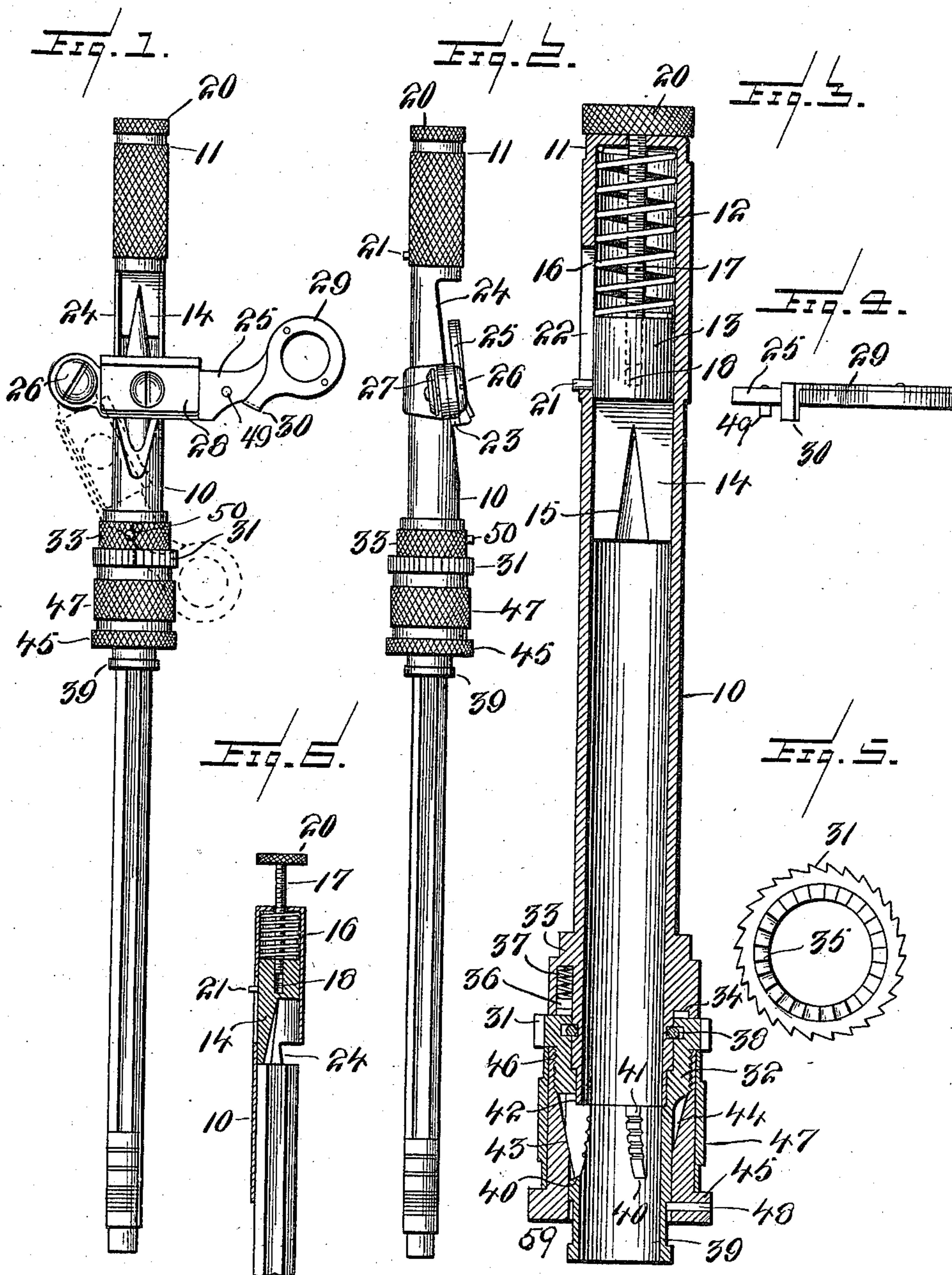


E. B. WELLES.
PENCIL SHARPENER.
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965,263.

Patented July 26, 1910.



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EDWARD BENTON WELLES, OF ASHEVILLE, NORTH CAROLINA.

PENCIL-SHARPENER.

965,263.

Specification of Letters Patent.

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To all whom it may concern:

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

10 This invention relates to a pencil sharpener and particularly to a structure provided with a pivoted shaving blade and a movable support disposed beneath the pencil point.

15 The invention has for an object to provide a novel and improved construction of the point support whereby it may be used as a gage for the insertion of a pencil during the preliminary cutting of the wood thereof and later automatically fed beneath the pencil point and the extent of such feed adjusted so as to produce points of different lengths.

20 A further object of the invention is to provide a novel and improved construction of chuck or holder rotatively mounted upon the casing so as to properly retain the pencil in position to be sharpened and to permit its intermittent rotation by the lever carrying the sharpening blade.

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

30 In the drawing—Figure 1 is a front elevation of the invention; Fig. 2 is an elevation at a right angle to Fig. 1; Fig. 3 is an enlarged vertical section; Fig. 4 is an end elevation of the handle of the sharpener lever; Fig. 5 is a front elevation of the chuck ratchet; Fig. 6 is a detail section showing the use of the point support as a gage; and Fig. 7 is a detail of the chuck dog.

35 Like numerals of reference refer to like parts in the several figures of the drawing.

40 The pencil holder 10 may be formed of any desired material or configuration, preferably being tubular as shown, and provided with a closed outer end 11 forming a casing 12 adapted to receive the point support 13 which is slidingly mounted therein and provided with an anvil portion 14 having a depressed recess 15 to receive the point of the pencil as shown in Fig. 1. This support 13 is held under tension by a spring 16 disposed within the casing and normally forc-

ing the support toward the point of the pencil and longitudinally thereof. The extent of this movement is limited by a screw 17 which is adjustably mounted in a threaded recess 18 in the support 13 and is provided with an operating head 20 adapted to contact with the end of the holder 10 and which limits the inward movement of the support and also provides means for retracting it when desired. The extent of the outward movement of the support away from the pencil may be determined by a pin 21 carried thereby and traveling in a slot 22 in the holder 10.

70 The holder 10 is provided with a laterally disposed pivoting lug 23 at one side of the aperture 24 which has downwardly inclined walls adjacent the anvil portion 14 of the support and extends therefrom for a sufficient distance to allow the proper cutting action. Upon this lug, the sharpener lever 25 is mounted by means of a pivot screw 26 which has a yielding movement by means of the spring washer 27 so as to laterally yield in its returning movement or when engaging projections upon the pencil to be sharpened. This lever is provided with a cutter blade 28 of any desired construction. The handle of the lever also has secured thereto a spring plate 29 having a depending yielding pawl 30 adapted to cooperate with a feeding ratchet 31 of a chuck 32 mounted upon the holder 10 as hereinafter described.

80 The holder is formed at the chuck end with an enlarged portion 33 having an annular groove 34 in its outer face into which the ratchet teeth 35 upon the chuck 32 extend. These teeth cooperate with a pawl 36 which is pressed into engagement therewith by a spring 37 in order to prevent a reversal of the rotation of the chuck and to hold it as fed by the sharpener lever. The chuck is retained in proper position upon the holder by a spring ring 38 disposed within recesses in the chuck and holder which come into alinement with each other when the parts are in proper position. The extended end 39 is provided with apertures 40 adapted to receive the pencil retaining dogs 41 which are properly roughened upon their inner faces as shown in Fig. 3. These dogs are formed at one end with a shoulder 42 which rests upon the end of the holder 10 while the opposite ends of the dogs engage the end wall of the apertures 40. The

dogs are formed with an outer inclined face 43 adapted to cooperate with a similar face 44 upon the holder casing 45 by which they may be adjusted to proper position to clamp and hold the pencil against rotation within the chuck. The casing 45 is threaded upon the chuck at its inner end 46 and is surrounded by a slip collar 47 which can be readily held by the user without affecting the rotation of the chuck or the jaw casing thereof. If desired, the casing 45 may be secured upon the extended end 39 by means of a pin 48 entering the circumferential groove 59. The sharpener lever 25 is provided with a stop 49 to limit its outward or return movement by engagement with a stop 50 upon the enlarged portion 33 of the holder.

In the operation of this invention the pencil to be sharpened is inserted in the holder in the position shown in Fig. 6 at which time the pencil support is forced inward and forms a gage to determine the extent of insertion of the pencil. The lever carrying the cutting blade is then oscillated toward and from the support as shown by dotted lines in Fig. 1 in order to remove the wood from the end of the pencil to be sharpened and the holder grasped at the slip collar. In order to intermittently rotate the pencil upon each return movement of this lever, the pawl carried thereby engages the ratchet upon the pencil chuck so as to present a new surface and this return movement is limited by the stops so that the pawl can only engage a single tooth in each movement. The spring washer upon the pivot of this lever prevents binding when contacting with an angular surface of the pencil. As the sharpening action progresses, the spring forces the anvil of the support beneath the point of the pencil, as shown in Fig. 1, thus preventing breaking of the lead and permitting the completion of the sharpening action with the under side of the point supported. The travel of this support is adapted to be adjusted by the screw thereon to determine the length of point to be formed on the pencil. In the movement of the sharpener lever, the chuck is intermittently rotated and held by the spring pawl engaging it, while the pawl upon this lever yields to permit the return of the lever for a subsequent cutting action.

The chuck construction is adapted to receive pencils of different sizes as the dogs therein can be adjusted by a rotation of their inclosing casing so as to project to different extents to determine the diameter of the opening into which the pencil is to be introduced. The inward adjustment of this casing forces the dogs inward for a small pencil while an outward adjustment thereof allows the dogs to recede to accommodate a pencil of greater diameter.

It will therefore be seen that the invention

presents a simple, efficient and economically constructed pencil sharpener adapted for different sizes of pencils and in which the point and lead are supported against breaking during the shaving action of the sharpener blade and in which this action automatically effects a rotation of the pencil to present a new surface at each successive movement of this blade.

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, a support carried by said holder and movable longitudinally of the pencil and yieldingly forced therebeneath, and adjustable means for limiting the extent of such movement.

2. In a pencil sharpener, a pencil holder, a shaving blade movably mounted thereon, a support carried by said holder, and movable longitudinally of the pencil and yieldingly forced therebeneath, and adjustable means carried by said support to engage said holder and limit the movement of said support.

3. In a pencil sharpener, a pencil holder, a shaving blade movably mounted thereon, a support carried by said holder and movable longitudinally of the pencil and yieldingly forced therebeneath, and a screw adjustably mounted in said support and adapted to engage said holder to limit the inward movement of said support.

4. In a pencil sharpener, a pencil holder, a shaving blade movably mounted thereon, a support carried by said holder and movable longitudinally of the pencil and yieldingly forced therebeneath, and a screw threaded into said support and having a head to engage the outer face at one end of said holder.

5. In a pencil sharpener, a pencil holder, a shaving blade movably mounted thereon, a support disposed beneath the pencil point and movable longitudinally thereof, a screw adjustably mounted in said support and adapted to engage one end of said holder, and a spring disposed between the head of said holder and said support.

6. In a pencil sharpener, a pencil holder, a shaving blade movably mounted thereon, a support disposed beneath the pencil point and movable longitudinally thereof, a screw adjustably mounted in said support and adapted to engage one end of said holder, a spring disposed between the head of said holder and said support, and a pin extended laterally from said support to travel in a slot in said holder.

7. In a pencil sharpener, a pencil holder, a pencil support movable longitudinally thereof and yieldingly forced beneath one end of a pencil, a lever pivoted upon said holder to travel toward and from said sup-

port and provided with a cutting blade, and means adjustably mounted upon said support for limiting the movement thereof longitudinally of said holder.

5 8. In a pencil sharpener, a holder provided with a slot therein, a pencil point support slidably mounted in said holder and provided with a recessed anvil portion, a pin carried by said support and extended
10 through an aperture in said holder, a tension spring disposed between said support and one end of said holder, and adjustable means carried by said support to engage one end of said holder.

15 9. In a pencil sharpener, a holder provided with a slot therein, a pencil point sup-

port slidably mounted in said holder and provided with a recessed anvil portion, a pin carried by said support and extended through an aperture in said holder, a ten- 20 sion spring disposed between said support and one end of said holder, and a screw adjustably threaded in said support and provided with a head to engage one end of said holder. 25

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

EDWARD BENTON WELLES.

Witnesses:

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