April 21, 1925. 1,534,547

L. RUPP

PENCIL SHARPENER

Filed Jan. 26, 1922

Fig. 1.

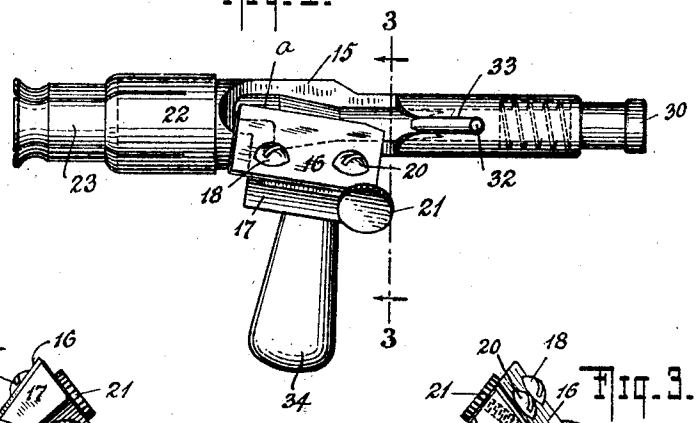



Fig. 2.

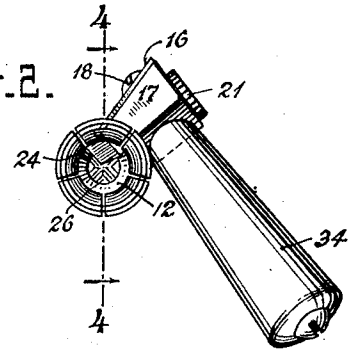



Fig. 3.

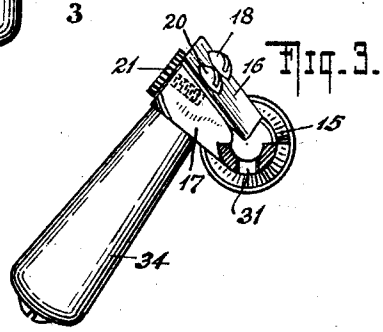



Fig. 4.

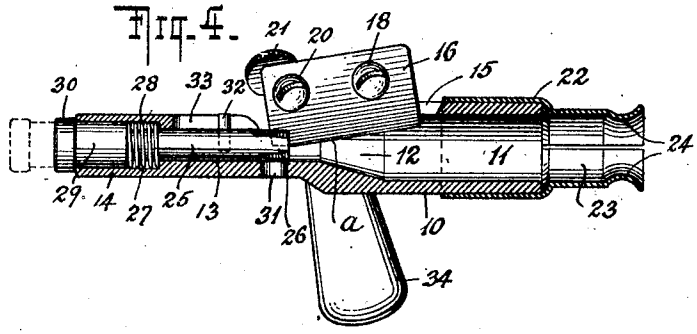



Fig. 5.

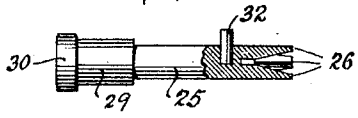



Fig. 6.

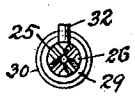



Fig. 7.

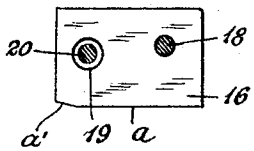



Fig. 8.




WITNESS

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# UNITED STATES PATENT OFFICE.

LAURENTE RUPP, OF NEW YORK, N. Y.

## PENCIL SHARPENER.

Application filed January 26, 1922. Serial No. 531,838.

*To all whom it may concern:*

Be it known that I, LAURENTE RUPP, a citizen of the United States, and resident of the borough of Manhattan, city, county, and State of New York, have invented certain new and useful Improvements in Pencil Sharpeners, of which the following is a specification.

My invention relates to pencil sharpeners and has for its object to provide a simple and novel device capable of being readily carried in the pocket and whereby the pencil may be efficiently and economically sharpened at will. Other more specific objects will appear from the description hereinafter and the features of novelty will be pointed out in the appended claims.

In the accompanying drawings, which illustrate an example of the invention without defining its limits, Fig. 1 is an exterior view of the device; Fig. 2 is an end view thereof; Fig. 3 is a cross section on the line 3—3 of Fig. 1; Fig. 4 is a longitudinal section on the line 4—4 of Fig. 2; Figs. 5, 6 and 7 are detail views and Fig. 8 is a fragmentary view of a pencil after it has been sharpened with the aid of the improved sharpener.

In its illustrated form the sharpener comprises a receiving barrel 10 constructed of metal or any other suitable material and having an internal bore 11 which tapers at 12 and communicates with the relatively reduced bore 13 of a member 14 as shown in Fig. 4; the member 14 constitutes an integral, axial extension of the barrel 10. The latter is cut away as indicated at 15 to accommodate the cutting blade 16 which is carried by a bracket 17 projecting outwardly from the barrel 10 as shown in Fig. 3; in the preferred arrangement the cutting blade 16 is pivoted at 18 upon the bracket 17 and is provided with a slot or its equivalent 19 for the accommodation of a stop-screw 20 whereby the pivotal movements of said blade are restricted. In order to adjust the pivotal movements of the blade 16 in an outward direction, with respect to the barrel 10, a set-screw 21 is threaded into the bracket 17 in such a manner that its head will form a stop against which the blade 16 abuts. With this construction the blade is free to adjust itself relatively to the pencil as will appear more fully hereinafter. As shown in Fig. 3 the blade 16 is inclined in the direction of the length of the barrel 10 while its cutting edge *a* is inclined transversely to said barrel as illustrated in Figs. 1 and 4.

To provide a proper bearing for the pencil during sharpening thereof, a tubular cap 22 is fitted over the entrance end of the barrel 10 as shown in Figs. 1 and 4 and is preferably held thereon by friction although if desired any suitable fastening devices may be added for preventing the removal of said cap; the latter is preferably split toward its free end to form a plurality of fingers 23, inwardly resilient and having their ends curved to form inwardly extending projections 24 as illustrated in Fig. 4.

For the purpose of forming a point upon the lead of the pencil after the wood thereof has been cut away by the blade 16, a plunger 25 is slidably mounted in the bore 13 of the member 14 and is provided at its inner end with cutters 26 shaped to form a tapering recess for the reception of the end of the lead as shown in Fig. 5. The plunger 25 is normally maintained in an inoperative position by means of a spring 27 located in a chamber 28 of the member 14 and bearing against a boss 29 which is slidably mounted in said chamber and comprises a continuation of the plunger 25. A head 30 carried by the boss 29 limits the inward movement of the plunger 25 and predetermines the operative position of the cutters 26, which in such operative position are in registry with an aperture 31 through which the cuttings of lead may escape; the outward movement of the plunger 25 is arrested by means of a pin 32 carried thereby and movable lengthwise of a slot 33 formed in the member 14 as shown in Figs. 1 and 4.

To facilitate the use of the sharpener for its intended purposes, a handle 34 is provided, which depends from the bracket 17 at a compound angle, or in other words is inclined in two directions, as shown in Figs. 1 and 2, to automatically position the device, when grasped in the hand, in its most efficient relation to enable the pencil to be economically sharpened with a minimum of

manual effort and with a minimum of strains tending to break the lead.

In using the sharpener the end of the pencil *b* to be sharpened is inserted into the bore 11, by way of the cap 22, with said pencil end located in the tapered portion 12, the projections 24 resiliently engaging the pencil *b* and centering the same; either at this stage or previously the stop-screw 21 has been adjusted to properly set the cutting blade 16. The sharpener is held stationary in its intended position, by means of the handle 34, and the pencil is rotated about its axis to cause the blade 16 to gradually cut away the wood and expose the lead *c*, the pencil being gradually advanced into the device as the cutting proceeds. As the pencil is thus pushed into the sharpener, said blade 16 will at all times automatically adjust itself, about the pivot 18 to the most favorable and efficient cutting position, the depth of the cut being predetermined by the extent of movement permitted by the stop screw 21 against which said blade abuts. It will be noted that the cutting edge *a* of the blade 16 is cut away as indicated at *a'*; this is done in order to reduce to a minimum the possibility of cutting into the lead *c* as the wood is being cut away by the blade 16. After the wood has been cut away to the desired extent the plunger 25 is pushed inwardly against the tension of the spring 27, by pressure exerted upon the head 30 to the operative position shown in full lines in Fig. 4. This brings the cutters 26 over the aperture 31 and over the exposed lead *c* of the pencil so that if the latter is now further rotated the lead will be rotated relatively to the cutters 26 and will be pointed thereby, the lead cuttings escaping through the aperture 31; as the plunger 25 is pushed inwardly as described, and assuming that the pencil is in position in the sharpener, a slight axial pressure will be exerted upon the lead *c* sufficient to move the pencil back out of engagement with the blade 16 so that no further wood will be cut away as the lead is being pointed by the cutters 26.

The relatively movable blade 16 capable of independent pivotal movement whereby it is free at all times to adjust itself to the most efficient cutting position, with respect to the pencil is an essential feature of the invention and prevents the production of strains tending to break the pencil or the lead thereof. The efficiency of the device is thereby increased and at the same time waste is prevented and the sharpener thus rendered economical to use. The latter is simple in construction and not easily disarranged and at the same time may be successfully used with very little manual effort; by making the sharpener so that it may readily be carried in the pocket it is always available for use when required.

Various changes in the specific form shown and described may be made within the scope of the claims without departing from the spirit of my invention.

I claim:—

1. A pencil sharpener comprising a barrel into which the pencil may be inserted, a cutting blade extending into said barrel and loosely mounted thereon whereby said blade automatically adjusts itself to the pencil being sharpened and adjustable means whereby the movement of adjustment of said blade is arrested.

2. A pencil sharpener comprising a barrel into which a pencil may be inserted, a bracket on said barrel, a cutting blade pivotally mounted on said bracket and freely movable about its pivot relatively to said bracket whereby said blade automatically adjusts itself to the pencil being sharpened, said blade extending into said barrel and having its cutting edge inclined in two directions and an adjustable stop on said bracket whereby the pivotal movement of said blade in adjusting itself is arrested.

3. A pencil sharpener comprising a barrel into which a pencil may be inserted, a bracket on said barrel, a cutting blade mounted on said bracket so as to be capable of a free pivotal movement thereon and extending into said barrel, said blade having its cutting edge inclined in two directions, means for restricting the free pivotal movement of said blade and an adjustable stop on said bracket whereby the pivotal movement of said blade in an outward direction inside of the range of adjustment of said means is arrested.

4. A pencil sharpener comprising a barrel into which a pencil may be inserted, a handle connected with said barrel in tangential relation thereto and inclined in the direction of the axis of said barrel and a cutting blade having its faces at substantially right angles to said handle and its cutting edge inclined lengthwise of said barrel.

5. A pencil sharpener comprising a barrel into which a pencil may be inserted, a bracket on said barrel, a cutting blade pivotally mounted on said bracket and extending into said barrel, said blade having its cutting edge inclined in two directions, an adjustable stop on said bracket whereby the pivotal movement of said blade in an outward direction is arrested, a tubular cap mounted upon the entrance end of said barrel and including resilient fingers whereby the pencil is centered in said sharpener and a plunger connected with said barrel and provided with means for pointing the lead of said pencil.

6. A pencil sharpener comprising a barrel into which a pencil may be inserted, a bracket on said barrel, a cutting blade piv-

otally mounted on said bracket and extending into said barrel, said blade having its cutting edge inclined in two directions, an adjustable stop on said bracket whereby the pivotal movement of said blade in an outward direction is arrested, a tubular cap mounted upon the entrance end of said barrel and including resilient fingers whereby the pencil is centered in said sharpener, a plunger connected with said barrel and provided with means for pointing the lead of said pencil and a handle depending projecting said barrel at inclinations in two directions for supporting the sharpener in its operative position

In testimony whereof I have signed this specification.

LAURENTE RUPP.