

(No Model.)

T. L. REGESTER.
DISK SHARPENER.

No. 580,465.

Patented Apr. 13, 1897.

Fig. 1.

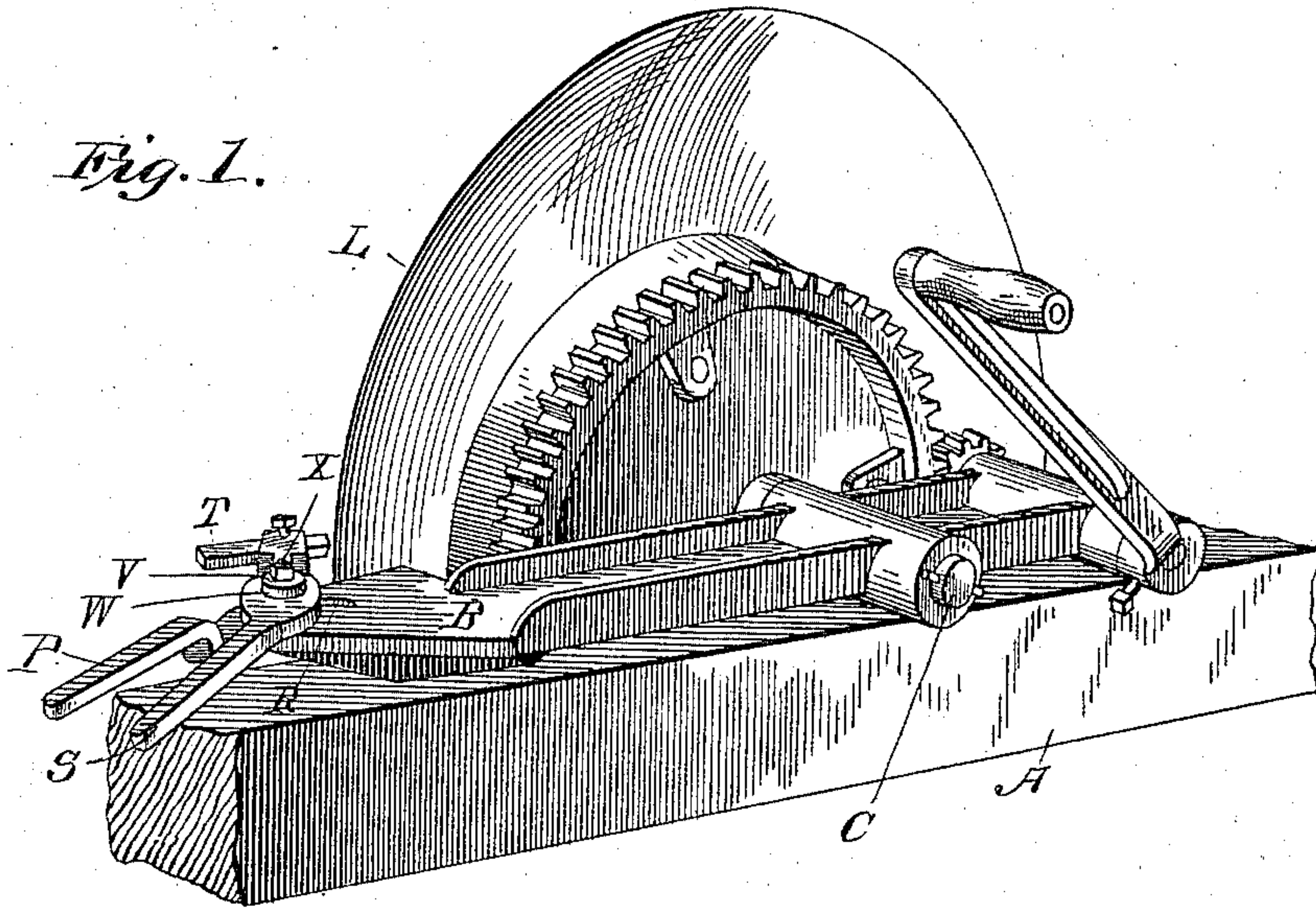


Fig. 2.

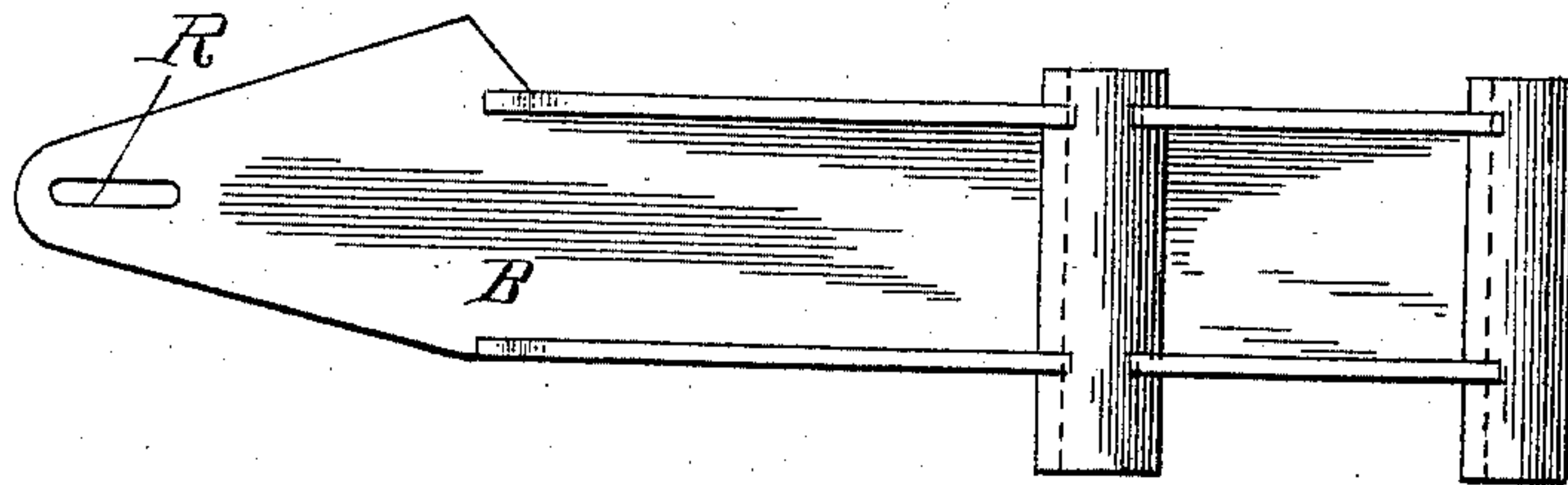
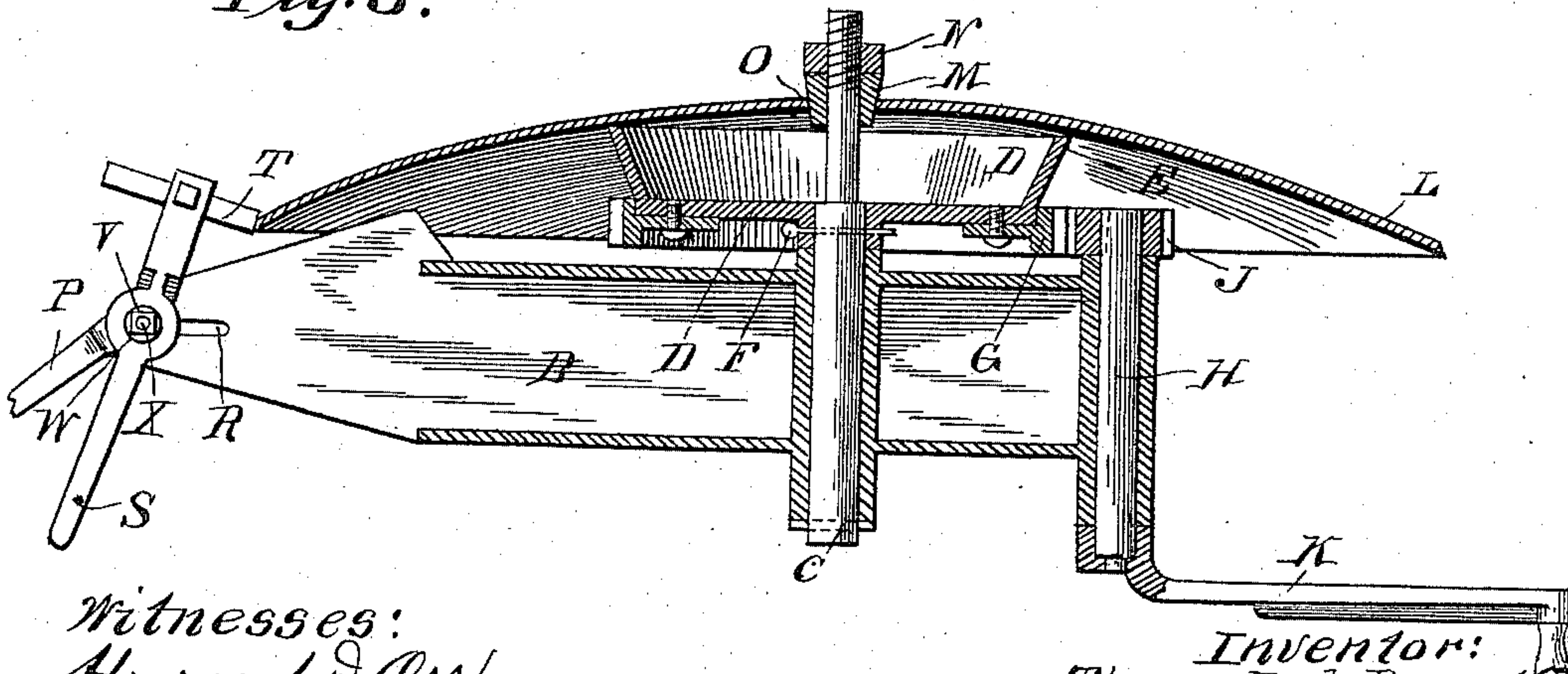


Fig. 3.



Witnesses:
Howard D. Orr,
Edward C. Lewis

Inventor:
Thomas Lyle Regester

By
John G. Manahan,
Att'y.

UNITED STATES PATENT OFFICE.

THOMAS L. REGESTER, OF STERLING, ILLINOIS, ASSIGNOR TO THE NOVELTY MANUFACTURING COMPANY, OF ROCK ISLAND, ILLINOIS.

DISK-SHARPENER.

SPECIFICATION forming part of Letters Patent No. 580,465, dated April 13, 1897.

Application filed February 14, 1896. Serial No. 579,246. (No model.)

To all whom it may concern:

Be it known that I, THOMAS LYLE REGESTER, a citizen of the United States, residing at Sterling, in the county of Whiteside and State of Illinois, have invented certain new and useful Improvements in Disk-Sharpeners; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

My invention has reference to machines for sharpening disks, and is intended to afford a cheap, convenient, and efficient means for sharpening the cutting edges of disks used in harrows and cultivators of different forms. It is so constructed that one person may hold the sharpening-knife to the side of the edge of the disk and at the same time rotate the latter against the action of said knife.

My invention consists in the mechanism hereinafter described for clamping and rotating a disk and the coincident contact of the paring-knife with the edge of said disk.

I attain the purpose aforesaid by the use of the construction shown in the accompanying drawings, in which—

Figure 1 is a perspective of a machine embodying my invention, exhibiting a disk in the position of being sharpened. Fig. 2 is a plan view of the plate which supports the operative parts. Fig. 3 is a horizontal transverse sectional view in the plane of the above-named plate.

Similar letters indicate similar parts throughout the several views.

A represents the frame of the machine, supported in any proper manner, upon which the plate B is suitably bolted.

C is a shaft journaled transversely in the plate B, and at one side of the frame A there is seated on said shaft C a circular metallic plate D, having its periphery turned from the frame A to form an annular flange E. A transverse pin F is passed through the shaft C and the hub of the plate D, between the main body of the latter and the plate B. In the interval between the plates B and D there is bolted to the latter the gear G, centered on the shaft C.

At one end of the plate B there is also journaled a transverse shaft H, provided at one end with the pinion J, adapted to engage and actuate the gear G. The shaft H is provided at its opposite end with a suitable crank K. The comparative size of the pinion J and gear G is about one to five, but such disparity may be increased or diminished, the purpose being to afford a large leverage advantage in the rotation of the shaft C.

L represents the disk to be sharpened, and is seated on the shaft C, with its concave side in contact with the flange E around the entire periphery of the latter. A conically-formed collar M is seated on the shaft C, with its smaller end projected into the central opening invariably found in the disks L. A threaded nut N, seated on the shaft C, is used to force the collar M into the opening O of the disk, and to thereby not only center said disk upon the shaft C, but to clasp said disk against the flange E aforesaid, so that in the rotation of the plate D the disk L is carried therewith.

On the plate B, oppositely to the shaft H, there is formed a stationary handle P and in said plate a slot R. In the slot R is adjustably seated the second handle S, which is provided at its opposite extremity with the knife T, in position to be forced and held against the side of the outer edge of the disk L, so as to pare and thereby thin and sharpen the edge of the latter. The handle S is seated on the slot R by means of a collar V, the base of which rests upon the plate B at each side of the slot R and the upper end of which extends laterally over the upper surface of the handle or lever S as an annular flange W. A bolt X, passed vertically down through the collar V and provided with a nut against the under surface of the plate B, affords means of holding the collar V at any desired locality on the slot R. The handle S is loosely seated around the collar V between the flange W and the plate B, and is therefore free to oscillate, whatever the compression effected by the bolt X. The outer end of the handle S is in such relation to the handle P that the operator may grasp both with one hand and, through the assistance of the stationary handle P, press the knife T against the disk L with any desired degree of pressure or per-

mit said knife to adjust itself to any irregularities in the thickness of said disk.

If it is desired to sharpen the disk also upon the concave side, said disk may be seated against the annular flange E, with its convex side contiguous thereto, in the same manner as heretofore described in reference to the concave side thereof.

My invention can be very cheaply afforded, is simple in construction, occupies but little room, and requires no special skill in its operation. The knife T is adjustably seated in the handle S by the set-screw l, and by this adjustment and that of the lever or handle S in slot R the machine can be used upon disks of any size. The method of sharpening by paring off the surface is the only practicable one, as to sharpen by grinding is substantially an endless job.

What I claim as my invention, and desire to secure by Letters Patent of the United States, is—

1. In a disk-sharpener, the combination, with a plate, one end of which is provided with means for holding and rotating a disk, and the opposite end is slotted longitudinally, and provided with a stationary handle, of a movable handle pivotally secured to the slot-

ted end of the plate, one end of which lies adjacent to the stationary handle and the opposite end is provided with a knife which is adapted to be pushed against the edge of the disk, substantially as set forth.

2. In a disk-sharpener, the combination, with a plate, one end of which is slotted longitudinally, and the opposite end and the intermediate portion are each provided with a transverse bearing, a shaft in each of the bearings, one of which is provided with a crank at one end and a gear-pinion at the other, a cup-shaped plate on the inner end of the other shaft, a gear-wheel upon the plate in engagement with the pinion, means for securing a disk to the outer end of the second-mentioned shaft, and a lever adjustably secured to the slotted end of the plate, one end of which forms a handle, and the opposite end is provided with a knife adapted to engage with the edge of the disk, substantially as set forth.

In testimony whereof I affix my signature in presence of two witnesses.

THOMAS L. REGESTER.

Witnesses:

JOHN G. MANAHAN,
ISABELLE MANAHAN.