

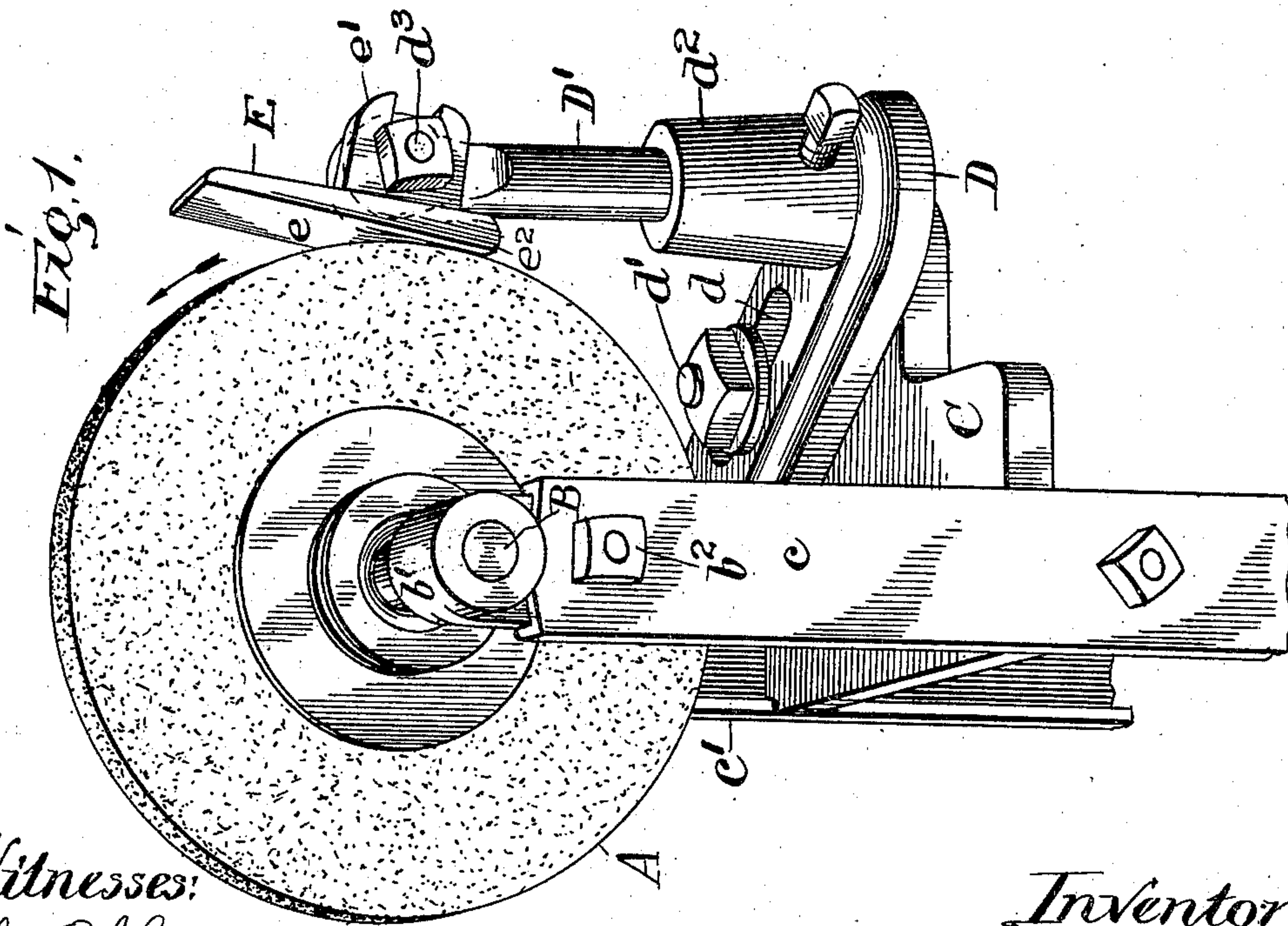
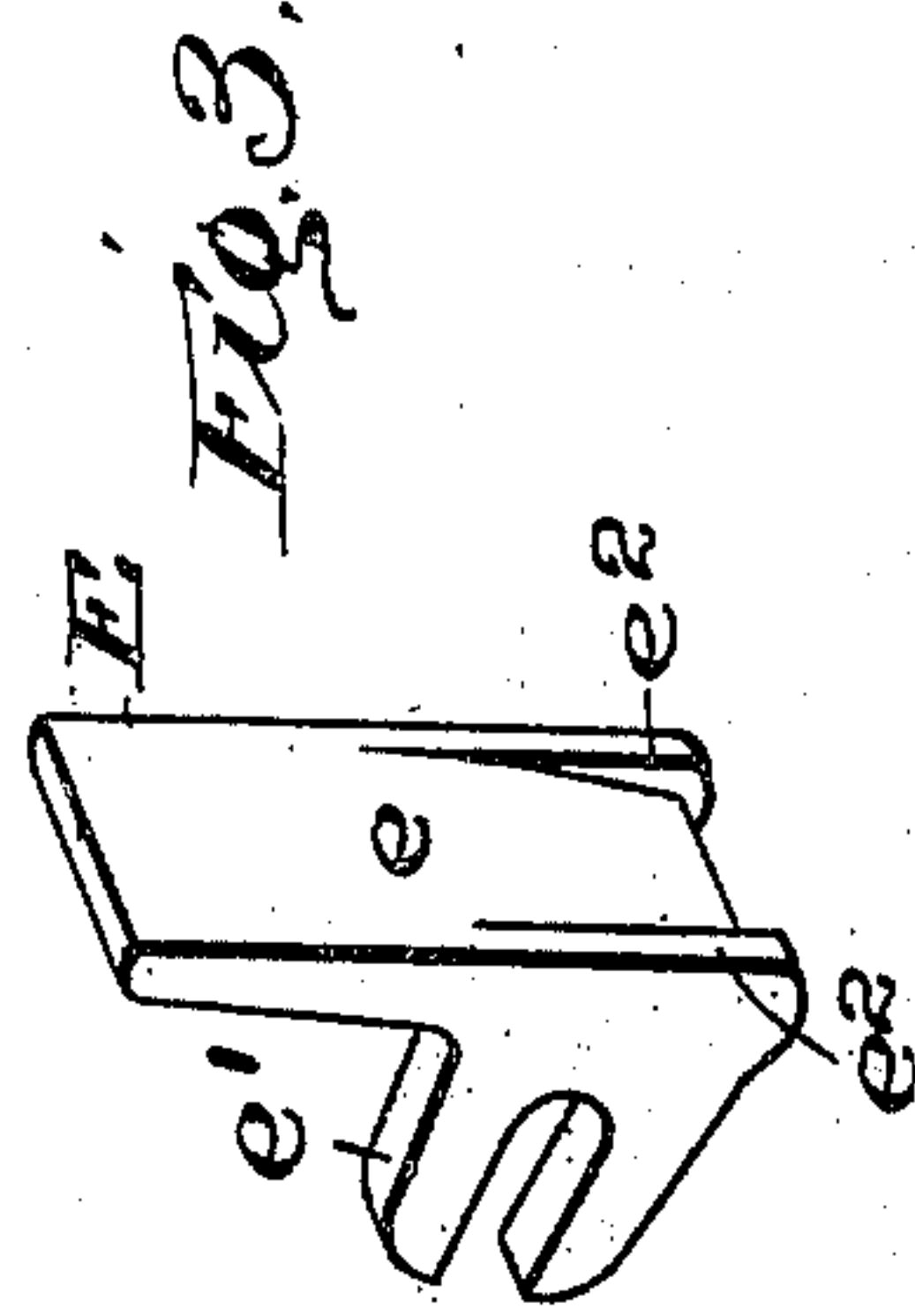
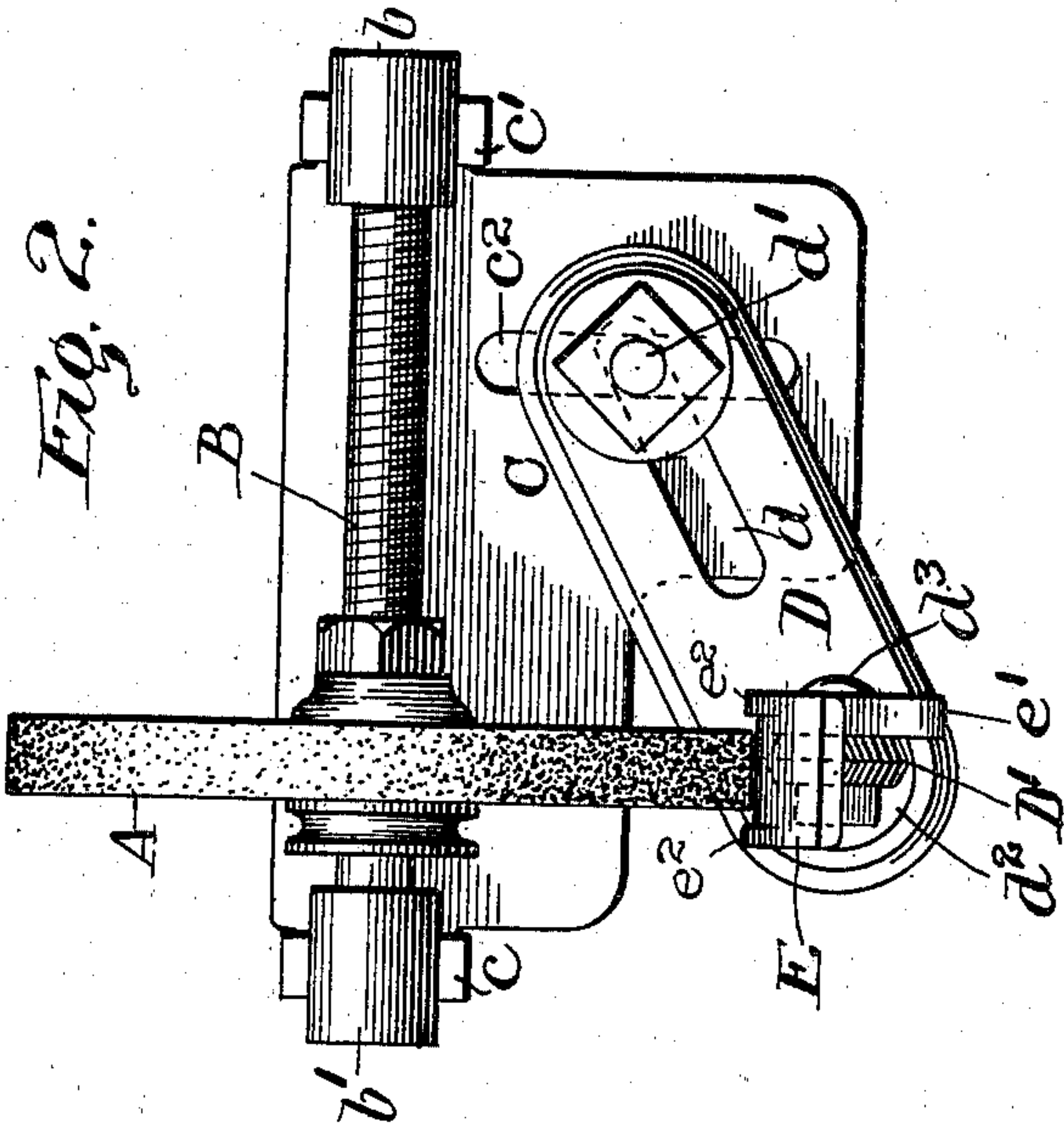
No. 709,177.

Patented Sept. 16, 1902.

S. C. SCHOFIELD.
TOOL GUIDE FOR GRINDSTONES.

(Application filed Jan. 30, 1902.)

(No Model.)



Witnesses:
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UNITED STATES PATENT OFFICE.

SILAS C. SCHOFIELD, OF FREEPORT, ILLINOIS.

TOOL-GUIDE FOR GRINDSTONES.

SPECIFICATION forming part of Letters Patent No. 709,177, dated September 16, 1902.

Application filed January 30, 1902. Serial No. 91,833. (No model.)

To all whom it may concern:

Be it known that I, SILAS C. SCHOFIELD, a citizen of the United States of America, residing at Freeport, in the county of Stephenson and State of Illinois, have invented certain new and useful Improvements in Tool-Guides for Grindstones, of which the following is a specification.

My invention relates to certain new and useful improvements in tool-guides for grindstones, the object of which is to produce a guide which can be readily adjusted in any desired position and which will hold in place objects of varying shapes and sizes at any desired angle. Great adjustment is necessary in this class of guides, for the reason that in the ordinary use of grindstones the guide must handle axes and like heavy tools, knives of varying thickness, all of which are ground tangentially with respect to the grindstones, and also scissors, which are ground approximately radially with respect to the grindstone. My improved guide is adapted to meet these varying conditions; and to these ends my invention relates to certain novel features of construction, which are shown in the accompanying drawings and which will be fully described in the specification.

In the drawings, Figure 1 is a perspective of an emery-wheel, showing my improved guide in the position for grinding knives. Fig. 2 is a top plan of the same in the same position. Fig. 3 is a perspective of the guide proper separated from the supporting device.

Referring to the drawings, A is an emery-wheel mounted upon a shaft B, which is rotatably journaled in boxes $b\ b'$. The boxes $b\ b'$ are secured by means of bolts b^2 to upright arms $c\ c'$, which are supported upon a base C. The base C is provided with a slot c^2 , as shown in Fig. 2. Upon this base rests a plate D, provided with a slot d , running longitudinally of said plate, through which slot passes a bolt d' , adjustably clamping the plate D to the base C. At the extremity of the plate D farthest removed from the slot d is a post D' , supported in a boss d^2 upon the plate D and vertically adjustable therein. This post D' is flattened at its upper end and perforated to receive a clamping-bolt d^3 . The boss d^2 and post D' form together a "telescoping arm," which term is applied to the

structure in the claims. To the upper end of the post D' is secured the guide proper, E. (Shown separately in Fig. 3.) This guide consists of a plate e , having a lug e' projecting backward from it, the lug e' being notched, as shown in Fig. 3. The plate e has upon its front surface two other projecting lugs e^2 , which are separated by a space slightly greater than the thickness of the emery-wheel A. The lugs e^2 also project a slight distance downward, so that if the face e is radially placed with respect to the emery-wheel they can still project slightly beyond the periphery of the wheel. The guide proper, E, is clamped to the post D' , as shown in Fig. 1, and can be held by means of the bolt d^3 in any position with respect to the wheel A, its angular position being changed by turning it upon the clamping-bolt and its radial position by sliding the notch upon the bolt.

The various adjustments described above will obviously permit the guide E to be placed in any position whatever with reference to the emery-wheel A. In grinding knives and like light objects the position shown in Fig. 1 is the most desirable. In grinding axes and heavy tools of that character the guide E is kept in the same angular position with reference to the upright standard, but is moved farther away from the emery-wheel in order to permit the entrance of the larger tool. In grinding scissors, scrapers, and other tools in which the ground edge is approximately at right angles to the surface of the tool the guide E is moved so that the surface e extends radially from the periphery of the wheel, the lower ends of the lugs e^2 extending slightly from the periphery. The scissors blade or scraper is then placed upon the guide, which will keep the surfaces at right angles to the wheel.

It may be that for various purposes it will be desirable to use other positions of the tool-guide; but any desired position of the guide can be readily secured by means of the various adjustments shown.

I claim as new and desire to secure by Letters Patent—

1. In a device of the class described, the combination with a suitable supporting-arm, of a guide consisting of a flat plate supported by said arm, means for angularly adjust-

ing said flat plate upon said arm, and means for altering the position of said guide in all directions, substantially as described.

2. In a device of the class described, the combination with a suitable supporting-arm, of a guide consisting of a flat plate, two forwardly-projecting lugs upon the edges of said plate and means for adjusting the position of said guide, substantially as described.

3. In a device of the class described, the combination with a slotted base and a grindstone rotatably journaled above the same, of a slotted plate upon said base, a bolt passing through the slots in said plate and said base, an arm extending upward from said plate, a flattened upper portion to said arm, a guide having a notched rearwardly-extending lug, and a suitable clamping-bolt passing through said flattened portion and said notch and adapted to hold said guide in any desired position with reference to said arm; substantially as described.

4. In a device of the class described, the combination with a suitable supporting-arm, of a guide consisting of a flat plate, a notched rearwardly-extending lug and two forwardly-projecting lugs upon the edges of said flattened plate, said lugs also forming semicircu-

lar projections from one end of said flattened plate and suitable means for adjustably supporting said guide upon said supporting-arm; substantially as described.

5. In a device of the class described, the combination with a supporting-arm, of a guide consisting of a flat plate, two forwardly-projecting lugs upon the edges of said plate, said lugs also forming curved projections on one end of said plate, and means for adjusting the position of said guide, substantially as described.

6. In a device of the class described, the combination with a suitable supporting-arm, of a guide consisting of a flat plate, two forwardly-projecting lugs upon the edges of said plate, means for angularly adjusting said guide upon said arm, and means for permitting said guide to be moved in all directions, substantially as described.

In witness whereof I have hereunto set my hand, at Freeport, in the county of Stephenson and State of Illinois, this 25th day of January, A. D. 1902.

SILAS C. SCHOFIELD.

Witnesses:

JAMES H. STEARNS,
OSCAR R. ZIPF.