A. WAISMAN.

CHALK SHARPENER.

APPLICATION FILED APR. 4, 1921.

1,413,080. Patented Apr. 18, 1922.

Fig. 1

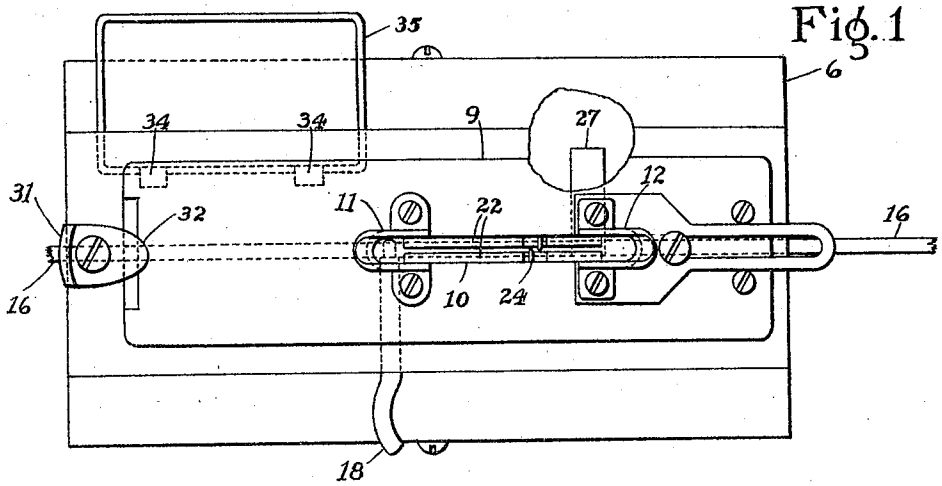


Fig. 2

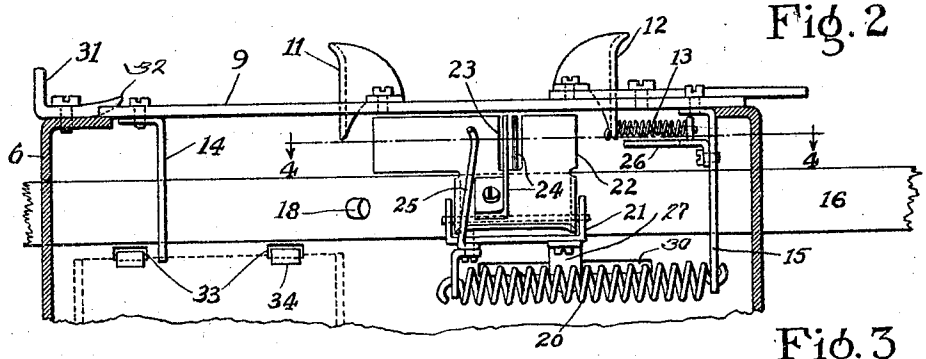


Fig. 3

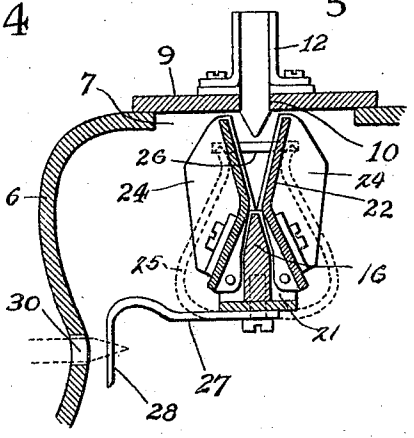


Fig. 4

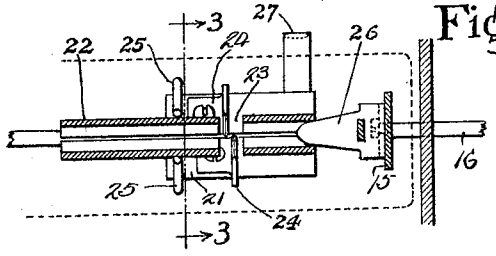
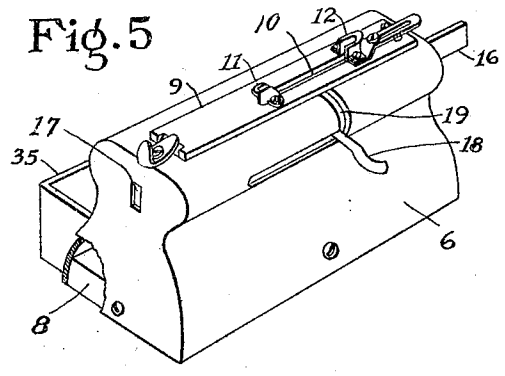


Fig. 5



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CHALK SHARPENER.

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To all whom it may concern:

Be it known that I, ABRAHAM WAISMAN, a citizen of the United States, and resident of the city of St. Louis and State of Missouri, have invented certain new and useful Improvements in Chalk Sharpeners, of which the following is a specification containing a full, clear, and exact description, reference being had to the accompanying drawings, forming a part hereof.

My invention relates to improvements in chalk sharpeners and has for its primary object a device for sharpening chalk which is used in the clothing manufacturing business.

A further object is to construct a chalk sharpener which will put an edge on a piece of marking chalk and which acts as a container for the shavings and also as a weight.

A still further object is to construct a device which will not only sharpen marking chalk, but will also straighten its edge in the event the same becomes chipped or broken.

In the drawings,

Fig. 1 is a top plan view of my device.

Fig. 2 a fragmental vertical elevation of the same with the housing in section.

Fig. 3 an enlarged fragmental transverse vertical section taken on the line 3—3 of Fig. 4, viewing the same in the direction of the arrows.

Fig. 4 a fragmental horizontal section taken on the line 4—4 of Fig. 2, viewing the same in the direction of the arrows.

Fig. 5 a perspective view of my device with a corner broken away and showing the base plate.

In the construction of my device I employ a housing 6 which is provided at its upper end with a slot 7. The bottom of this housing is open and is closed by the base plate 8. This base plate is relatively heavy so that the device can also be utilized as a weight to prevent cloth from slipping.

Secured over the opening 7 is a plate 9. This plate is provided with a slot 10. Secured to the plate 9 and projecting into the slot 10, is a U shaped holding member 11. This member is rigidly attached to the top and is for the purpose of acting as a guide and clamp for one end of the piece of chalk while it is being sharpened. Slidably secured on the plate 9 is a similar member 12 which answers the same purpose as the member 11, engaging with and holding the other end of the piece of chalk. This member is held against one end of the slot, or opening 10, by means of the contractile spring 13. This is for the purpose of allowing the member 12 to be moved forward, so that a piece of chalk can be securely held between the members 11 and 12. Secured to the underside of the plate 9 are brackets 14 and 15 through which the sliding bar 16 passes. The upper portion of this bar is preferably tapered, as represented, in Fig. 3, in order that the guide plates 22, to be described, may closely approach each other when forced inwardly by their springs 25. The ends of the housing 6 are provided with openings 17 to permit the bar to pass. Secured to the bar 16 is a lever or handle 18 which projects through an L shaped slot 19 which is formed on one side of the housing 6. The bar 16 is held in retracted position by means of the spring 20. Rigidly secured to the underside of the bar 16 is a yoke 21 to which are pivotally attached guide plates 22. These plates are provided with slots or openings 23, through which knives 24 extend. The cutting edge of each knife projects a short distance beyond the inner face of the plate that carries it and is parallel to such face, and as these plates are arranged at an acute angle to each other the two blades constitute a V-shaped cutter arranged to trim the chalk on its opposite faces and impart the desired sharp edge thereto, one knife being preferably arranged a little in advance of the other as represented in Fig. 4. Secured to the yoke 21 are springs 25 which bear against the guide plates 22 and tend to force them toward each other, and hold them in position against the chalk during the trimming operation. Rigidly secured to the bracket 15 is a triangular shaped tongue 26 which tends to spread the guide plates and the knives apart; when the spring 20 has drawn the bar 16 backwards to its farthest extent.

My object in spreading the guide plates and knives is to permit the ready insertion of the chalk between the guides 22. Rigidly secured to the underside of the yoke 21 is a knife 27 which has its cutting end 28 turned downward and which reciprocates with the bar 16. The purpose of this is to trim the edge of the chalk when the same has become chipped or broken. This is done by inserting the chalk through the slot 30 formed in one side of the housing 6. The plate 9 is secured to the housing 6, by means

of a lock 31 which is pivotally secured to the top of the housing and which permits it to be turned so that its end 32 may become disengaged with the top plate 9. Formed in one side of the housing are openings 33 through which the hooks 34 extend. These hooks are for the purpose of securing a container 35 to the housing in which container a surplus amount of chalk may be carried.

While I have shown my device with the yoke bar partially drawn forward, it is to be understood that in actual operation the yoke 21 will rest against the shoulders of the tongue 26, so that the knives 24 will be drawn far enough back to clear the end of the slot 10. I have shown my device as being operated by a lever. I do not desire to limit myself to this precise construction, as I may also employ a crank mechanism for operating the bar 16, or the same may be arranged to be mechanically operated without departing from the spirit of my invention. The operation of my device is as follows:

The spring 20 will draw the bar 16 sufficiently far back to make the yoke 21 contact with the shoulders of the tongue 26. In this position the tongue 26 will enter between the guide plates 22 and force them apart, thus spreading the knives. A piece of chalk is now inserted in the slot 10 and the clamping member 12 drawn forward, thus holding the chalk securely in place. The inserted edge of the chalk rests on the upper edge of the bar 16 and by drawing the handle 18 forward, the guide plates 22 are released from the tongue 26 and springs 25 move the plates 22 toward each other until they come into contact with the chalk. The knives will scrape the surplus chalk from both sides simultaneously and bring the same to a sharp V edge. These knives are so arranged as to cut on both strokes of the bar. In other words, a cut in both directions and the guide plates 22 are so arranged that when the chalk is once sharpened, no more chalk will be removed by the knives, thus eliminating a possibility of the chalk being cut away uselessly. In the event the sharp edge of the chalk becomes nicked or broken, the chalk is inserted in the slot or opening 30 and the bar 16 reciprocated. Thus the knife edge 28 will trim the edge of the chalk and straighten the same.

The plates 22 constitute a V-shaped receiver, of which the bar 16 is the bottom, in which lies the chalk, while being sharpened. The clamps 11 and 12 hold the chalk against endwise movement. One of the members just referred to, the V-shaped receiver for the chalk or the holder that engages with the ends of the chalk, is movable, with reference to the other. Broadly considered, it is immaterial which moves, but I prefer the arrangement shown in which the bar 16 and the knife-carrying plates 22 constitute the movable element.

Having fully described my invention, what I claim, is:

1. A chalk sharpener comprising a housing open at its upper end, a plate located on said housing and over the opening, a slot formed in said plate, said slot adapted to permit the insertion of chalk, a pair of clamping members carried by said plate, a reciprocating bar mounted beneath said plate, knives carried by said reciprocating bar and means for operating said bar.

2. A chalk sharpener comprising a housing, having an opening formed in its top; a slotted plate mounted on said housing for closing the opening formed therein, a fixed chalk clamp mounted on said plate adjacent one end of the slot, a movable clamp mounted on said plate adjacent the opposite end of the slot, brackets secured to the under side of the plate, a bar slidably mounted on said brackets, an adjustable guide mounted on each side of the said bar, a knife carried by each of the said adjustable plates, a knife carried by said bar, means for holding said bar in retracted position, and means for sliding said bar forward.

3. A chalk sharpener, comprising a pair of movable plates arranged to form a V-shaped receiver in which lies the chalk, adapted to be separated to permit the chalk to be placed between them, means for forcing the plates toward each other, knives carried by the plates for trimming the chalk, means for holding the chalk endwise while being trimmed, and means for moving the chalk holder and the knife-carrying plates one with reference to the other.

4. A chalk sharpener comprising a sliding bar, a pair of movable plates carried thereby arranged to form a V-shaped receiver in which lies the chalk, means for forcing the plates toward each other, knives carried by the plates for trimming the chalk, means for holding the chalk against endwise movement while being trimmed, and means for moving the bar and the knife-carrying plates.

5. A chalk sharpener comprising a pair of movable plates arranged to form a V-shaped receiver in which lies the chalk while being trimmed, means for forcing the plates toward each other and toward the opposite sides of the chalk, knives carried by the plates for trimming the chalk, means for determining the approach of the plates beyond each other, and means for moving the trimming knives and their carrying plates with reference to the chalk.

6. A chalk sharpener comprising a pair of movable plates arranged to form a V-shaped receiver in which lies the chalk while being trimmed, knives carried by the plates, means for moving the plates longitudinally with reference to the chalk, means

tending to force the plates toward each other to bring the knives into operative engagement with the opposite sides of the chalk, and means for forcing apart the plates to separate them when they are moved longitudinally into a certain position.

7. A chalk sharpener comprising a sliding bar, a pair of movable plates carried thereby and adapted to form a V-shaped receiver in which lies the chalk while being sharpened, knives carried by the plates, means for moving the sliding bar to carry the plates and knives past the chalk, means acting on the plates tending to force them toward each other, and a wedge-shaped part tending to separate the plates when they are moved to one end of their longitudinal reciprocation.

8. A chalk sharpener comprising an adjustable holder for engaging with and clamping the piece of chalk to be sharpened, a sliding bar movable with reference to the said chalk holder, a pair of plates pivoted to the bar and arranged to constitute a V-shaped receiver in which lies the chalk when in the said holder, knives carried by the plate for trimming the opposite sides of the chalk, springs acting on the plates and tending to force them toward each other, and a wedge-shaped tongue for separating the plates when the bar is moved to one end of its throw.

9. The combination stated in claim 8 including a spring for automatically moving the sliding bar to the position with the wedge-shaped tongue separating the knife-carrying plates.

In testimony whereof, I have signed my name to this specification.

ABRAHAM WAISMAN.