

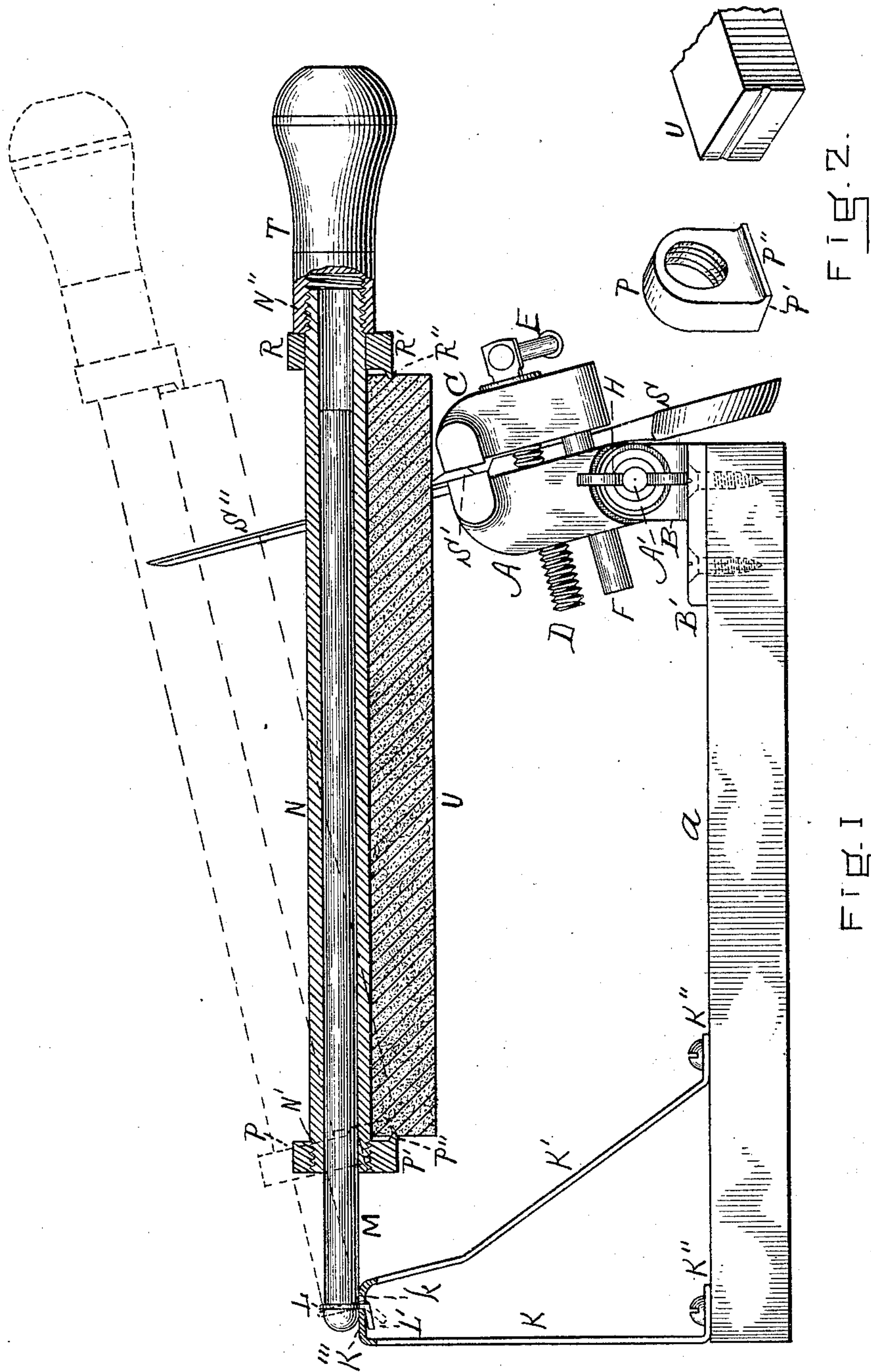
No. 688,146.

Patented Dec. 3, 1901.

J. H. YEATON.  
SHEARS SHARPENER.

(Application filed Oct. 3, 1901.)

(No Model.)



WITNESSES:

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# UNITED STATES PATENT OFFICE.

JUSTIN H. YEATON, OF PORTSMOUTH, NEW HAMPSHIRE.

## SHEARS-SHARPENER.

SPECIFICATION forming part of Letters Patent No. 688,146, dated December 3, 1901.

Application filed October 3, 1901. Serial No. 77,390. (No model.)

*To all whom it may concern:*

Be it known that I, JUSTIN H. YEATON, a citizen of the United States, residing in Portsmouth, in the county of Rockingham and State of New Hampshire, have invented a new and useful Improvement in Shears-Sharpener, of which the following is a specification.

This invention relates to machines which are intended, primarily, for sharpening shears, but which may also be employed in sharpening any cutting instrument which has a blade or blades requiring a beveled cutting edge; and the invention or improvement relates particularly to that class of shears-sharpening machines in which the blade to be operated on is held in a fixed and positive but adjustable position at a suitable angle to the plane of operation of a grinding-stone which is adapted to be reciprocated or moved over and upon the cutting edge of the blade and retracted alternatively, thus grinding and sharpening the blade at the desired angle or bevel.

The invention consists in a certain novel construction and arrangement of parts whereby the shears are held in such a position that the downwardly-extending handle swings clear of the base of the machine, and hence is not liable to swing the free or upwardly-extending blade into contact with the stone and cause the stone to be dragged over the edge thereof, whereby the machine can be taken apart by swinging up the grinding mechanism vertically instead of horizontally, whereby the grinding mechanism cannot swing off the frame by gravity, whereby the stone can be easily adjusted in and removed from its frame or holder, and whereby the operation of the machine is facilitated with due regard to economy of time and manufacture.

The nature of my invention is fully described below and illustrated in the accompanying drawings, in which—

Figure 1 is a view, partly in side elevation and partly in longitudinal vertical section, of a shears-sharpener embodying my invention, a pair of shears being in position and dotted lines illustrating the stone swung up vertically from the vise. Fig. 2 is a detail in perspective showing one of the clamp-nuts and

a portion of one end of the stone separated from the nut.

Similar letters of reference indicate corresponding parts.

*a* represents a suitable base. At one end of this base an adjustable vise is mounted. This vise consists of the relatively stationary jaw A, pivotally secured at A' to an upright or standard B, extending vertically from a plate B', which is screwed to the base *a*, and a movable jaw C, capable of being moved with relation to the jaw A by means of the screw D, which extends through a correspondingly-threaded hole in the jaw A, and a suitable handle E for rotating said screw. A guide F has one end rigidly secured to the jaw C and extends through a plain hole in the jaw A. By actuating the handle or lever E the vise is enabled to receive and clamp a blade, as S', of a pair of shears, of which S'' represents the other blade and S the handle, and by loosening a suitable nut H the angle of the vise may be changed by moving it upon the pivot A' to suit the desired bevel on the blade which is to be sharpened. As the vise is set at the extreme right end of the base *a*, adjusting it to a forward incline, so as to provide for the proper bevel of the blade S', allows the handle S of the free or loose blade S'' to swing by the base *a* without touching it, so that the blade S'' is free by the action of gravity to point upward and be entirely out of the way of the sharpening mechanism. In applying the shears the blade to be sharpened has its broad or smooth side against the inner surface of the jaw A, as shown in the drawings.

K represents a frame, of which K' is a brace, consisting, preferably, of a strip of flat metal bent into the shape shown and secured at its feet K'' by means of suitable screws to the base *a*. Its central portion K''' is flat and horizontal and is provided with a hole *k*. Into and through this hole the bent shank L' of the ring L extends, the bend being at substantially right angles to the ring portion and extending toward the left under the flat portion K''', whereby the ring cannot be detached from the frame K K' without swinging the upper portion of the ring rear-



ward, and hence the portion L' downward. This ring embraces by means of a suitable groove the rod M, which extends into the tube N for preferably the greater portion of its length, said tube being adapted to reciprocate or slide longitudinally and rotatively upon the rod M. The opposite ends of the tube are screw-threaded, the free end being thus threaded at N' to receive a clamp-nut P, the lower end P' of which is flat and broad and is provided with an inwardly-extending horizontal broad tooth or clamping edge P''. On the tube and near its opposite end is the ring R, provided with the lower horizontal end R' and horizontal tooth or clamping edge R'', the ring being exactly the shape of the nut P, but not screw-threaded. At this end the tube is screw-threaded at N'' to receive the handle T, which screws upon it against the ring R.

U represents the grinding-stone.

The grinding-stone is held firmly in position by screwing the handle T against the ring R, and thus forcing the clamping edges P'' and R'' into the opposite ends of the stone, which is held in this manner firmly in position. The blade is sharpened by pushing the stone over its edge toward the frame K, lifting the stone by means of the handle T and drawing the tube N out toward the end of the rod M, and then dropping the stone upon the blade S' and again pushing on the handle, and so on until the blade is sufficiently sharpened. As above mentioned, the handle S of the blade S'', being free to hang down without interfering with the base a, allows the blade S'' to project up in a substantially vertical position without its edge striking the stone U and dragging over it, as would be the case if the handle rested against the side edge of the base. The handle and its immediate supporting-frame are removed by swinging the rod M up vertically until the shank L' of the ring L can be removed from the hole k. Thus there is no danger of the stone coming in contact with the edge of the blade S'' or even dragging over the edge of the blade S'. To remove the stone U and replace it by a coarser or finer one is easily accomplished by simply loosening the handle or ferrule T.

Any kind of stone or sharpening surface of suitable shape may be employed and held by the clamps.

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

1. A sharpening device of the character described, comprising a base, a vise for holding the blade to be sharpened, means for adjusting the angle of inclination of said vise, said vise being set at the extreme edge of the base and with its movable jaw extending beyond said edge whereby the handle of the shears is free to swing below the surface of the base without coming in contact therewith, a suitable standard as K, a rod pivotally secured at one end to said standard and adapted to swing vertically from the vise, a tube slidingly disposed on said rod, clamps on said tube adapted to engage the ends of a suitable stone for grinding the blade, and a handle screwing from one end of the tube whereby the clamps are forced against the ends of said stone, substantially as described.

2. A sharpening device of the character described, comprising a base, an adjustable vise secured to said base near one end thereof and adapted to hold a blade at different angles, a standard as K provided with a perforated surface K''' k, a rod M, the hooked ring L, L' pivotally connecting said rod with the standard, the tube N slidingly disposed on said rod, the nut P, P' at one end of the tube and provided with the gripping edge or lip P'', the ring R, R' near the other end of the tube and provided with the gripping edge or lip R'', a suitable stone as U for grinding the instrument, and the handle T adapted to screw against said ring and thereby force the gripping edges or lips P'', R'' into engagement with the opposite ends of the stone, substantially as set forth.

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

JUSTIN H. YEATON.

Witnesses:

JOHN W. KELLEY,  
LILLIAN B. YEATON.