J. J. WOLF.

PENCIL SHARPENER.

APPLICATION FILED APR. 30, 1913.

1,077,778. **Patented Nov. 4, 1913.**

Fig. 1.

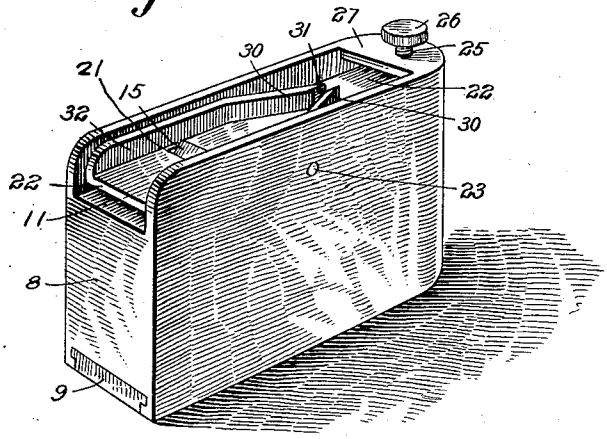


Fig. 2.

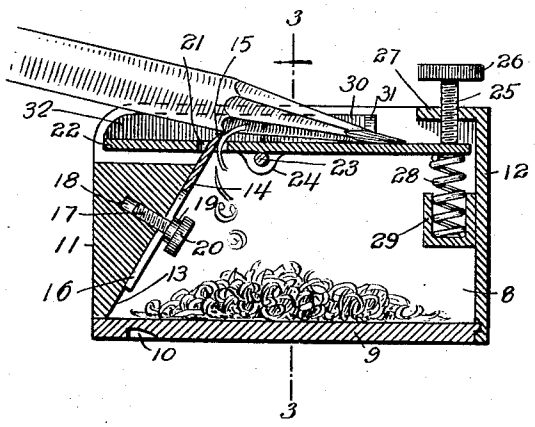
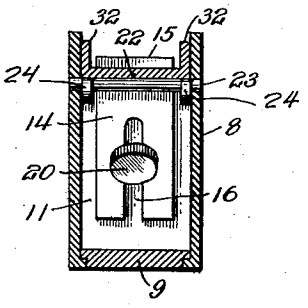


Fig. 3.



WITNESSES

Frank C. Palmer.

E. F. Marcy

INVENTOR

John J. Wolf

BY Munn & Co

ATTORNEYS

UNITED STATES PATENT OFFICE.

JOHN J. WOLF, OF SAN ANTONIO, TEXAS.

PENCIL-SHARPENER.

1,077,778. Specification of Letters Patent. Patented Nov. 4, 1913.

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To all whom it may concern:

Be it known that I, JOHN J. WOLF, a citizen of the United States, and a resident of San Antonio, in the county of Bexar and State of Texas, have invented a new and Improved Pencil-Sharpener, of which the following is a full, clear, and exact description.

Among the principal objects which the present invention has in view are: to provide an apparatus of the character mentioned adapted to sharpen a pencil point by removing the wood therefrom in the form of shavings of different thicknesses; to provide in an apparatus of the character mentioned means for positioning the pencil preliminary to removing the shavings therefrom; to provide means for rapidly and readily varying the operation of the cutting member of the sharpener; to provide means for collecting the shavings and dust, independent of the operation of sharpening the pencil; to provide an apparatus of the character mentioned having a compact structure to enable the same to be transported in the pocket of a person; and to minimize the cost of construction of such apparatus.

One embodiment of the present invention is shown in the accompanying drawings, in which—

Figure 1 is a perspective view of an apparatus constructed and arranged in accordance with the present invention; Fig. 2 is a longitudinal vertical section taken on the median line of said apparatus; Fig. 3 is a cross section taken on the line 3—3 in Fig. 2.

Apparatuses of the character mentioned are principally designed for those desiring ease of operation, or to whom the use of a pen-knife is awkward, difficult, or dangerous, as, for instance, where school children are called upon to sharpen pencils. The usual apparatus, which is a desk attachment or fixture, is too cumbersome to be readily transported by a person, and therefore is disqualified for use by one who is not confined in his or her operations to a desk.

The present invention seeks to overcome the objections mentioned, by constructing and arranging the various parts of the herein-disclosed apparatus in condensed form, to enable one to carry the apparatus in his pocket, or, in the case of school children, to carry the apparatus in the ordinary school-bag, or in the package of books, if the same be transported in this form. With this object in view, the box 8 is contracted in its transverse dimensions, and the long sides thereof are grooved to receive a slide or door 9. The door 9 fits flush with the one end of the box, and with the edges of the long side thereof. The door 9 is provided with a finger-nick 10, whereby the door is drawn outward to empty the box 8 of its contents, such as the chips shown in the drawings. The opposite ends of the box are closed by a bed block 11 and a wall 12. The block 11 is shaped to form a rest or seat for a cutting blade 14. The blade 14 has a cutting edge 15 and an adjusting slot 16. The slot 16 is provided to receive a screw 17, which is mounted in a small tapped bore or hole 18. The screw 17 has a shoulder 19 and a knurled or milled head 20. It is obvious that by loosening the screw 17, the blade 14 may be shifted on the surface 13. It is equally obvious that by tightening said screw, the blade may be locked rigidly in position. Also, it will be observed that when the door 9 is drawn outward, the head 20 of said screw is exposed in position to be manipulated. The upper end or cutting edge of the blade 14 extends through a slot 21 provided in a table 22. The table 22 is mounted to rock upon a shaft 23, bearings therefor being formed in tabs 24 (see Fig. 2 of the drawings). The table 22 is elongated to extend below a screw 25, the knurled head 26 whereof extends above the box, a tapped perforation being provided in a shelf 27 to support said screw. The end of the table 22 in contact with the screw 25 is normally supported by a spring 28. The spring 28 is of sufficient strength to steady the table 22 in its operative or adjusted position, and is mounted in a cup 29, which is rigidly attached to the inner face of the wall 12 forming a part of the box 8.

The table 22 is provided with guide flanges 30. The flanges 30 are converged forward of the cutting edge of the blade 14, and are disposed between said blade and the screw 25. The juxtaposed ends of the flanges 30 are parted to form a channel 31, which is sufficiently wide for the passage of the lead of the conventional pencil. The channel 31 serves as a guide for the positioning of a pencil during the operation of sharpening the same. The flanges

30 serve as guides to direct the lead of the pencil into the channel 31. The ends of said flanges forming the opening in said channel further serve as a gage for regulating or controlling the cut of the blade 14. It is obvious that if the lead of the pencil be introduced within the channel 31 prior to drawing the pencil backward over the cutting edge 15 of the blade 14, the length of the cut performed by said blade on said pencil will be, in all instances, the same. In this manner, the operation of the apparatus is controlled to produce an evenly and equally sharpened pencil. The raised sides 32 of the table 22 operate, if called upon, to lead the pencil point to and between the flanges 30 when advanced over the edge 15, from the rear or open end of said table.

When using a tool thus described and as illustrated in the accompanying drawings, the pencil is preliminarily disposed substantially as shown in Fig. 2 of the drawings, with the lead or point thereof extending between the ends of the flanges 30 and through the channel 31 formed thereby. The pencil is advanced at each operation until arrested by the flanges 30. The body or wood of the pencil is then lowered against the cutting edge 15, and, sufficient pressure being applied, is drawn backward toward the open end of the table 22. In this movement, the blade 14 operates to remove the shavings from the wood of the pencil and to cut the lead of the pencil if movement of the pencil be continued for this purpose. At each succeeding cut, the pencil is slightly rotated, said pencil being steadied within the channel 31 for this purpose. By continuing the operation, there will finally result a sharpened pencil.

Rapidity of the work or the thickness of the shavings removed by the blade 14 depends on the level of the table 22. The level of the table 22 is controlled by the cooperation of the spring 28 and the screw 25. The operator manipulates, by means of the head 26, the screw 25, depressing the end with which it is in contact, or permitting the spring 28 to lift said end at will.

It will be observed that as the end of the table 22 with which the screw 25 is in contact is depressed, the opposite end thereof is lifted, the result on the blade 14 being as if the same were drawn downward through the slot 21, thereby exposing less of the blade and the cutting edge 15. This operation may be continued until an exceedingly thin shaving is removed from the wood of the pencil, or, if it be desired, the table 22 can be disposed so that the cutting edge 15 of the blade 14 is totally below the surface of said table.

Under certain conditions of the wood or the lead of the pencil, it may be deemed wise to minimize the cut of the blade 14. If, however, it is desired to increase the cut of the blade, this may be accomplished by reversing the operation of the screw 25, to permit the spring 28 to lift the end of the table 22 with which it is in contact, thereby depressing the end of said table having the slot 21 formed therein. This results in exposing to a greater degree the cutting edge 15 of the blade 14.

It will be observed that at any time the blade may be adjusted or removed for replacement or sharpening, and this by manipulating the screw 17.

Claims.

1. A pencil sharpener, comprising a box; a bed block; a cutting blade slidably mounted on said block; means for holding said blade rigidly on said block; a table mounted above said block and pivoted intermediate its ends, said table having a slot through which is protruded the cutting edge of said blade; and means for varying the extent of protrusion of said blade through said slot.

2. A pencil sharpener, comprising a box; a bed block; a cutting blade slidably mounted on said block; means for holding said blade rigidly on said block; a table mounted above said block and pivoted intermediate its ends, said table having a slot through which is protruded the cutting edge of said blade; and means for rocking said table to vary the protrusion of said blade through said slot.

3. A pencil sharpener, comprising a box; a bed block; a cutting blade slidably mounted on said block; means for holding said blade rigidly on said block; a table mounted above said block and pivoted intermediate its ends, said table having a slot through which is protruded the cutting edge of said blade; a yielding support for said table; and an adjusting screw having a bearing on said table, said screw and yielding support coöperating to vary the protrusion of said blade through said slot.

4. A pencil sharpener, comprising a box; a bed block; a cutting blade slidably mounted on said block; means for holding said blade rigidly on said block; a table mounted above said block and pivoted intermediate its ends, said table having a slot through which is protruded the cutting edge of said blade; a spiral spring disposed below to support the inner end of said table; a feed screw mounted in said box to bear upon said table above said spring, said screw and spring coöperating to vary the elevation of said table; and a rocking bearing for said table intermediate said slot and said screw and spring.

5. A pencil sharpener, comprising a box; a bed block; a cutting blade slidably mounted on said block; means for holding said blade rigidly on said block; a table mount-

ed above said block and pivoted intermediate its ends, said table having a slot through which is protruded the cutting edge of said blade; a spiral spring disposed below to support the inner end of said table; and a feed screw mounted in said box to bear upon said table above said spring, said screw and spring coöperating to vary the elevation of said table.

6. A pencil sharpener, comprising a box; a bed block; a cutting blade slidably mounted on said block; means for holding said blade rigidly on said block; a table mounted above said block and pivoted intermediate its ends, said table having a slot through which is protruded the cutting edge of said blade; a yielding support for said table; an adjusting screw having a bearing on said table, said screw and yielding support cooperating to vary the protrusion of said blade through said slot; and means mounted on said table for controlling the placement of said pencil preliminary to cutting the same.

7. A pencil sharpener, comprising a box; a bed block; a cutting blade slidably mounted on said block; means for holding said blade rigidly on said block; a table mounted above said block and pivoted intermediate its ends, said table having a slot through which is protruded the cutting edge of said blade; a yielding support for said table; an adjusting screw having a bearing on said table, said screw and yielding support cooperating to vary the protrusion of said blade through said slot; and a plurality of converging flanges mounted on said table, said flanges being converged away from said slot, to form guides for the placement of a pencil preliminary to cutting.

8. A pencil sharpener, comprising a box, a bed block; a cutting blade slidably mounted on said block; means for holding said blade rigidly on said block; a table mounted above said block and pivoted intermediate its ends, said table having a slot through which is protruded the cutting edge of said blade; a yielding support for said table; an adjusting screw having a bearing on said table, said screw and yielding support cooperating to vary the protrusion of said blade through said slot; and a plurality of converging flanges mounted on said table, said flanges being converged forwardly of said slot and disparted to form a channel to receive the lead of a pencil.

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

JOHN J. WOLF.

Witnesses:
W. A. MENGER,
H. J. MENGER.

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