

I. M. ROSE.  
GRINDING OR SHARPENING DEVICE.

APPLICATION FILED MAR. 27, 1903.

NO MODEL.

Fig. 1.

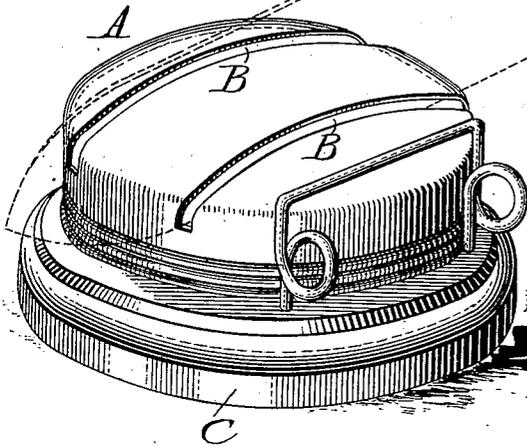


Fig. 4.

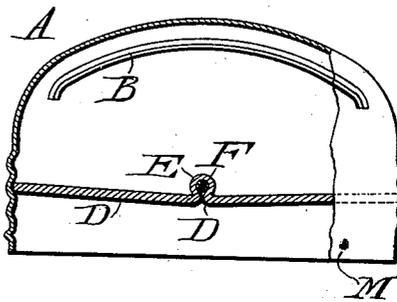


Fig. 2.

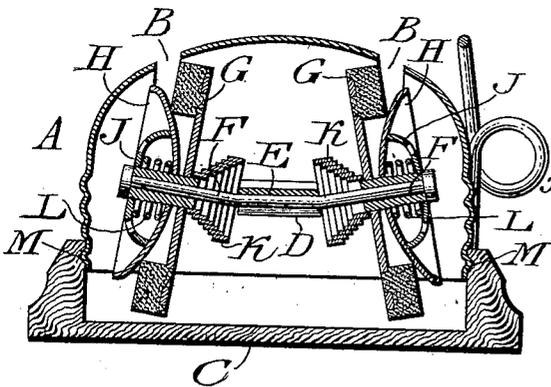
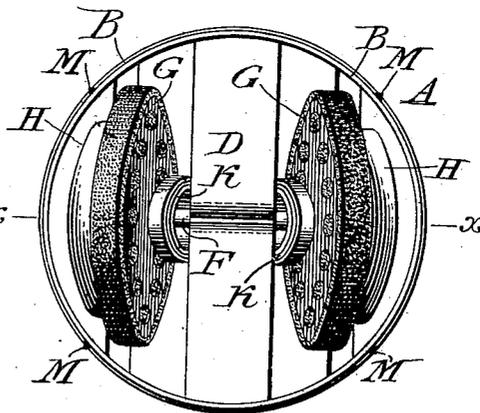


Fig. 3.



Witnesses

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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. 730,706, dated June 9, 1903.

Application filed March 27, 1903. Serial No. 149,844. (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 new and useful Improvements in Grinding or Sharpening Devices, of which the following is a specification.

My invention consists of an improvement in a grinding and sharpening device, the same embodying a stone or wheel, means for rotating said wheel by the reciprocation thereagainst of the article to be sharpened, said article thus constituting the motor of said wheel, while in grinding or sharpening contact with the same, a shaft carrying said wheel, and means, a cross-bar which forms the bearings for said shaft, and a cap which incloses said parts and has said cross-bar connected therewith, whereby said shaft is firmly supported and is well enabled to endure the strain or pressure to which it is subjected when the device is in service.

It also consists of details of construction, as will be hereinafter described.

Figure 1 represents a perspective view of a grinding, sharpening, or polishing device embodying my invention. Fig. 2 represents a vertical section thereof on line *x x*, Fig. 3. Fig. 3 represents a view of the interior of the device, taken from the bottom thereof. Fig. 4 represents a partial side elevation and a section of a portion at a right angle to Fig. 2.

Similar letters of reference indicate corresponding parts in the figures.

Referring to the drawings, A designates a cap having transverse slots B in the crown or top thereof.

C designates a base on which said cap is secured. Within said cap is a horizontally-arranged bridge or cross-bar D, whose ends are firmly secured to said cap and whose central portion is formed with an eye E, in which is mounted the shaft F, said eye for the purpose of strength being bent up from the metal or material of said cross-bar, as most plainly shown in Fig. 4. On opposite portions of said shaft are the loosely-fitted stones, burs, runners, or wheels G of grinding and sharpening nature or of polishing nature, if so desired, the loosely-fitted disks H, of dishing or

convex form, and the nuts J. Interposed between the bridge D and wheels G are the springs K, whose tendency is to hold said wheels in register with the slots B and compensate for any irregularities of contiguous parts. Interposed between the disks H and the nuts J are the springs L, whose tendency is to press said disks toward the wheels G, the tension of the same being adjusted by the nuts J.

The operation is as follows: The blade of a knife or other article of cutlery is passed through a slot B and introduced between the wheel and disk below the same. The blade is now drawn to and fro, so that reciprocating rotary motions are imparted to the wheel, and thus said blade is subjected to a grinding and sharpening action, it being noticed that when the blade first contacts with the disk the latter yields laterally to permit the proper location of the blade, after which the blade is pressed against the wheel, it being noticed that the blade by its reciprocations furnishes the power by which the wheel is rotated, and so the blade is ground and sharpened. During these operations the bearings of the shaft are subjected to considerable downward strain; but the bridge D with its eye E are strong in their nature and so firmly support said shaft, while the bridge remains connected with the cap.

On the exterior of the cap at the lower portion thereof are the teats M, which when the said cap is pressed into the base C spring into said base, and so act as a lock for holding the cap reliably connected with the base, it being evident that said cap is somewhat resilient in its nature, and so first contracts in order to enter the base and then expands, causing the engagement of said teats with the inner wall of said base, as most apparent in Fig. 2, without requiring other fastenings for said cap in its mount upon said base.

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

1. In a grinding or sharpening device of the character stated, a wheel, a disk at the side of the same, a shaft on which said wheel and disk are mounted, an inclosing cap with a slot therein leading to the place of grinding or

sharpening between said wheel and disk and a bridge connected with said cap and forming a bearing for said shaft.

2. In a grinding and sharpening device of the character stated, a grinding and sharpening wheel, a shaft for said wheel and a bridge which is connected with a surrounding member and formed with an eye, in which said shaft is mounted.

3. In a grinding or sharpening device, a base, grinding or sharpening members mounted therein, a resilient cap inclosing said members and mounted on said base and having at top a slot leading to said members and at

bottom outwardly-projecting teats which are sprung into said base.

4. In a grinding and sharpening device, a cap, a base on which the same is supported, a grinding or sharpening member within said cap, a bridge secured within said cap supporting the shaft of said member, and locking means projecting from the exterior of said cap sprung into said base.

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Witnesses:

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