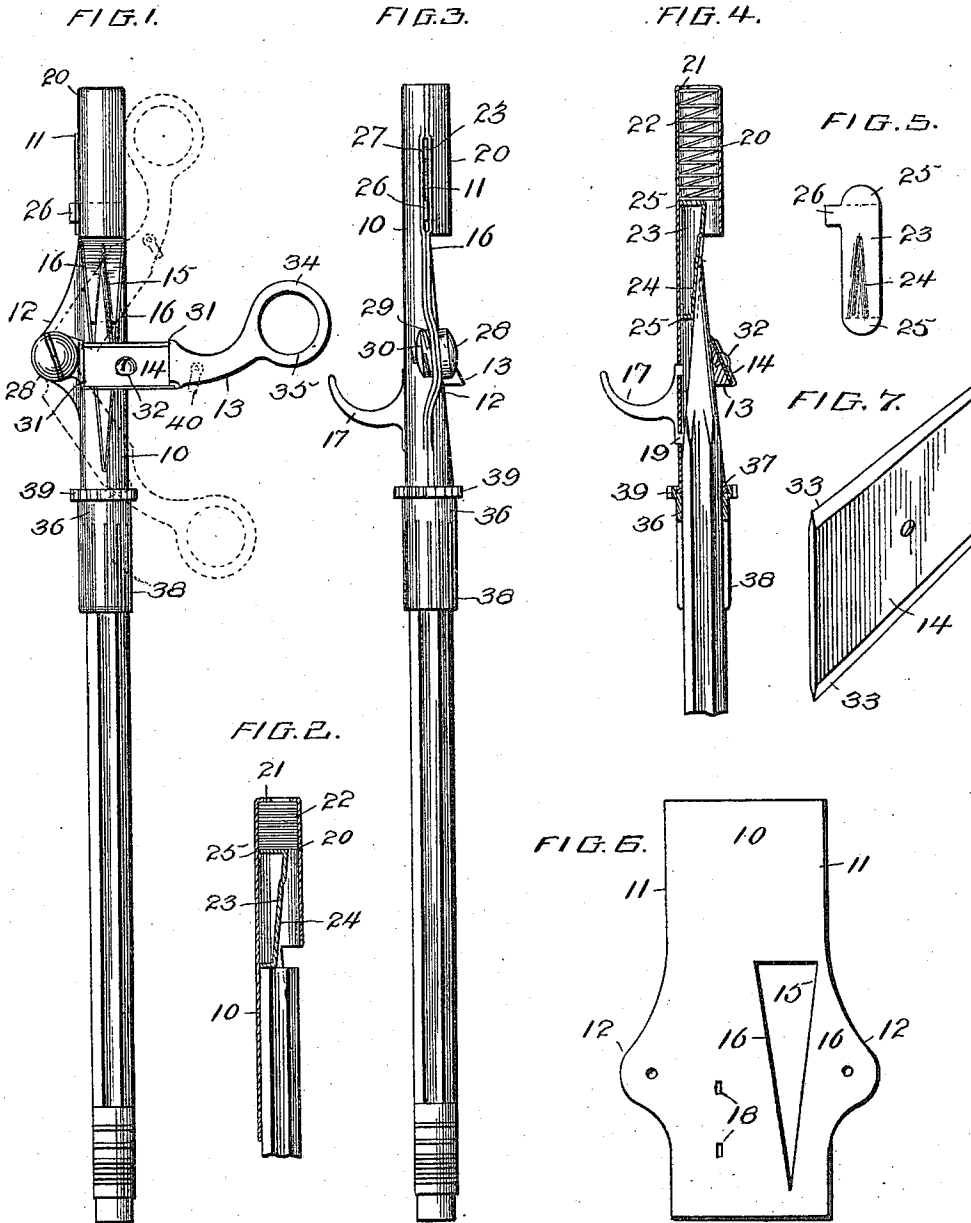


E. B. WELLES.
PENCIL SHARPENER.
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965,262.

Patented July 26, 1910.



WITNESSES:

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EDWARD B. WELLES, OF ASHEVILLE, NORTH CAROLINA.

PENCIL-SHARPENER.

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Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, EDWARD B. WELLES, citizen of the United States, residing at Asheville, county of Buncombe, and State of North Carolina, have invented certain new and useful Improvements in Pencil-Sharpener, of which the following is a specification, reference being had therein to the accompanying drawing.

This invention relates to a pencil sharpener, and particularly to a structure provided with a shaving knife mounted to cut longitudinally of the pencil.

The invention has for an object to provide a novel and improved construction whereby the pencil holder is provided with a shaving blade movably mounted thereon, and a movable support beneath the pencil point said support being adapted to form a gage for the insertion of the pencil for the preliminary cutting of the wood thereof.

A further object of the invention is to provide a novel and improved construction of pencil holder having a pivoted lever carrying a shaving blade and a rotatable pencil clasp adapted to be operated in the movement of said lever in one direction to turn the pencil within the holder laterally between the shaving operations of the blade.

Other and further objects and advantages of the invention will be hereinafter fully set forth and the novel features thereof defined by the appended claims.

In the drawing:—Figure 1 is an elevation of the invention; Fig. 2 is a detail vertical section; Fig. 3 is a side elevation of the sharpener; Fig. 4 is a vertical section thereof showing the sharpened pencil in position; Fig. 5 is a detail plan of the blank from which the point support is formed; Fig. 6 is a similar view of the blank from which the pencil holder is formed, and Fig. 7 is a detail perspective of the cutting blade.

The pencil holder 10 is formed in any desired manner or configuration, preferably being formed from a blank of sheet metal, as shown in Fig. 6, bent into tubular form and the meeting edges 11 thereof secured together. These edges are provided with extensions 12 which form pivoting lugs for the lever 13 carrying the cutting blade 14. The blank is also provided with a tapering aperture 15 over which the lever 13 oscillates, and the side edges 16 of this aperture are adapted to contact with the blade 14 as here-

inafter described. The holder 10 is also provided with a finger hold 17 at one side and secured thereto in any desired manner, for instance, by the apertures 18 to receive the lugs 19 of the finger hold 17.

The outer end of the holder 10 forms an inclosing casing 20 one end of which is bent or crimped inward, as shown at 21 to form an abutment for the tension spring 22 disposed within the casing. Slidably mounted in this casing is the point support 23, which may be formed in any desired manner, and is provided upon its upper face with a depressed portion 24 adapted to receive the point of the pencil, as shown in Fig. 4. A preferable form of constructing this support comprises the blank, as shown in Fig. 5, the opposite ends 25 of which are curved and bent at an angle to the body to conform to the interior of the holder in which it reciprocates. For the purpose of operating this support by hand, a lug 26 is extended from one side thereof between the side walls 11 of the holder which at that point are spaced apart, as shown at 27 in Fig. 3. The support 23 is normally held in the position shown in Fig. 4 during the sharpening of an already pointed pencil, but when a new or unpointed pencil is inserted, this support is forced into its inclosing casing, as shown in Fig. 2, thereby forming a gage determining the extent to which the pencil shall be inserted.

The sharpening lever 13 is pivotally mounted upon the lugs 12 by means of the bolt or pivot 28 extending therethrough, and for the purpose of permitting a yielding movement of this lever during its return travel, a spring washer 29 surrounds the shank of the bolt 28 and is secured in position by means of a nut 30, as shown in Fig. 3. The lever is provided with flanges 31 to receive the opposite ends of the blade 14 which is secured in position by means of the screw 32 or other fastening device. This blade may be of any desired character, but is preferably formed with each of its longitudinal edges 33 inclined in opposite directions so that it may be reversed in position to secure new cutting edges, and these edges retained in sharpened condition by their contact with the pencil lead and the side walls 16 of the aperture in the holder. The lever is provided with a handle portion 34 having the aperture 35 therethrough so that

the thumb and finger of the user may be brought into contact through the aperture and a firm hold thus secured.

For the purpose of imparting an intermittent rotary movement to the pencil between the shaving actions of the blade thereon a clasp 36 is provided and is rotatably mounted upon the holder by means of the crimped edge 37 thereof which enters a circumferential recess in the clasp, as shown in Fig. 4. This clasp may be of any preferred construction for retaining the pencil therein, such, for instance, as the series of separated spring portions 38 which engage and retain the pencil within the clasp by their tension thereon. This clasp is also provided with a series of ratchet teeth 39 upon its end next the cutting lever and these teeth are adapted to cooperate with a pawl or projection 40 carried by the under side of the lever, as shown in Fig. 1.

In the operation of the invention, the pencil to be sharpened is inserted in the holder in the position shown in Fig. 2 at which time the pencil support is forced inward to form a gage to determine the extent of insertion of the pencil. The lever and cutting blade are then oscillated toward and from the end of the holder, as shown by dotted lines in Fig. 1. For partially rotating the pencil upon the return movement of this lever the pawl engages the ratchet upon the pencil clasp and imparts a partial rotation to the pencil so as to present a new surface. In order that this return movement may be effected without tension upon the pivot of the lever or binding in contact with an angular surface upon the pencil the spring washer is provided and permits a yielding of the lever upon its pivot during the return movement. As the sharpening action progresses and the wood of the pencil is sufficiently removed, the spring forces the point support beneath the point of the pencil, as shown in Fig. 4 thus absolutely preventing breaking of the lead and permitting a completion of the sharpening action with the under side of the pencil point supported. The finger hold upon the holder permits the user to secure a firm grasp which will retain the holder and pencil in proper relation to each other during the sharpening of the wood of the pencil which is also automatically rotated in the alternate movement of the lever during the sharpening action. It will be seen that the invention is adapted to be formed from sheet material properly stamped and shaped so as to provide a simple, economically constructed and very efficient pencil sharpener in which the blade may be reversed and retained in sharpened condition. During the cutting action of the blade the beveled edge thereof contacts with the lead of the pencil, while during the return movement this blade is brought into

contact with the edges 16 of the aperture in the holder. When it is desired to further sharpen a pencil already pointed the point support may be withdrawn by means of its operating lug to indicate the extent to which the pencil shall be inserted in the holder. The support is then released and thrown by the spring beneath the point of the pencil so that said point rotates in the recess in the support and the lead is constantly supported against breakage.

Having described my invention and set forth its merits, what I claim and desire to secure by Letters Patent is:—

1. In a pencil sharpener, a pencil holder, a shaving blade movably mounted thereon, and a support movable within the holder and yieldingly forced beneath the end of the pencil to be sharpened to provide a support therefor.

2. In a pencil sharpener, a pencil holder, a shaving blade movably mounted thereon, and a support slidingly mounted within the holder and yieldingly forced beneath the end of the pencil to be sharpened to provide a support therefor.

3. In a pencil sharpener, a pencil holder, a shaving blade movably mounted thereon, and a spring actuated sliding support disposed within the holder and yieldingly forced beneath the end of the pencil to be sharpened to provide a support therefor.

4. In a pencil sharpener, a pencil holder, a shaving blade movably mounted thereon, a support movable within the holder and yieldingly forced beneath the end of the pencil to be sharpened to provide a support therefor, and an angular wall at one end of said support to form a gage for the insertion of the pencil to be sharpened.

5. In a pencil sharpener, a pencil holder, a shaving blade movably mounted thereon, and a support provided upon its upper face with a depression to receive a pencil point, said support being movable within the holder and yieldingly forced beneath the end of the pencil to be sharpened.

6. In a pencil sharpener, a pencil holder, a pencil point support movable longitudinally of and beneath one end of the pencil, and a lever pivoted to travel toward and from said support and provided with a cutting blade.

7. In a pencil sharpener, a pencil holder, a cutting blade movably mounted thereon, and a pencil point support mounted for movement longitudinally of and beneath the pencil point.

8. In a pencil sharpener, a pencil holder, a cutting blade movably mounted thereon, and a pencil point support mounted for yielding movement longitudinally of and beneath the pencil point.

9. In a pencil sharpener, a holder provided with a tubular portion at one end, a

sliding point support mounted in said portion, a spring extending between the free end of said portion and said support, and a movably mounted cutting blade adapted to coöperate with said support.

5 10. In a pencil sharpener, a tubular holder having an elongated aperture, a sliding point support provided with an operating means extending through said aperture, and a tension spring bearing upon said support.

10 11. In a pencil sharpener, a tubular holder having an elongated aperture, a sliding point support provided with an operating lug extending through said aperture, a tension spring bearing upon said support, a lever pivotally mounted upon the holder and having a blade to coöperate with said support, and a finger hold disposed at the opposite side of said lever.

15 20 12. In a pencil sharpener, a sliding point support comprising a blank having curved ends bent at an angle thereto in the same direction and a laterally disposed operating lug.

25 13. In a pencil sharpener, a pencil holder,

a pencil support slidably mounted in one end of said holder and movable longitudinally thereof, and an anvil carried by said support and provided with a recess to receive said pencil.

14. In a pencil sharpener, a holder, a pencil support movable longitudinally beneath a pencil point, a sharpener lever pivoted upon said holder, and pencil rotating means carried by said holder and adapted to be 35 actuated by the movement of said lever in one direction.

15. In a pencil sharpener, a holder, a pencil support movable longitudinally beneath, a lever pivoted to travel toward and from 40 said support and provided with a cutting blade, and means carried by said support for limiting its movement longitudinally of the holder.

In testimony whereof I affix my signature 45 in presence of two witnesses.

EDWARD B. WELLES.

Witnesses:

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