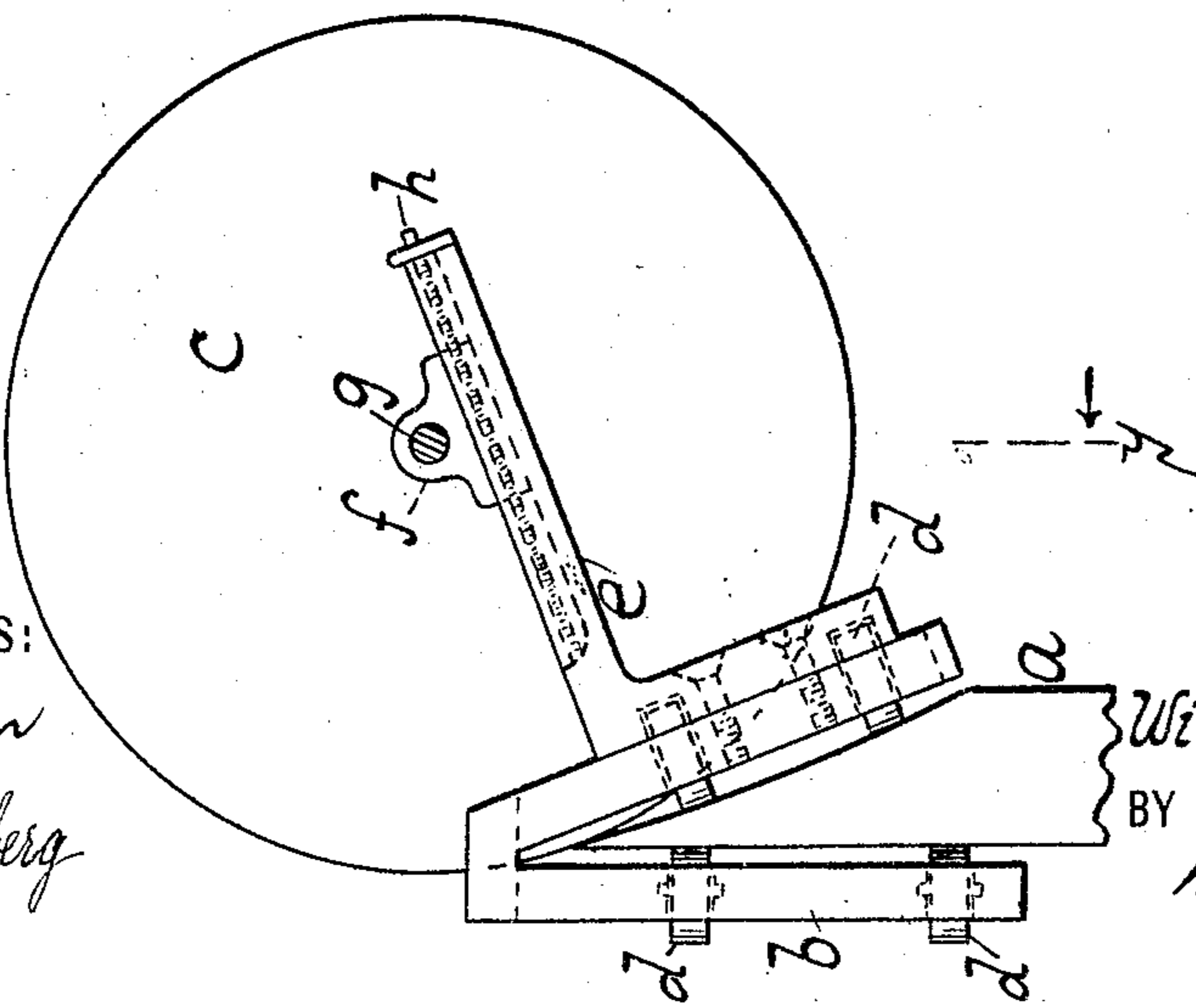


Fig. 3.

Fig. 1.



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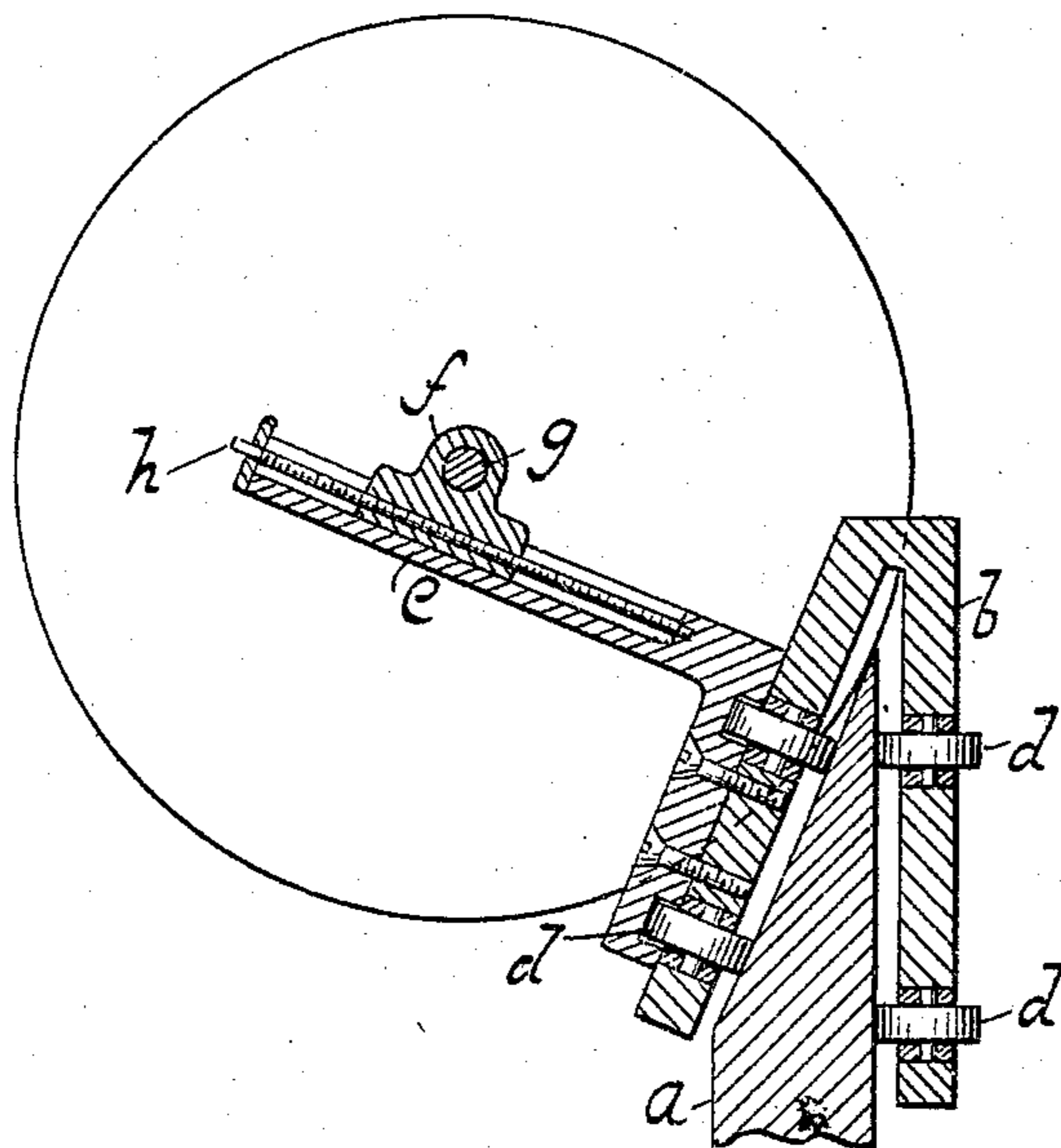
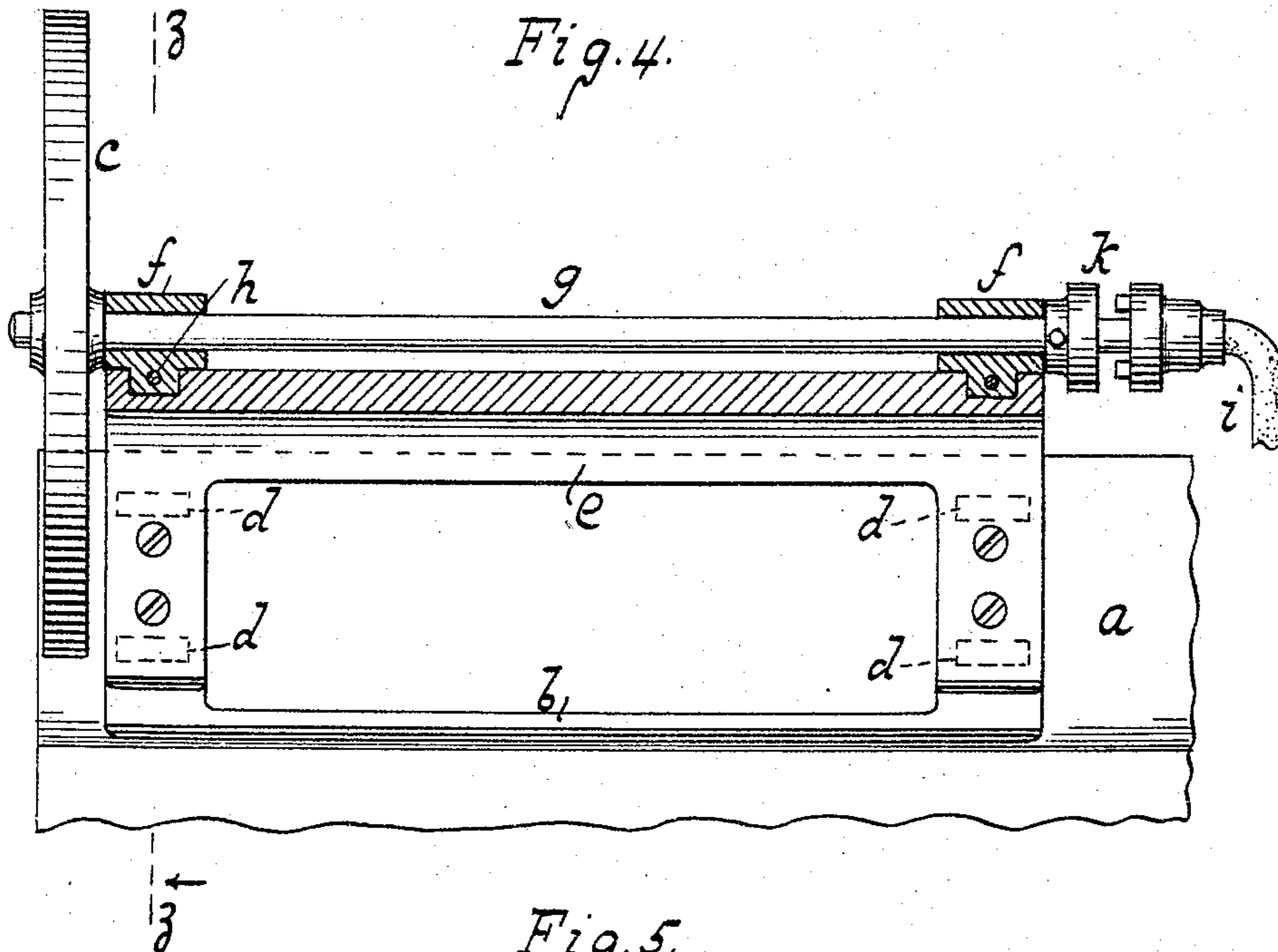
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UNITED STATES PATENT OFFICE.

WILLIAM H. WILLIAMS, OF ASTORIA, NEW YORK.

SHARPENING KNIVES OF VENEER OR OTHER MACHINES.

SPECIFICATION forming part of Letters Patent No. 772,305, dated October 11, 1904.

Application filed February 6, 1904. Serial No. 192,417. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM H. WILLIAMS, a citizen of the United States, residing at Astoria, in the county of Queens and State of New York, have invented new and useful Improvements in Sharpening or Whetting Knives of Veneer or other Machines, of which the following is a specification.

By means of this invention sharpening of a knife or blade can be effected without any moving of the knife being required. The sharpening can be done rapidly and effectively and a thin edge given to the knife, which is now stubbed up by the use of whetstones.

This invention is set forth in the following specification and claims and illustrated in the annexed drawings, in which—

Figure 1 is a section along $x x$, Fig. 2. Fig. 2 is a front elevation of a device embodying this invention sectioned along $y y$, Fig. 1. Fig. 3 shows a modification. Fig. 4 is a view like Fig. 2 with the grinding or sharpening wheel at the opposite end or side from that shown in Fig. 2. Fig. 5 is a section along $z z$, Fig. 4.

In the drawings is shown a knife or blade a , such as used, for example, in veneer-machines. A supporting-frame is shown at b . On this frame is mounted the sharpening-wheel c , as presently explained. The frame b straddles or sits on the knife, so as to follow the same or make the knife act as a guide. The frame b has rollers d running against the faces of the blade, so that the frame can be easily run back and forth or along the blade. The frame, as seen, does not touch the edge of the blade or knife; but the rollers d rest or run on the faces or on the rear and front sides or bevel of the knife. The frame carries a bracket or arms e , on which are the bearings f for shaft g of wheel or disk c . Set-screws h enable the shaft and sharpening-wheel to be adjusted so that the wheel makes proper contact with the blade. As the wheel is ground or moves away it is adjusted to maintain proper sharpening or whetting contact. The wheel is rotated by suitable means. An electric motor can be employed; but other means for giving rotation are of course included in the invention.

The shaft or wheel being rotated and the frame moved back and forth on the knife, the wheel will sharpen the knife without the latter having to be moved or dismantled. A thin edge can thus be given to the knife in a short time and with little labor and without any stubbing up of the thin edge of the blade, as is now apt to occur by the use of a whetstone.

This sharpener is used after grinding and gives a satisfactory edge.

The frame can be moved by hand to carry the sharpening-wheel to any point or to an end of the blade, and the reversibility of the shaft enables the wheel to be set to reach from the frame to either end of the blade.

By removing the screws h the bearings f can be lifted out of place to reverse the wheel-shaft.

In Fig. 2 is shown a flexible shaft i , which can be driven by suitable means and when coupled to shaft g by clutch k will rotate the same.

In Fig. 3 is shown an electric motor m on frame e and through which extends the shaft g to be rotated thereby.

The frame part or shank to which the wheel-carrying bracket is secured is at such angle that the sharpening-wheel sits squarely against the bevel or face of the knife at which the sharpening is being done.

In Figs. 2 and 4, respectively, the sharpening-wheel is shown at opposite ends of the frame. This opposite positioning can be accomplished either by having two frames or by making shaft g dismountable, so that it can be placed on the frame with the wheel either at the right or left hand end of the frame. As the wheel lies to the right the knife can be ground to its extreme right end by running the frame sufficiently to the right.

In Fig. 4 the wheel as mounted is shown in position to run to or grind the end of the blade at the left of the spectator, while the frame b remains on the blade. As stated, two frames b , with a right and left hand wheel, respectively, could be provided, or the shaft g could be made detachable, so as to be unshipped and turned about to bring the wheel

to opposite sides of the frame. The removal of the shaft *g* can be effected by unscrewing or unfastening the front strip supporting the outer ends of screws *h*, whereupon the screws, 5 with the bearings *f*, can be slid or pulled off the brackets *e*, the shaft turned round, and thus replaced on the bracket, and the front strip again screwed or fastened into place.

What I claim as my invention, and desire to 10 secure by Letters Patent, is—

1. A sharpening or whetting device comprising a wheel and a reciprocatory supporting-frame for the wheel, said frame being made to straddle a knife so as to be guided 15 thereby.

2. A sharpening device comprising a frame and a wheel having its shaft reversibly mounted on the frame, the latter being made to run or be guided on a knife.

20 3. A sharpening device comprising a reciprocatory frame and a rotary grinding-wheel on the frame, the latter having rollers made to ride upon the faces of a knife so that said frame can be guided thereby.

25 4. A sharpening device comprising a reciprocatory frame made to travel upon and be

supported by a knife or blade, and a wheel adjustably mounted on the frame so as to be brought into contact with the blade supporting the frame.

5. A sharpening device comprising a reciprocating frame adapted to straddle and be supported by a knife, a bracket carried by the frame and a wheel carried by the bracket, said wheel being carried at such angle as to 35 sit squarely against the knife.

6. A sharpening device comprising a reciprocating frame adapted to straddle and be supported by a knife, a wheel, and a shaft for the wheel reversibly and adjustably mounted on the frame. 40

7. A sharpening device comprising a reciprocatory frame made to sit on a knife, a wheel, a shaft for the wheel, and a motor for the wheel. 45

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

WILLIAM H. WILLIAMS.

Witnesses:

WM. H. WILLIAMS, Jr.,

ALEX S. WILLIAMS.