(No Model.)

P. W. TILLINGHAST.

PENCIL SHARPENER.

No. 411,909. Patented Oct. 1, 1889.

Fig. 1.

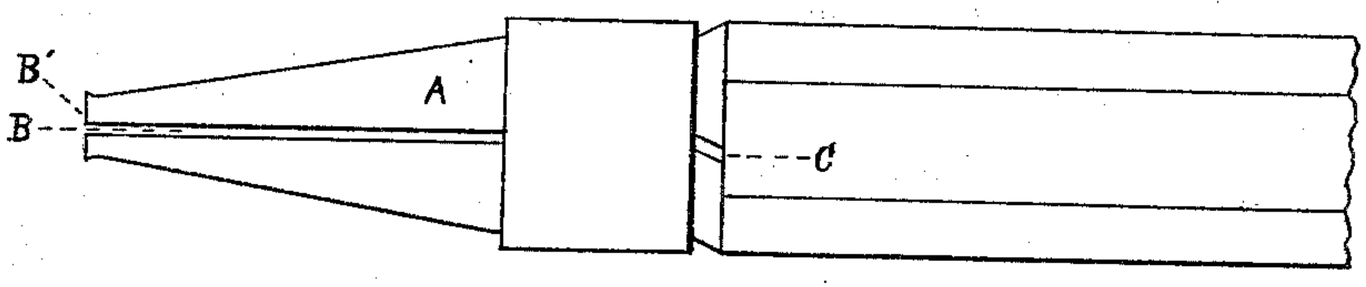


Fig. 2.

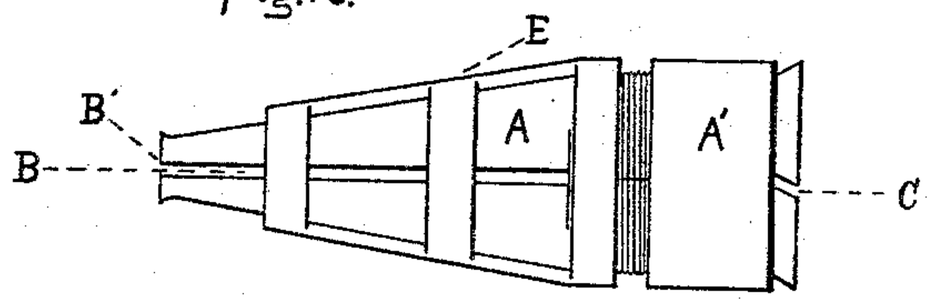


Fig. 3.

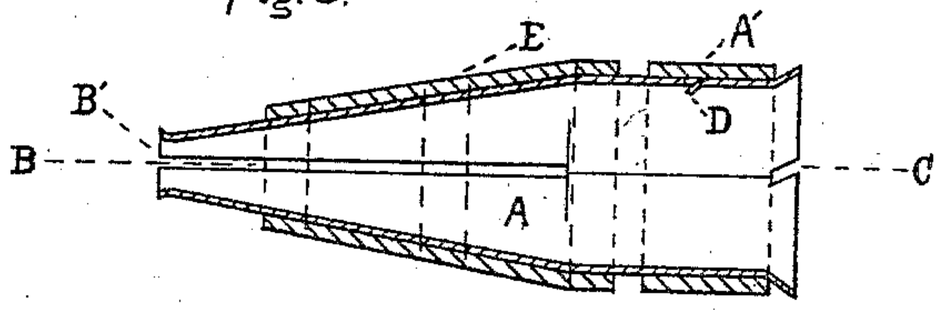
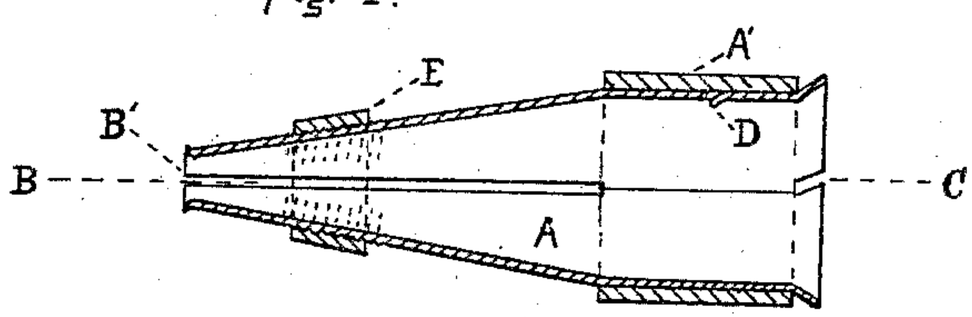


Fig. 4.



Witnesses.

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UNITED STATES PATENT OFFICE.

PARDON W. TILLINGHAST, OF PROVIDENCE, RHODE ISLAND.

PENCIL-SHARPENER.

SPECIFICATION forming part of Letters Patent No. 411,909, dated October 1, 1889.

Application filed December 5, 1888. Serial No. 292,762. (No model.)

To all whom it may concern:

Be it known that I, PARDON W. TILLINGHAST, a citizen of the United States, residing at Providence, in the county of Providence and State of Rhode Island, have invented certain new and useful Improvements in Pencil-Sharpeners, of which the following is a specification.

My invention relates to a pencil-sharpener that is designed to be carried on the pencil at all times and offer no obstruction to the free use of the same, and also protect the pencil-point when not in use.

I am aware that sharpeners have been patented that are similar in some respects to my invention, but in most cases they possess the following features, which are objectionable:

First. They are larger in diameter than the pencil, and if left on the pencil would be an obstruction to the free use of the same.

Second. The taper is short and causes the point of the sharpener to make a slight scratch or groove round the lead, causing it to break with slight pressure in using, if it does not fracture before removing from the sharpener, and it is practically impossible to make a long point that will not break easily. The point of the sharpeners are rigid, causing the lead to bind or wedge itself in the same, and liable to twist or break off when the cutting-edge is not in proper condition.

Third. They are so constructed that they will only cut to one size, and to get a fine point emery-paper or other similar material must be used.

Fourth. Unless made of thick material, the cutting-edges will catch in the wood and spring open and are liable to break.

I overcome the above objections in the following manner:

First. I provide a sharpener with a cutting-edge in one end arranged to cut away a portion of the outside of the pencil, which allows the body of the sharpener to fit on the same. The cutting-edge on the taper portion of the sharpener cuts away the remainder and makes the working-point on the pencil. The sharpener is no larger in diameter than an ordinary pencil and does not interfere with the use of the same.

Second. The taper is longer and the cutting-edges at or near the point are curved; the lead is not grooved, as in other sharpeners, and a longer point can be obtained without danger of breaking, and the lead is less liable to clog or bind in the same.

Third. The sharpener is so constructed that it is capable of being adjusted to cut any sized point desired.

Fourth. For the purpose of adjusting the cutting-edges a nut or clamp is provided, which also serves to keep the parts from springing open and prevents their breaking.

The construction of the sharpener is illustrated in the accompanying drawings, forming a part of this specification, in which similar letters refer to similar parts throughout the several views.

Figure 1 is a side view of the sharpener on the pencil. Fig. 2 is a side view with adjusting-nut E. Fig. 3 is a sectional side view of Fig. 2. Fig. 4 is a sectional side view illustrating one other form of adjusting-nut.

Fig. 1 consists of a body or shell A, made in one piece and slotted on the taper portion of the same. The slots or openings B′ are arranged to form cutting-edges B. A cutting-edge C is provided in the back end of the shell, which cuts away the pencil to the same diameter as the inside of said shell A which fits on the turned portion of the pencil with sufficient tension to prevent its coming off in ordinary use. In order to make it more secure a small tongue D is bent in from the shell that will press into the wood, and as the pencil is turned in the sharpener will form a thread or groove which will hold the shell in position. The said shell can then be fed onto the pencil and the cutting-edges B will sharpen the same.

For the purpose of varying the size of the pencil-point the arrangement shown in Fig. 2 is used. This consists of a body A, preferably made in two pieces and secured in a ferrule or collar A′. A nut E is provided, having openings for the passage of the shavings, and screws on the said body A. A portion of the nut encircles the sharpener near the point and draws the two parts together when screwed up and will allow them to separate when the said nut is loosened. It also prevents the said parts of the shell A from springing open when sharpening the pencil, and they are less liable to break off.

Fig. 4 illustrates one other form of nut and method of applying the same. A part of the taper portion of the shell is provided with a thread or its equivalent. The nut E is threaded to correspond. Said thread in shell and nut is not continuous, but extends part way round the same, for the purpose of making a quick adjustment. The nut E can be pushed on the taper portion of the shell A until the outlet in said shell is the required diameter and will be held in that position by turning it slightly to engage the threads in the nut E with the threads on the shell A.

By reference to the drawings it will be seen that the point of the sharpener, instead of ending on a line with the taper portion, is turned out slightly, so that the shoulder on the lead made by the cutting-edges B will be curved instead of angular, thereby giving more strength to the point of the pencil, and will admit of a longer and smaller point to be obtained without breaking than with other sharpeners.

The herein-described parts all combine to make an adjustable pencil-sharpener that can be carried on the pencil at all times and capable of making any sized point desired, and when not in use the lead will be protected by turning the sharpener backward and drawing the lead into the shell.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. In a pencil-sharpener, the body A, made in two pieces, in combination with the collar A′, for the purpose of holding the two parts A together.

2. In a pencil-sharpener, the body A, made in two pieces and provided with a ferrule or collar A′ and having cutting-edges B and C, the said cutting-edges C being at an angle to the plane of the pencil, for the purpose described.

3. In a pencil-sharpener, the body A, composed of one or more parts and provided with cutting-edges at each end of the same, the cutting-edges C being at an angle to the axis of the sharpener and to the plane of the pencil for the purpose of trimming down the pencil, so that the outside of the sharpener may be the same or a smaller diameter than the pencil.

4. In a pencil-sharpener, the body A, composed of one or more parts, in combination with the nut E or other suitable means for adjusting the outlet B′ to a large or small diameter, as and for the purpose described.

5. In a pencil-sharpener, the body A, composed of one or more parts and having its smallest diameter slightly removed from the end of the same, for the purpose of giving a curved cutting-edge B at the point or outlet B′.

6. A pencil-sharpener composed of one or more parts and provided with an inwardly-projecting piece D, adapted to press into the pencil and hold the sharpener on the same.

7. In a pencil-sharpener, the combination of the body A, cutting-edges B and C, tongue D, and adjusting-nut E, all for the purpose specified.

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Witnesses:

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