

No. 719,880.

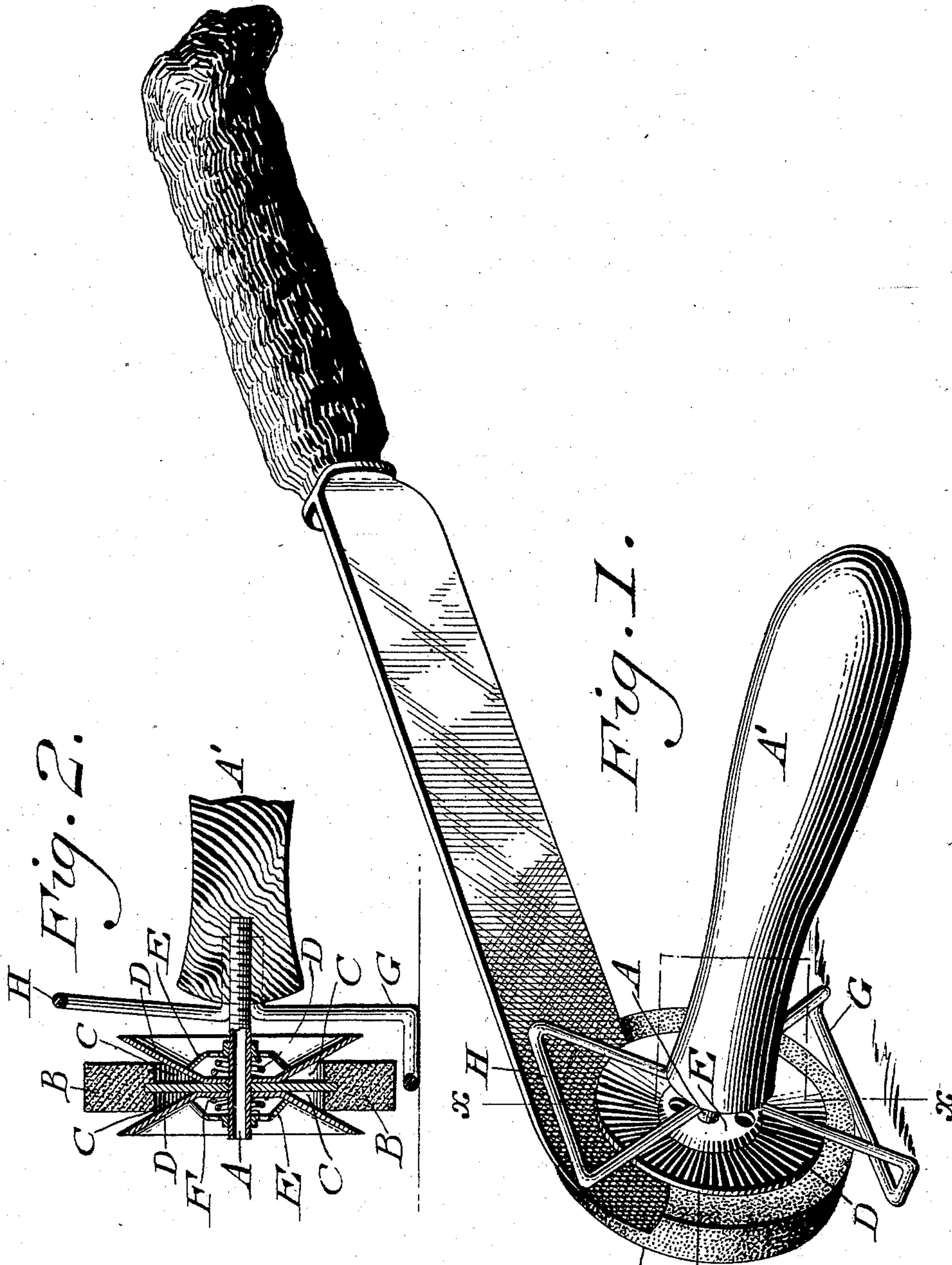
PATENTED FEB. 3, 1903.

I. M. ROSE.
GRINDING OR SHARPENING DEVICE.

APPLICATION FILED OCT. 23, 1902.

NO MODEL.

2 SHEETS—SHEET 1.



Witnesses
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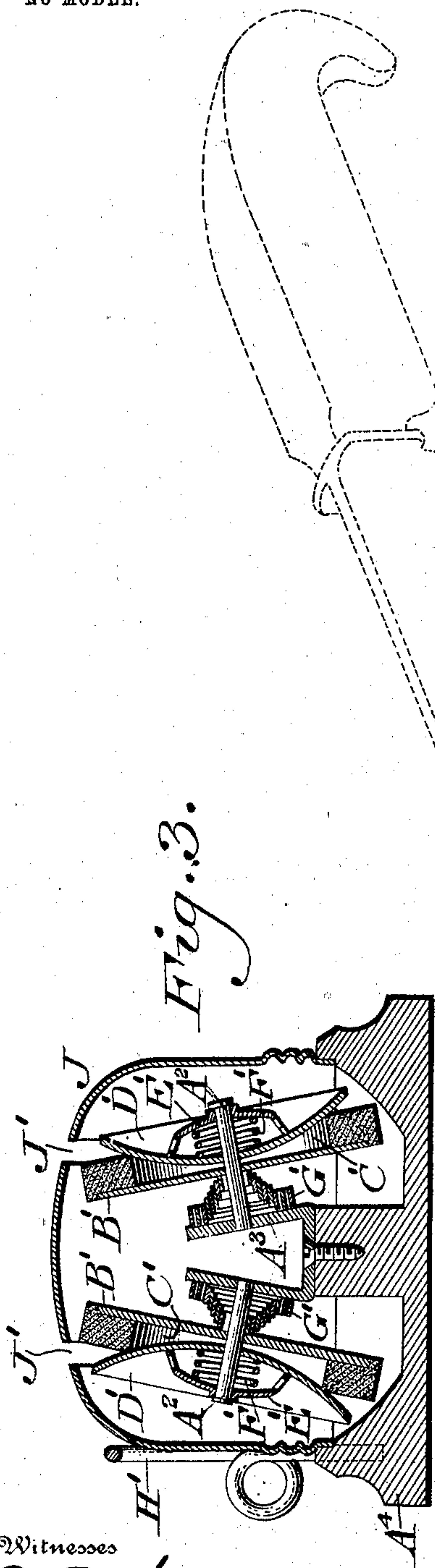
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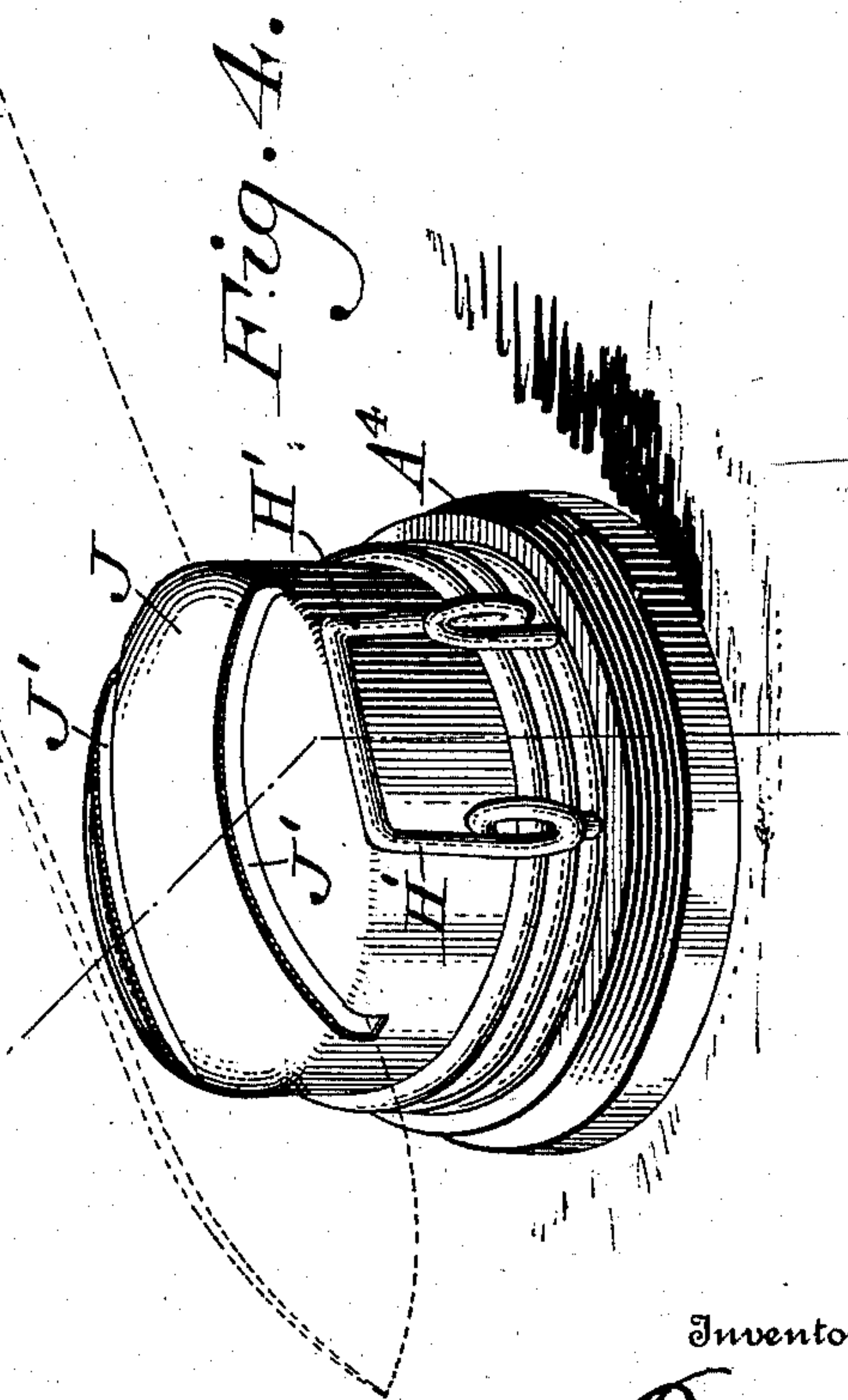
2 SHEETS—SHEET 2.



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UNITED STATES PATENT OFFICE.

ISRAEL M. ROSE, OF PHILADELPHIA, PENNSYLVANIA.

GRINDING OR SHARPENING DEVICE.

SPECIFICATION forming part of Letters Patent No. 719,880, dated February 3, 1903.

Application filed October 23, 1902. Serial No. 128,433. (No model.)

To all whom it may concern:

Be it known that I, ISRAEL M. ROSE, a citizen of the United States, residing in the city and county of Philadelphia, State of Pennsylvania, have invented a new and useful Improvement in Grinding and Sharpening Devices, of which the following is a specification.

My invention relates to an improvement in grinding and sharpening devices embodying a grinding or sharpening stone, bur, runner, or wheel and means for rotating said wheel by the reciprocation thereagainst of the article to be sharpened, said article constituting the motor of said stone while in grinding or sharpening contact with the same.

The invention consists of means for guiding the edge of the article to be sharpened against the side of the stone and holding it thereagainst during the sharpening operation.

It also consists of a guard for preventing the knife from cutting the hand of the operator.

Figure 1 represents a perspective view of a grinding and sharpening or polishing device embodying my invention. Fig. 2 represents a section of a portion thereof on line *xx*. Fig. 3 represents a vertical section of a form of device having a plurality of grinding or sharpening members. Fig. 4 represents a perspective view thereof.

Similar letters of reference indicate corresponding parts in the figures.

Referring to the drawings, A designates a shaft which is carried by the handle A', on which is freely mounted the stone, bur, runner, or wheel B, the sides of the central portion of which have recesses C therein.

D designates heads of dishing or flaring form, the same being mounted on the shaft A at the sides of the wheel B and having their central portions enter the recesses C, said heads being adapted to slide on said shaft to and from said wheel, as apparent in Fig. 2.

E designates nuts which are screwed on the shaft A outside of the heads D, said nuts being preferably dishing reversely to said heads.

Interposed between the heads and nuts are the springs F, which bear against said parts and serve to force the heads inwardly or toward the wheel B, said nuts serving to retain said springs in position and adjust the tension or pressure thereof.

The operation is as follows: The blade of a

knife or other article of cutlery is placed in position between the head and wheel through the space afforded by the flare of the latter and occupies a position at the side of said head, its edge contacting with said side. The blade is now drawn to and fro, so that reciprocating rotary motions are imparted to the wheel, and thus the edge of said article is subjected to the grinding and sharpening action of said wheel, it being noticed that when the first article is applied to the wheel the head D yields outwardly to permit the proper introduction of said article into position, and the spring then presses said head against said article, and the latter is thus held in contact with the wheel under proper pressure, it being noticed that the article by its reciprocations furnishes the power by which the wheel is rotated.

The device held by the handle A' may be rested upon a table or other support by means of the leg or foot G, which depends from the shaft A. Rising from said shaft back of the wheel B and extending above the adjacent head D is the frame H, which forms a guard, so that should the knife slip from the wheel in a direction toward the handle it will be prevented from reaching the hand of the operator and cutting the same.

In Figs. 3 and 4 I show a plurality of grinding or sharpening devices, each consisting of the shaft A², the bearings A³, on which the two shafts A² are mounted, and the base A⁴, in which said bearings are supported. The stones, burs, runners, or wheels B' are loose upon the shafts A² and have recesses C' in their sides. D' designates heads of dishing or flaring form, which are mounted freely on the shafts A², and E' designates nuts which are fitted on the shafts A². Interposed between said nuts and the heads D' are springs F', whose tendency is to force the heads D' toward the wheels B', the tension of the same being adjusted by said nuts E'. G' designates springs, which bear against the backs of the wheels B' and serve to hold said wheels in register with the slots J' and compensate for any irregularities of contiguous parts. The operation is the same as in the previous figures excepting that the wheels B' are subjected to pressure on opposite sides and both the wheels and heads yield as the article to

be ground or sharpened is introduced between them.

On the base is supported the cap J, which incloses the wheels and adjacent parts as a guard, the crown of said cap having slots J' for the passage of the knife or other article of cutlery therethrough in order to be subjected to the grinding or sharpening operation. Secured to the base and rising from one side thereof is the guard H', which is similar in operation and use to the guard H of Figs. 1 and 2.

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

1. A device for grinding or sharpening articles consisting of a grinding or sharpening wheel, a sliding head at the side of the same, and means for pressing said head toward said wheel.

2. A grinding or sharpening wheel, a shaft carrying the same, a head on said shaft adapted to slide to and from said wheel, and a spring bearing against said head, adapted to force the latter toward said wheel.

3. A grinding or sharpening wheel, a shaft carrying the same, a head on said shaft adapted to slide to and from said wheel, a spring bearing against said head, adapted to force the latter toward said wheel, and a nut on said shaft for controlling said spring and adjusting the pressure thereon.

4. A grinding and sharpening wheel, and a head on the side of said wheel, adapted to slide to and from the same, and means for creating

a pressure on said head toward said wheel, said head being dishing and said wheel having a recess in its side to receive the central portion of said head.

5. In a grinding or sharpening device substantially as described, a rotatable grinding or sharpening wheel, a head at the side of said wheel and a guard interposed between said rotatable wheel and the handle thereof and rising above said head.

6. A device for grinding or sharpening articles consisting of a grinding or sharpening wheel, a head at the side of the same, a shaft on which said wheel and head are loosely fitted so as to be permitted to rotate and slide thereon, and means for pressing said head toward said wheel and the latter toward said head.

7. A device for grinding or sharpening articles, consisting of a grinding or sharpening wheel, a head at the side of the same, a spring bearing against said wheel and a spring bearing against said head, said springs being adapted to force said wheel and head in opposite directions toward each other.

8. In a device for grinding or sharpening articles, a grinding or sharpening wheel and a head between which said article may be placed, and a cap over said wheel and head having slots in harmony with the place of grinding or sharpening.

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