

954,812.

Fig. 1.

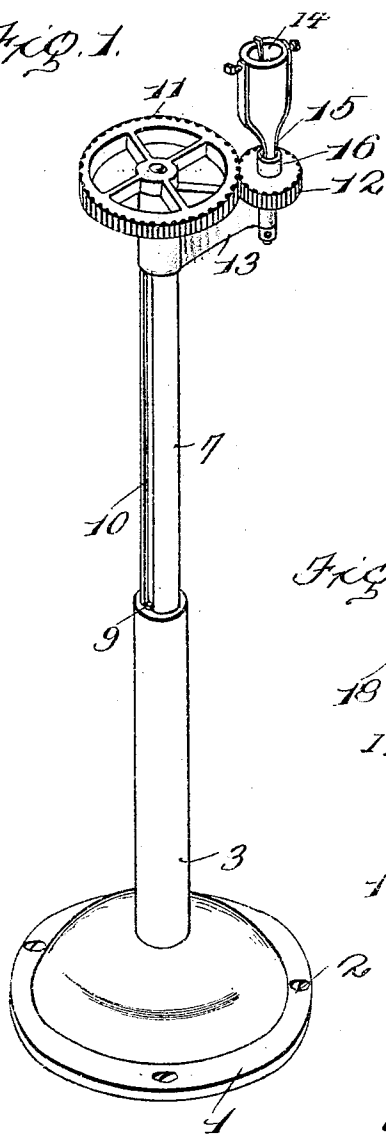


Fig. 2.

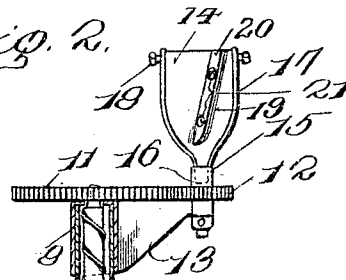
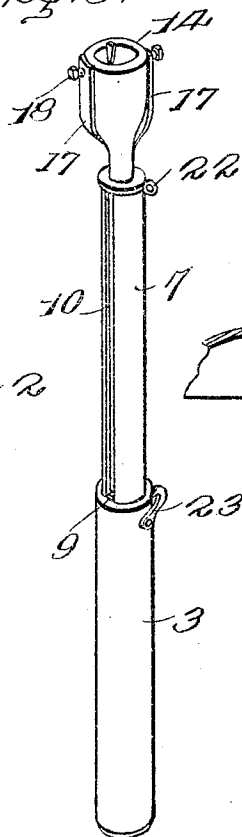


Fig. 3.



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HENRY W. KOHNES, OF DAYTON, OHIO, ASSIGNOR OF ONE-THIRD TO CHARLES W. ALDAY, OF DAYTON, OHIO.

PENCIL-SHARPENER.

954,812.

Specification of Letters Patent.

Patented Apr. 12, 1910.

Application filed September 10, 1908. Serial No. 452,499.

To all whom it may concern:

Be it known that I, HENRY W. KOHNES, citizen of the United States, residing at Dayton, in the county of Montgomery and State of Ohio, have invented certain new and useful Improvements in Pencil-Sharp-
 5 eners, of which the following is a specification.

The object of my invention is to provide
 10 an efficient, durable and cheaply constructed device for sharpening pencils comprising essentially, a cutter attached to the end of telescoping tubular sections and adapted to revolve directly or indirectly therewith.

The invention further consists in the novel
 15 construction and arrangement of parts whereby the device with certain modifications in formation may be stationary or portable.

For a full understanding of the invention and the merits thereof and to acquire a knowledge of the details of construction and the means for effecting the result, reference
 20 is to be had to the following description and accompanying drawings, in which:

Figure 1 is a perspective view of the device; Fig. 2 is a vertical longitudinal sectional view thereof; and, Fig. 3 a modification illustrating a portable form of device.

Corresponding and like parts are referred
 30 to in the following description and indicated in all the views of the drawing by the same reference characters.

Referring to the drawings, the numeral 1
 35 designates the base adapted to be secured to any suitable support as by screws 2, and 3 designates a tubular casing or vertical support secured to the base 1 and serves as a cover for the inner tubular sections herein-
 40 after described.

The numeral 4 designates a tube located within the casing 3 and provided internally with a spiral groove 4^a adapted to receive and cooperate with a spiral rib 4^b surrounding the spindle 5, and cause said spindle to rotate upon the application of pressure while gradually assuming a position within said tube. As before stated, the tube 4 is of smaller diameter than the casing 3, and a
 45 spring 6 is interposed between said tube and casing for the purpose of retaining the spindle 5 and tubular section 7 in a normal outwardly extended position relative to the casing.

The spindle 5 is rotatably secured at one

end to the tubular section 7, as shown at 8, and the numeral 9 designates projections or lugs on the tube 4 arranged to slide in slots 10 formed in said sections 7 and by means of which outward movement of the spindle and tubular section 7, occasioned by the tension of the spring 6 upon the end of the tubular section, will be limited.

Located at the outer extremity of the tubular section 7 and rigidly secured to the end
 65 of the spindle 5 extending through said section, is a cog wheel 11 meshing with a smaller cog 12, and adapted to rotate with said spindle. The cog wheel 12 is journaled in the bracket arm 13 rigidly secured to the tubular section 7, and a cup 14 is secured to said wheel and designed to rotate therewith. The revolutions of the cup 14 will be governed by the degree of the gear thus formed and as illustrated will cause said cup
 70 to revolve faster than the spindle. The cup is preferably formed with a stem 15 arranged to fit within a socket 16 located upon the wheel 12, and vertically supported by clamp members 17 secured to said socket and attached to the cup as by set screws 18.

The numeral 19 designates the cutter blade adapted to extend through a slot in the body portion of the cup 14, and be secured to a lip 20 formed upon said cup to hold said blade at a shearing angle and bring the cutting edge in contact with a pencil in the desired manner, and the said blade may be adjustably secured to the lip 20 as by screws 21 to provide a convenient method of replacing same when dull or broken.

Referring to Fig. 3, a portable form of device is shown wherein the gear wheels 11 and 12 are eliminated and the cup 14 secured directly to the spindle 5. An eye 22 is located upon the tubular section 7 arranged to receive a hook 23 attached to the casing 3, and serves to hold the sharpener in a closed or telescoping position.

With the arrangement of the several parts as shown, the operation of the device is as follows:—The end of a pencil partly pointed is placed in the cup and pressure applied. The spiral rib on the spindle following the similarly formed groove in the tube 4, will cause said spindle and cog wheel 11 to rotate to the extent of pressure, and the wheel 12 meshing with the cog wheel 11 and carrying the cup, will be rotated, thus exerting the

cutting action of the blade 19 upon the pencil while revolving there-around. Upon the release of pressure, the spindle 5 and tubular section 7 carrying the gear and cup 14 will be returned to their normal extended position by the spring 6.

The operation of the modified form of device designed as a portable sharpener and illustrated in Fig. 3 is the same as above described, the gear being dispensed with and the cup attached directly to the spindle 5 and rotated therewith. The hook and eye may be conveniently used to hold the telescoping sections in a closed position when placed in the pocket as will be understood.

Having thus described the invention, what is claimed as new is:—

1. A pencil sharpener including a tubular outer casing, a tubular fixed section secured within said casing but spaced from the same, said inner section being provided with an internal spiral groove, a spindle provided with a spiral rod cooperating with the spiral groove so as to rotate the spindle upon a downward movement thereof, and an exterior nonrotatable tubular section surrounding the spindle and spaced therefrom, said section being loosely connected to the spindle and reciprocating therewith, and said section telescoping into the space between the outer casing and the spiral grooved inner section and thereby forming means whereby the spindle may be depressed into said outer tubular section, but guarding the spindle from contact with the hands of the operator.

2. A pencil sharpener including a tubular support or outer casing, a tubular section within said casing but spaced therefrom, a central spindle having a spiral-threaded en-

gagement with the inner tubular section so that the spindle shall rotate upon being telescoped into said section, a cutter mounted to be rotated by said spindle, a spiral spring within the casing and surrounding the inner tubular section, and an outer nonrotatable tubular section surrounding the spindle, loosely connected thereto and reciprocating with it, said tubular section telescoping into the space between the first named outer casing and the inner section and moving against the pressure of said spring, said outer nonrotatable section thereby constituting means whereby the spindle may be moved and said spindle protected from contact with the hand.

3. A pencil sharpener including a rotatable spindle and a fixed tubular section having a spiral-ribbed engagement with said spindle to rotate the latter upon a telescoping movement of the latter into the tubular section, a cutter mounted to be rotated by said spindle, an outer casing nonrotatable with the spindle but loosely engaged therewith, surrounding the spindle, spaced therefrom and having telescopic engagement with the tubular section, thereby forming means whereby the spindle may be operated, but providing a guard preventing contact of the hand of the operator with the spindle, and a spring contained within said outer fixed tubular section, said spring resisting the telescoping movement of the spindle.

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

HENRY W. KOHNES. [L. S.]

Witnesses:

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