No. 618,008. Patented Jan. 17, 1899.

J. S. HOERNER.

SHARPENER FOR EDGE TOOLS.

(Application filed May 23, 1898.)

(No Model.) 2 Sheets—Sheet I.

FIG. 1

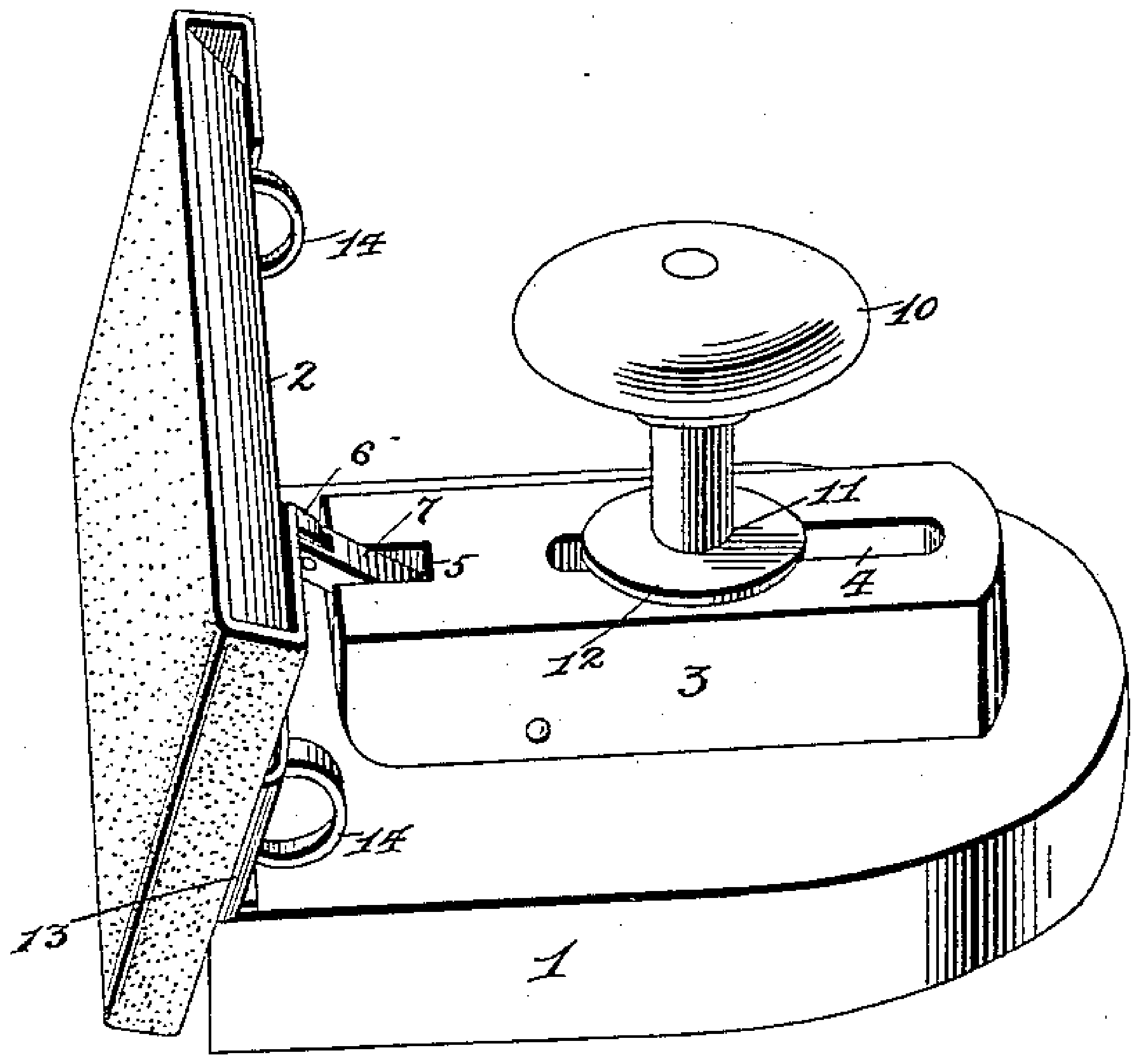
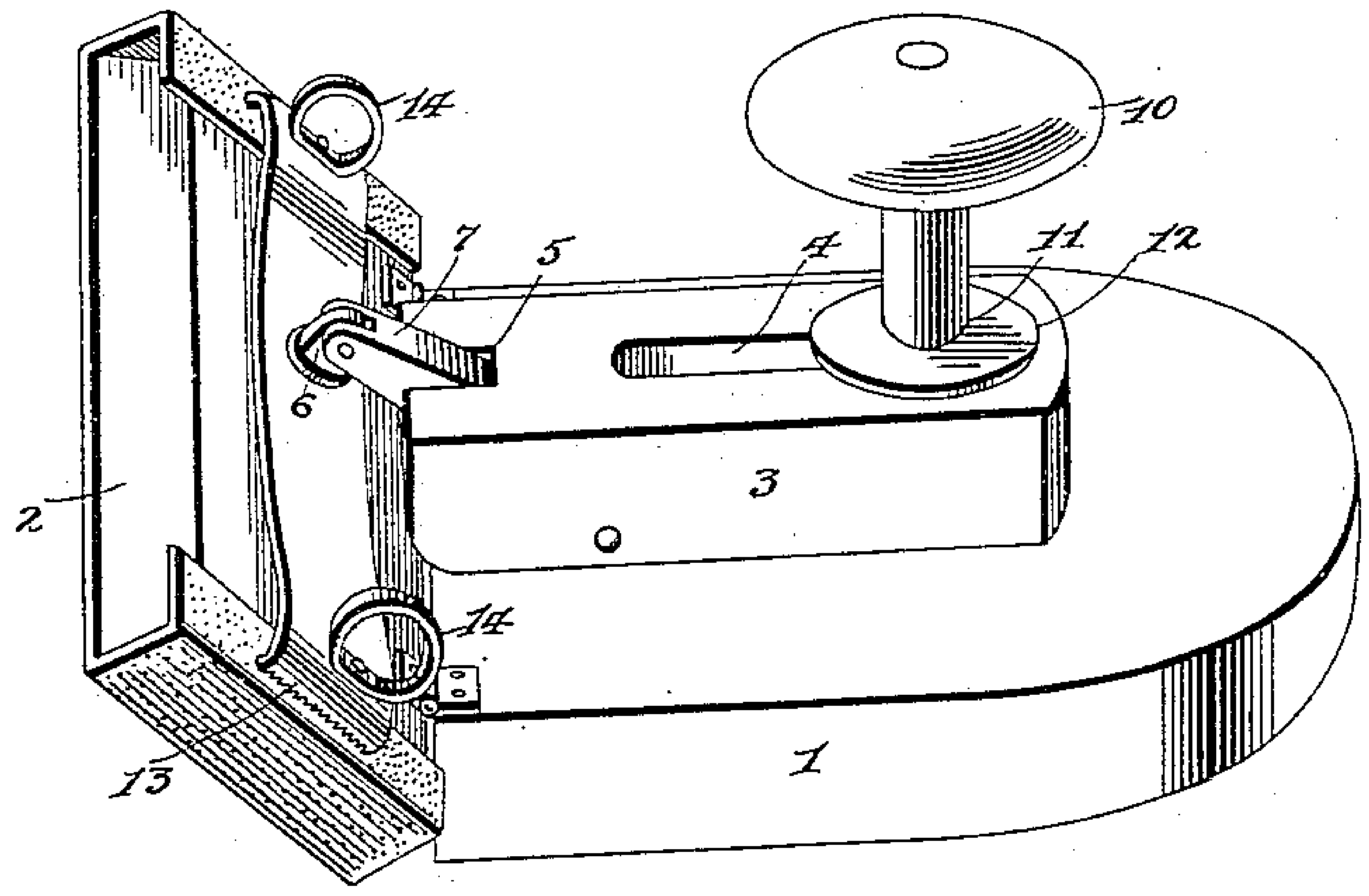


FIG. 2



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Witnesses

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FIG. 3

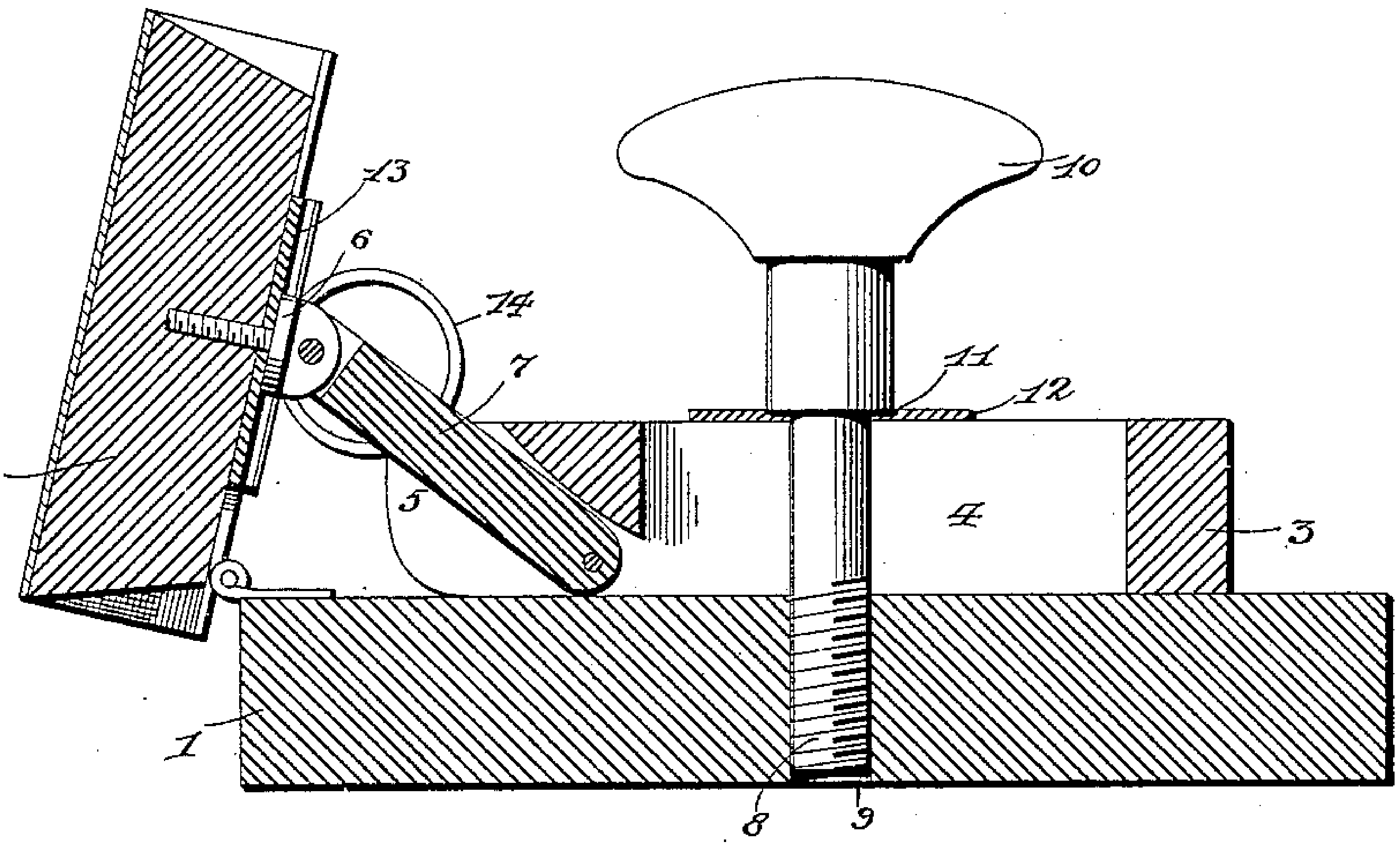
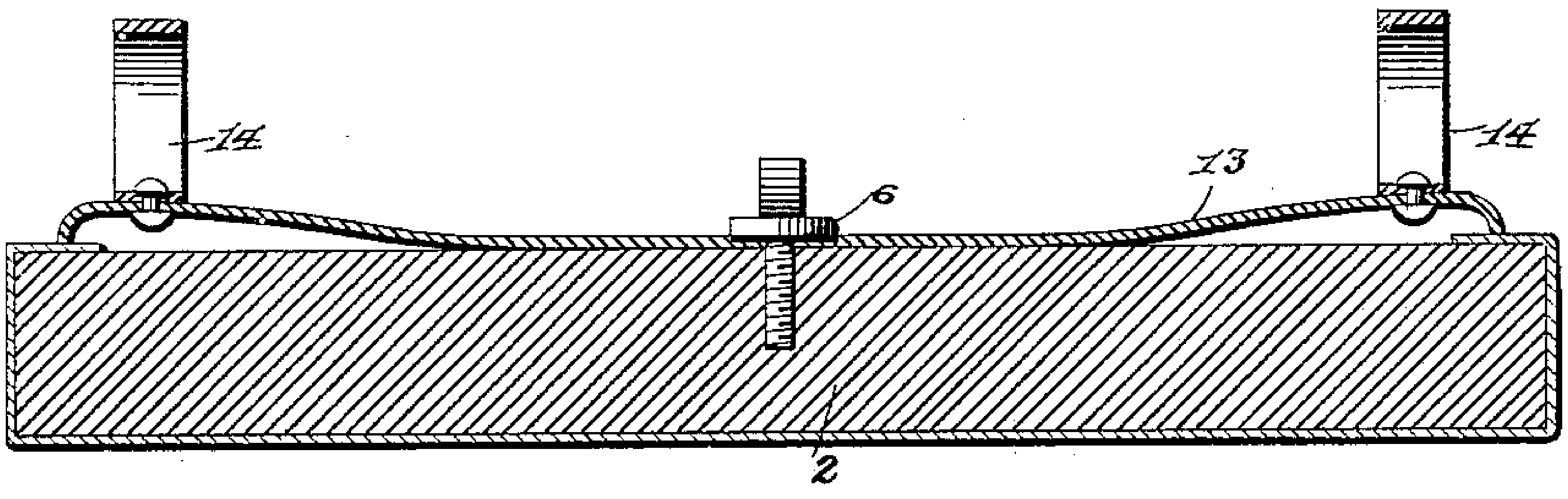


FIG. 4



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UNITED STATES PATENT OFFICE.

JOHN S. HOERNER, OF HIGHLAND, ILLINOIS.

SHARPENER FOR EDGE-TOOLS.

SPECIFICATION forming part of Letters Patent No. 618,008, dated January 17, 1899.

Application filed May 23, 1898. Serial No. 681,472. (No model.)

To all whom it may concern:

Be it known that I, JOHN S. HOERNER, a citizen of the United States, residing at Highland, in the county of Madison and State of Illinois, have invented certain new and useful Improvements in Sharpeners for Edge-Tools; 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.

The invention relates to sharpeners for edge tools, and more particularly to a device for sharpening the blades of paper-cutting machines.

The object of the invention is to provide a simple, durable, and inexpensive device of this character by means of which the blades in an "upper-cut" and "down-cut" paper-cutting machine may be sharpened without the necessity of removing them from the machine.

With this object in view the invention consists in certain features of construction and combination of parts, which will be hereinafter fully described and claimed.

In the accompanying drawings, Figure 1 is a perspective view of my improved sharpening device, showing it set to sharpen the blade of a "down-cut" paper-cutting machine. Fig. 2 is a similar view showing it adjusted to sharpen the blade of an "upper-cut" paper-cutting machine. Fig. 3 is a longitudinal sectional view of the device. Fig. 4 is a sectional view through the hinge-section and its spring-clamp.

In the drawings, 1 denotes the base of a sharpener, to the front end of which is hinged a section 2, adapted to carry the abrading material.

3 denotes a sliding block having a longitudinal aperture 4 and at its forward end a slot 5.

6 denotes a stud fastened to the back of the hinge-section, and 7 denotes a link having one end pivoted to the block.

8 denotes a set-screw, the lower end of which passes through the longitudinal slot in the block and engages a screw-thread on the socket 9 in the base. This screw is provided with a handle 10 for rotating it and is also provided with an angular shoulder 11, that bears against a clamping-washer 12 to clamp said washer to the block and hold the block in its adjusted position and the hinge-section at the desired angle.

13 denotes a spring-clasp, the ends of which are preferably turned downward and are serrated. This clasp is secured to the back of the hinge-section by the screw-post and is designed to hold a strip of emery paper or cloth or other abrading material to the hinge-section. Rings 14 are secured to the ends of the clamp and afford means for releasing the said ends from the strip in order to replace it when worn.

In operation when it is desired to sharpen the blade of a down-cut paper-cutting machine the blade is lowered to a point within about two or three inches from the bed-plate of the machine, and the sharpening device is moved up to the blade and the hinge-section adjusted to lie parallel with the cutting edge of the blade. The set-screw is now operated to clamp and retain the hinge-section at the desired angle, as shown in Fig. 1. Now by reciprocating the device across the bed-plate of the machine with the abrading material bearing against the cutting edge of the blade said blade will be easily and quickly sharpened without the necessity of removing it from the machine and with no danger of the workman having his hand cut during the operation.

When sharpening the blade of an upper-cut machine, the device is adjusted to the position shown in Fig. 2 and is reciprocated across the bed-plate of the machine in the manner above described.

While I have shown the hinge-section as being provided with a strip of emery paper or cloth, I would have it distinctly understood that I do not restrict myself to such construction and consider as coming within the scope of my invention any sharpening device in which the abrading-tool is hinged to a base and is adapted to be adjusted in different angles, and therefore wherever in claims the term "abrading-tool" is employed said term is meant to cover any style, shape, or character of abrading-tool capable of performing the work in view.

Having thus described my invention, what I claim is—

1. The combination with the sliding base having a flat under side, of an abrading-tool hinged thereto, and means for locking the abrading-tool at different angles to the base, substantially as specified.

2. The combination with the base, an abrading-tool hinged thereto, a sliding block, a link connection between the abrading-tool and the sliding block, and means for clamping the block at different points of adjustment, substantially as described.

3. The combination with the base, a hinged section secured thereto, a clasp secured to the back of the hinged section and adapted to engage the abrading-strip, a sliding block having a longitudinal aperture, a screw-stud secured in the back of the hinged section, a link pivoted to the screw-stud and to the sliding block, and a set-screw extending through the slot in the block, and engaging a screw-threaded socket in the base-plate, substantially as set forth for the purpose described.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

JOHN S. HOERNER.

Witnesses:
GEO. J. KERNER,
LOUIS LORY, Jr.