

E. H. KLABER & S. WHITEHEAD.
PENCIL SHARPENER.

APPLICATION FILED DEC. 19, 1910.

Patented Jan. 14, 1913.

2 SHEETS—SHEET 1.

1,050,770.

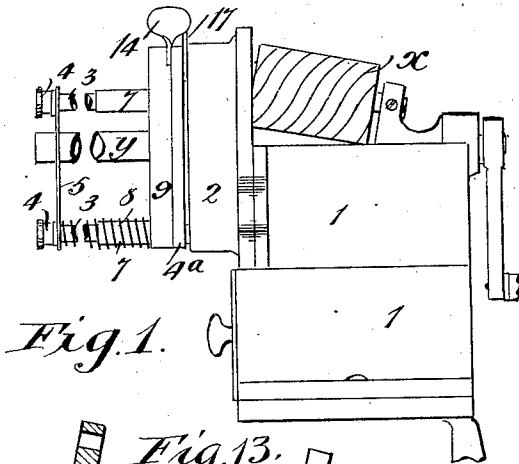


Fig. 1.

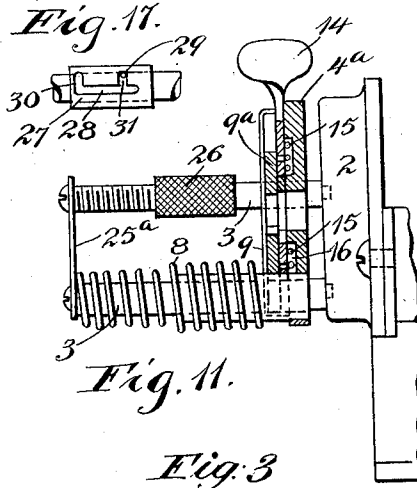


Fig. 3.

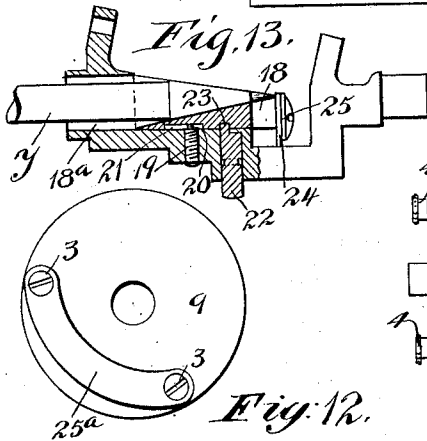


Fig. 12.

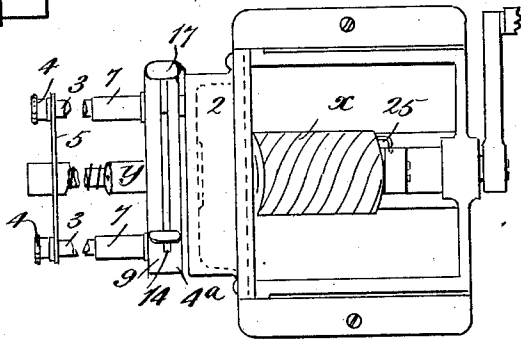


Fig. 11.

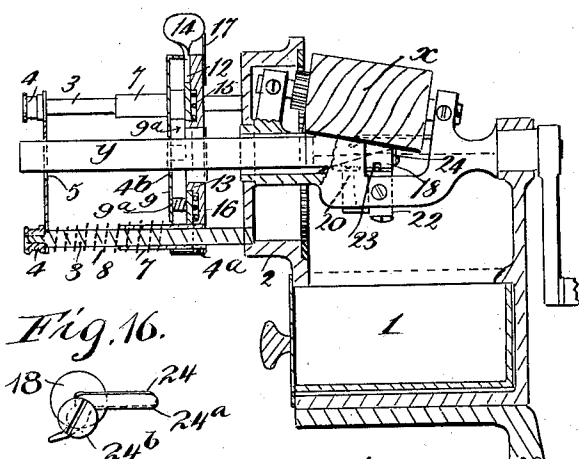


Fig. 16.

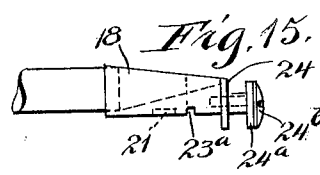


Fig. 15.

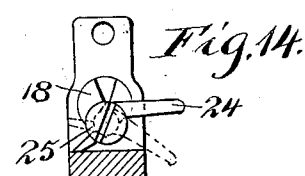


Fig. 14.

Fig. 2.

WITNESSES

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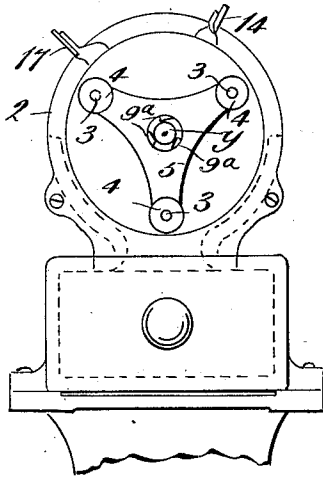


Fig. 4.

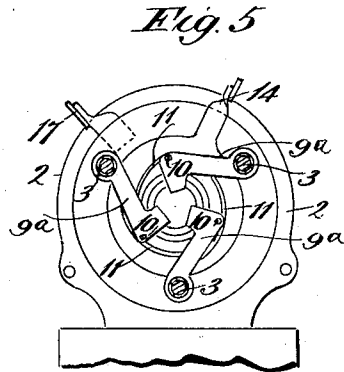


Fig. 5.

Fig. 6.

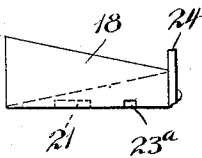


Fig. 10.

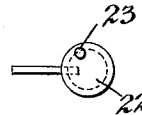


Fig. 7.

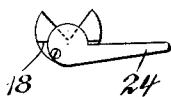


Fig. 9.

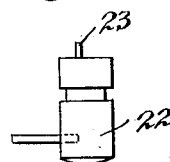
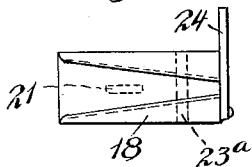


Fig. 8.



WITNESSES

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UNITED STATES PATENT OFFICE.

EMILE HERTZ KLABER, OF LONDON, ENGLAND, AND SAMUEL WHITEHEAD, OF BERLIN, GERMANY; SAID WHITEHEAD ASSIGNOR TO SAID KLABER.

PENCIL-SHARPENER.

1,050,770.

Specification of Letters Patent.

Patented Jan. 14, 1913.

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To all whom it may concern:

Be it known that we, EMILE HERTZ KLABER, a subject of the King of Great Britain, residing in London, England, and SAMUEL WHITEHEAD, a subject of the King of Great Britain, residing in Berlin, Germany, have invented certain new and useful Improvements in Pencil-Sharpeners, of which the following is a specification.

10 This invention relates to improvements in pencil sharpeners and refers to devices of the kind in which the pencil is held stationary and the cutting effected by a rotary cutter which is arranged at an angle relatively to the axial line of the pencil and mounted upon a suitable frame which is caused to revolve around the pencil during the cutting operation.

15 The present invention has for its object to provide means whereby the feeding of the pencil by hand is avoided and the said pencil is pushed forward during the cutting operation automatically. Provision is made whereby a sharper or blunter point may be produced upon the pencil as desired.

20 Means are also provided for holding the pencil central and indicating when the point is formed and for automatically checking the cutting action.

25 In order that the invention may be the better understood, drawings are appended in which:—

30 Figure 1. is a side elevation of a machine embodying the present invention. Fig. 2. is a longitudinal section. Fig. 3. is a plan. Fig. 4. is a front end view. Fig. 5. is a similar view with the outer plate removed. Fig. 6. is a side view of the block supporting the pointed end of the pencil. Fig. 7. is an end view of said block. Fig. 8. is a plan of same. Fig. 9. is an elevation of the means for effecting the longitudinal movement of the block. Fig. 10. is a plan of same. Fig. 11. is a side view to a somewhat larger scale of an alternative arrangement of the guides for the device for holding the body of the pencil. Fig. 12. is an end view of the said guides. Fig. 13. is a side elevation showing a means for regulating the length of the point of the pencil. Fig. 14. is a front view of the means illustrated in Fig. 13. Figs. 15 and 16 are respectively a side and front view of an alternative arrangement for determining the bluntness or otherwise of the point of the pencil. Fig. 17. is a side view

of an alternative means for limiting the movement of the pencil carrier.

Referring to the accompanying drawings, 1. indicates generally the frame of the machine which is substantially of the usual form and construction. Tapped or otherwise secured to the end plate 2. of the machine are pins 3. to the ends of which is secured by nuts 4. a plate 5. The plate 5. is provided with a central perforation 6. for the passage of the pencil. Slidably mounted upon the pins 3. is a circular or other shaped plate 4^a. perforated for the passage of the pins 3. which pins form supports and guides for the plate 4^a. In order to prevent the plate from becoming jammed upon the pins 3. sleeves may be provided as shown at 7. which at the inner ends are tapped into the plate 4^a.

8. indicates a helical spring coiled around one of the pins 3 and at one end bearing against the outer face of the cover 9. secured to plate 4^a. and at the other end bearing against the inner surface of the plate 5. The tendency of the spring 8. is to force the plate 4^a. inward and the strength of the spring is such that, as will be presently described, it keeps the pencil against the cutter with a sufficient pressure to insure the proper cutting of the pencil. The cover 9. is perforated at 4^b. the centers of the two perforations 4^b. and 6. being in line and so positioned with regard to the cutter *x* that the center line of the pencil is coincident with the center of the circle described by the said cutter *x* in its revolution. In order to secure the pencil, the plate 4^a. has pivotally secured to it a number of jaws 9^a. Figs. 2, 5, and 11. The jaws may be conveniently mounted upon the sleeves 7. as shown in Fig. 5. and they are each provided upon their inner surfaces with a pin 10. engaging radially inclined slots 11. formed in a disk 12. revolvably mounted upon an extension 13. upon plate 4^a. see Figs. 2. and 11. The disk 12. is provided with a projecting arm 14. and is under the influence of a spiral spring 15 contained in a cavity or recess 16. formed in the inner face of plate 4^a. see Figs. 2. and 11. The tendency of the spring 15. is to keep the jaws always closed, and in order that they may be opened, the disk 12. is rotated by the arm 14. thereon, and in order to facilitate this operation a second finger plate or piece 17.

is secured to the outer face of plate 4^a. By this means a slight pressure of the finger and thumb upon plates 14. and 17. will cause the jaws 9^a. to be opened to permit the passage of the pencil and when released the jaws will close upon the pencil which thereupon comes under the action of the spring 8. before referred to. The end of the pencil being operated upon and which pencil is indicated in Figs. 1. 2. 3. and 4 by *y*, is supported in a tapering V shaped slot formed in a circular block 18. which block is mounted upon the body carrying the cutter.

Provision is made for preserving the alinement of the block, said means comprising a screw 19, shown in dotted lines in Fig. 2 and in full in Fig. 13. The screw at its upper end is provided with a pin 20 engaging a longitudinal slot 21 in the underside of the block 18, Figs. 2, 6, 8 and 13. The longitudinal movement of the block is effected by means of the pin 22 Figs. 2, 9 and 13, which pin is provided with a projection 23 disposed eccentrically with regard to the axis of the pin (see Fig. 10), and engaging a laterally disposed slot in 23^a (Figs. 6 and 8), in the underside of the block 18, which is substantially circular as shown in Fig. 8, fits within the hole 18^a, (Fig. 13), formed in the body carrying the cutter *x* for the passage of the pencil to the cutter. By turning the pin 22, the block 18, according to the direction of its motion, causes the block to be advanced toward or withdrawn from the cutter.

In order to limit the inward movement of the pencil so as to avoid waste thereof by the continued cutting of the wood after the point has been formed, a plate 24. is provided upon the end of the block 18 and which plate may be pivotally mounted upon the block, so that where a specially fine point is desired, it may be turned downward clear point has been formed, a plate 24. is provided for the plate 24, as shown at 25 in Fig. 3. The plate 24. may be shaped as shown in dotted lines in Fig. 14. and be secured to the block 18 by means of a screw 25. When the end of plate 24. is in the position shown in Fig. 14. the end of the pencil shuts against the inner face of the plate. When the plate is turned into the position shown in dotted lines in Fig. 14. the end of the point comes into contact with the inner surface of the head of screw 25. and a finer point is formed. Where pencils having a larger diameter than ordinary lead pencils are being sharpened, for instance chalk pencils in which the core is of much greater diameter than ordinary pencils, an arrangement may be employed such as shown in Figs. 15 and 16. In this case the block 18 is shortened and in addition to a plate such as 24. a second plate 24^a. is provided which is secured to the end of the block by a screw

24^b. screwed to the end of block 18. with a collar between the plates and having a head. By turning plate 24 into its inoperative position, a much finer point can be formed and by turning plate 24^a. into an inoperative position, a still finer point, as the pencil will move forward until the point comes into contact with the head of screw 24^b.

As an alternative arrangement to that shown in Figs. 1 to 5, we may employ that illustrated in Fig. 12. In this case only two pins such as those 3 before referred to are employed which are connected by means of a curved plate 25. In this case as also in the construction first described, provision may be made for positioning the plate 4^a. so that it is moved only a sufficient distance necessary either to form a point upon an uncut pencil or to sharpen one that has a broken or worn point. In order to effect the above object we may employ a knurled nut or sleeve such as 26 Fig. 11 which is provided with an internal screw thread engaging a screw thread upon one of the pins 3 and which nut is turned one way or another in order to increase or diminish the distance the plate 4^a. may be moved. Instead of this arrangement a sleeve such as 27 Fig. 17 may be mounted on pin 3. having a slot 28 engaging a pin 29 tapped into said pin 3. Slots 30 and 31 are formed leading at a right angle out of the main slot 28 and by rotating the sleeve it may be moved longitudinally on the pin 3 and the pin 29 engaged with either slot 30 or 31 so as to vary the limit of movement of plate 4^a. on pins 3.

When in use the plates 14 and 17 are pressed by the finger and thumb causing the jaws to open when the plate 4^a. is moved away from the cutter *x* until its movement is either considered sufficient or is limited by either of the means such as those above described. The pencil is then introduced and pushed along until its further movement is checked by contact with the cutter when the plates are released and the jaws engage and hold the pencil. When this has been effected, the pencil is advanced by the spring automatically as the wood is cut away until the point is formed when its further advancement is checked.

Claims:

1. In a pencil sharpener, the combination of a revoluble cutter, a chuck for holding the pencil, means for moving said chuck longitudinally of the pencil toward the cutter, adjustable means for limiting said movement, means for supporting the end of the pencil, and means for checking the feed of the pencil to the cutter, substantially as described.

2. In a pencil sharpener, the combination of a revoluble cutter, a chuck mounted upon guides parallel to the axis of the pencil, a spring coiled upon one of said guides and

acting, when compressed, directly upon the chuck to move the same toward the cutter, adjustable means for limiting said movement, means for supporting the end of the
5 pencil, and means for checking the feed of the pencil to the cutter, substantially as described.

3. In a pencil sharpener, the combination of a revoluble cutter, a chuck for holding the
10 pencil, means for moving said chuck longitudinally of the pencil toward the cutter, adjustable means for limiting said movement, means for supporting the end of said pencil, said supporting means being capable
15 of adjustment longitudinally of the cutter by means of a revoluble member provided with an eccentrically disposed projection en-

tering a recess in the support, and means for checking the feed of the pencil, said means being adjustable to produce a fine or 20 blunt point, substantially as described.

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

EMILE HERTZ KLABER.

Witnesses:

ADA MARIA BERGER,
ADELAIDE FUNK.

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

SAMUEL WHITEHEAD.

Witnesses:

OTTO MOLDENBAUM,
ELSE WESTPHAL.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents,
Washington, D. C."
