

No. 891,015.

PATENTED JUNE 16, 1908.

G. P. SUMA.
PENCIL SHARPENER.
APPLICATION FILED JAN. 6, 1908.

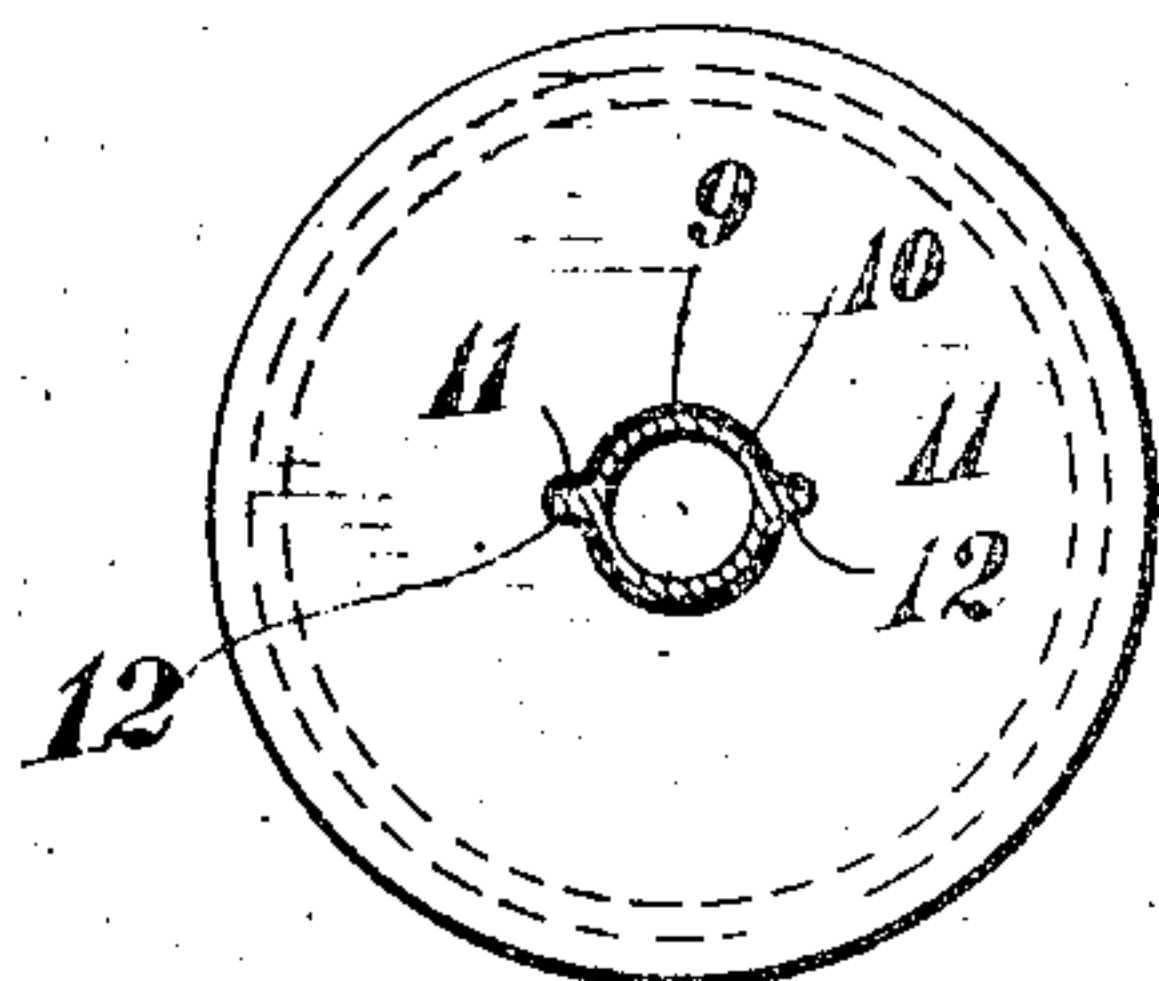


Fig. 2

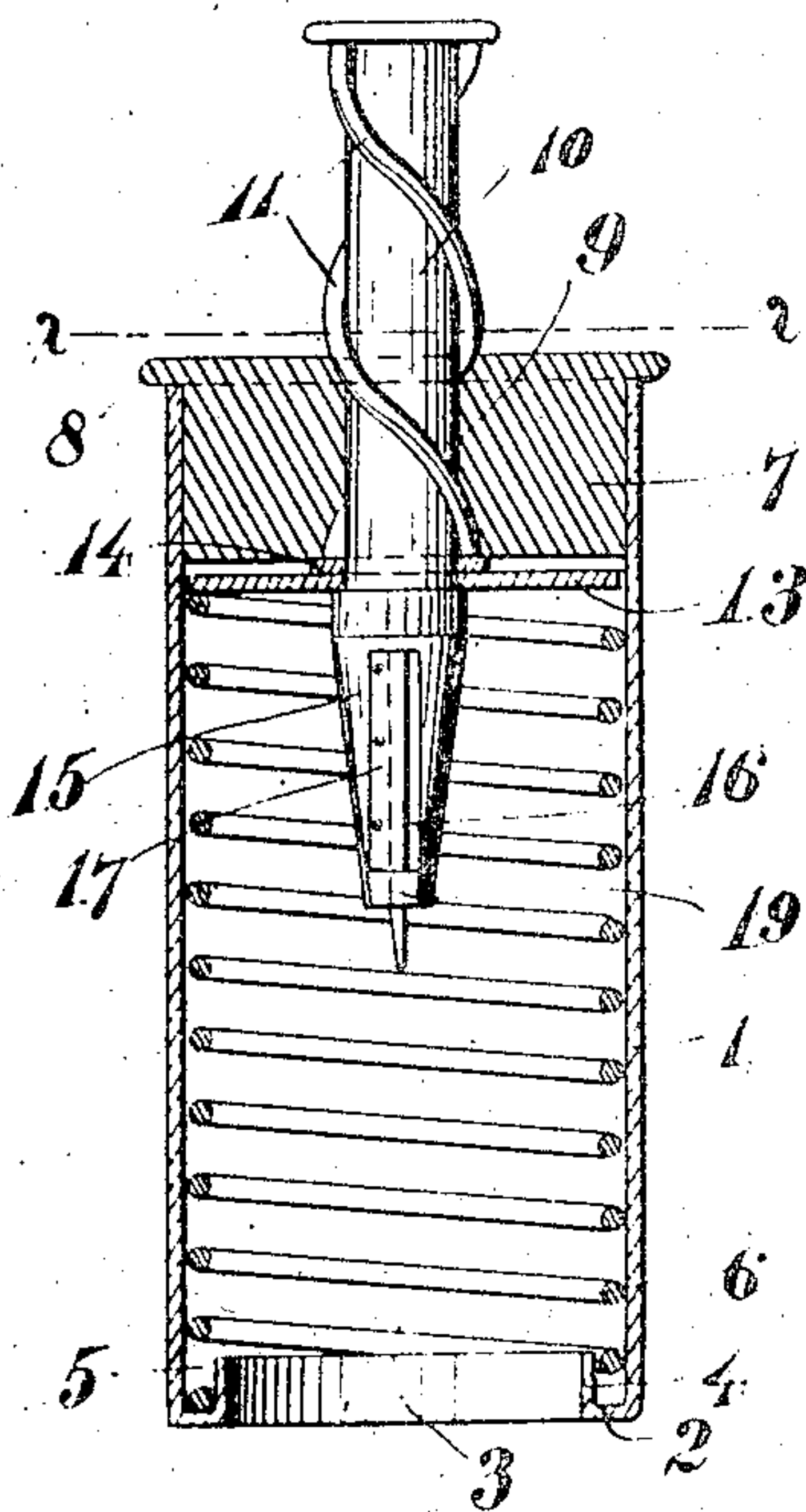


Fig. 1

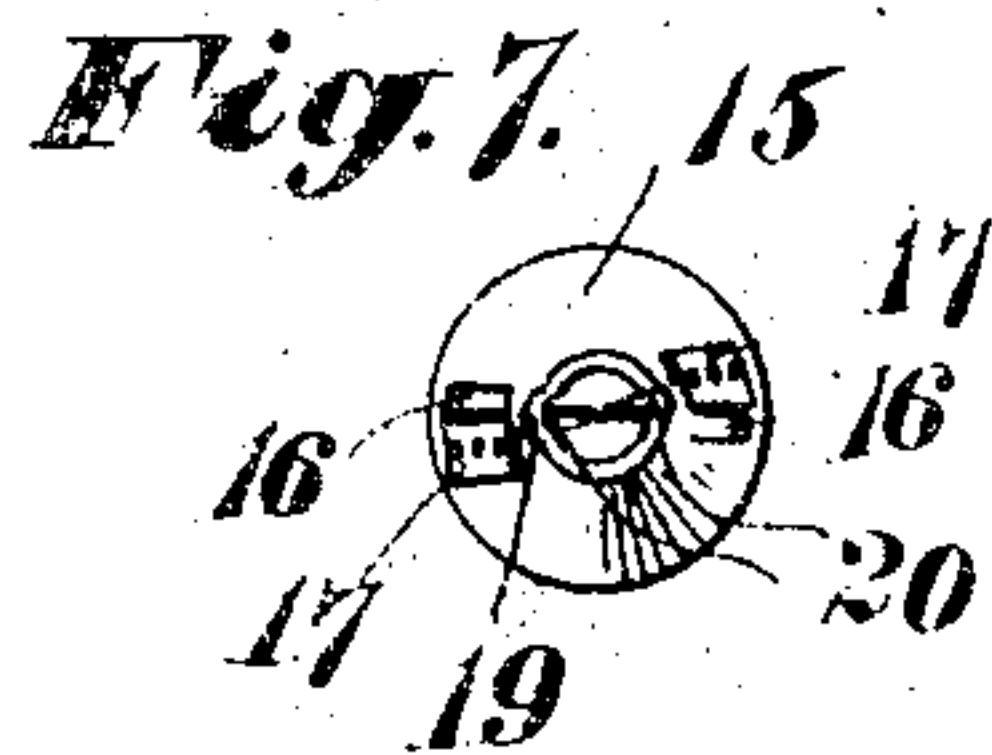


Fig. 7.

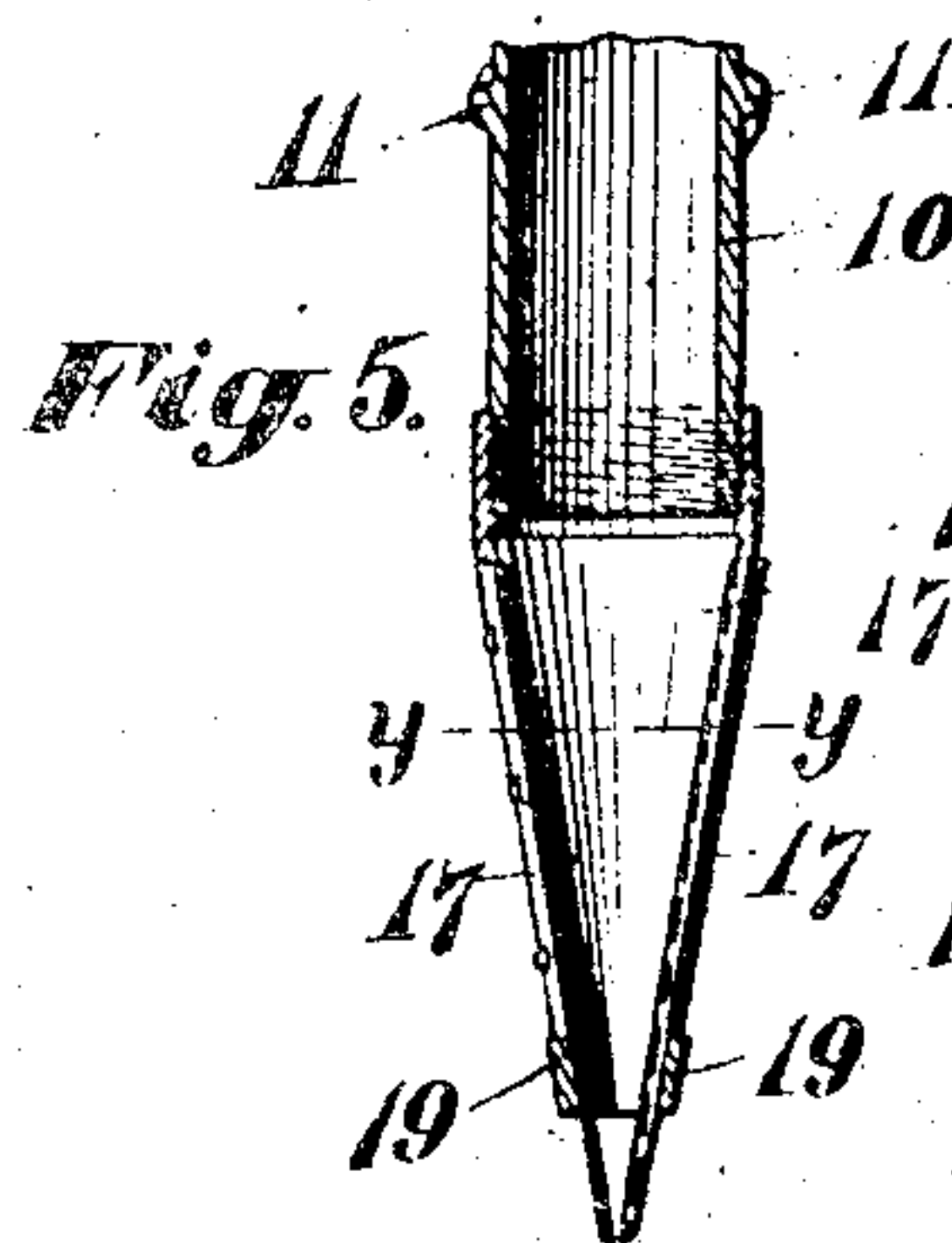


Fig. 5.

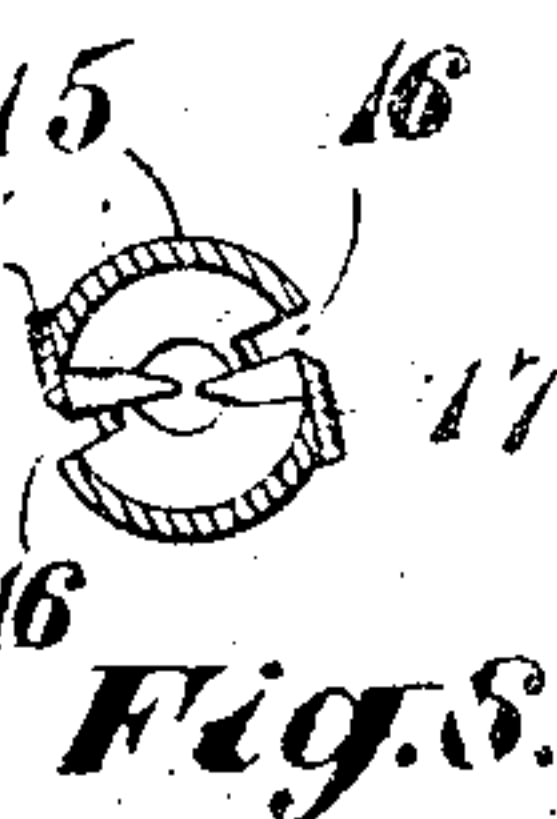


Fig. 3.

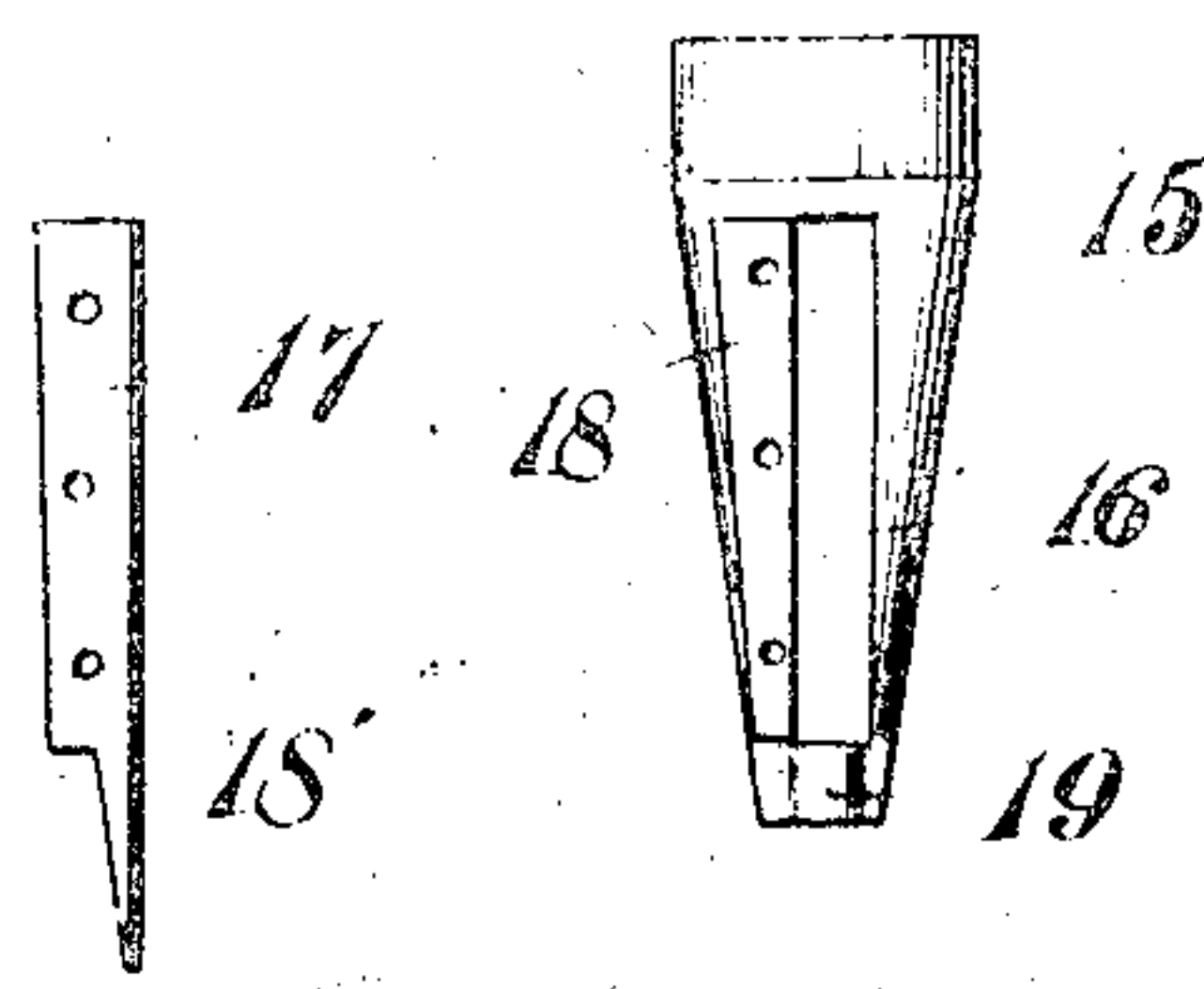


Fig. 4.

Fig. 3

Witnesses,
A. A. Dixon
H. J. Austin

Inventor;
George P. Suma
by
Joshua R. Potts.
Atty.

UNITED STATES PATENT OFFICE.

GEORGE P. SUMA, OF CHICAGO, ILLINOIS.

PENCIL-SHARPENER.

No. 891,015.

Specification of Letters Patent.

Patented June 16, 1908.

Application filed January 5, 1908. Serial No. 409,404.

To all whom it may concern:

Be it known that I, GEORGE P. SUMA, a citizen of the United States, residing at Chicago, county of Cook, and State of Illinois, have invented certain new and useful Improvements in Pencil-Sharpeners, of which the following is a specification.

My invention relates to pencil sharpeners and particularly to that class thereof wherein the pencil is held in a suitable sleeve and a knife is caused to move about the end of the pencil to sharpen the same.

The object of my invention is to provide a pencil sharpener of simple construction which will readily and quickly sharpen the pencil.

A further object of my invention is to provide a pencil sharpener of the class mentioned of such improved construction that the point of the pencil will not be readily broken while being sharpened.

Other objects will appear hereinafter.

My invention will be more readily understood by reference to the accompanying drawings forming a part of this specification and in which:

Figure 1 is a vertical section of the device, parts being shown in elevation, Fig. 2 is a top plan view thereof, a portion of the device being shown in section, the section being taken on the line $x-x$ of Fig. 1, Fig. 3 is an elevation of the sharpening element with the knife removed, Fig. 4 is a detail view of the knife, Fig. 5 is a vertical section of the sharpening element, the knives being in position, Fig. 6 is a section on the line $y-y$ of Fig. 5, and Fig. 7 is a bottom plan view thereof.

Referring to the drawings, 1 indicates a hollow cylindrical member having a bottom, 2. The bottom, 2 is provided with a central discharge opening, 3 for the shavings defined by an annular flange, 4 extending upwardly from the bottom and forming an annular groove, 5 to receive the end of a spring, 6, the purpose of which will appear hereinafter. The upper end of the member, 1 is closed by a member, 7 which is preferably solid and extends a considerable distance within the member, 1.

8 indicates an annular flange on the closure, 7 for limiting its inward movement.

The closure is provided with a central vertical bore, 9 to receive a vertically reciprocatory sleeve, 10. The sleeve, 10 is provided with the helical flanges, 11 throughout a greater portion of its length, and the bore, 9 is provided with corresponding grooves, 12.

It is obvious that by reciprocating the sleeve through the bore it will be caused to rotate. The sleeve, 10 is rotatably mounted on a plate, 13 between which and the bottom, 2 is interposed the spring, 6, which tends to hold the plate and sleeve in raised position, the sleeve being longitudinally fixed in the plate. 14 indicates a washer interposed between the ends of the helical flanges, 11 and the plate, 13. The washer, 14 takes up the wear and reduces the friction between the parts.

Fixed to the lower end of the sleeve, 10 is a conical member, 15 having a pair of slots, 16 which extend almost the length of said member. The slots, 16 are diametrically opposed and extending through said slots are a pair of knives 17, which are secured to the flattened faces, 18 formed on the outer walls of said member. The knives are provided with a slender depending portion, 18' which converge, or nearly so at their points and which serve to sharpen the lead of the pencil. The portions, 18' are arranged with their upper ends entirely within the member, 15 and the member, 15 is somewhat bulged or outwardly bowed as at 19, forming recesses, 20 into which said portions fit, holding them firmly. By arranging the knives diametrically opposite as shown clearly in Fig. 6, the tendency to break the point of the pencil so common in sharpeners of this class is avoided, as the pressure of the knives upon each side of the blade is equal. The member, 15 is secured to the bottom of the sleeve, 10 in any suitable manner and its upper edge forms a shoulder 21 between which and the ends of the flanges, 11 are arranged the plate, 13 and the washer 14.

To use the device, the pencil is inserted in the sleeve, 10 and pressed downwardly against the tension of the spring, 6. As the sleeve moves downwardly it is caused to rotate in the manner before described and in rotating causes the knives to travel about the end of the pencil, sharpening the same. When the pencil is withdrawn the spring, 6 quickly returns the parts to normal position.

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

1. In a pencil sharpener a cylinder open at the bottom, in combination with a closure for the top of said cylinder having a central vertical bore, a sleeve mounted for vertical reciprocation through said bore, helical flanges on said sleeve and extending sub-

stantially throughout its length, the bore in said closure being correspondingly grooved and means on the end of said sleeve for sharpening the pencil, substantially as described.

5 2. In a pencil sharpener a cylindrical member having a closure at its upper end, a sleeve mounted for vertical reciprocation through said closure coacting means on said sleeve and said closure for causing said sleeve to
10 rotate as it is reciprocated and a pair of diametrically opposed knives angularly arranged at the lower end of said sleeve, as and for the purpose specified.

15 3. In a pencil sharpener a cylindrical member open at the bottom, in combination with a closure for the top of said member, a plate

arranged within said member, a spring arranged beneath said plate, a sleeve rotatably mounted in said plate and arranged for vertical reciprocation through said closure, 20 coacting means on said sleeve and said closure for causing said sleeve to rotate as it is reciprocated and means secured to the lower end of said sleeve for sharpening a pencil, substantially as described. 25

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

GEORGE P. SUMA.

Witnesses:

ARTHUR A. OLSON,
HOWARD S. AUSTIN.