

F. H. SUMNER.
SHEAR GUIDE.
APPLICATION FILED JAN. 5, 1911.

1,005,082.

Patented Oct. 3, 1911.

Fig. 1.

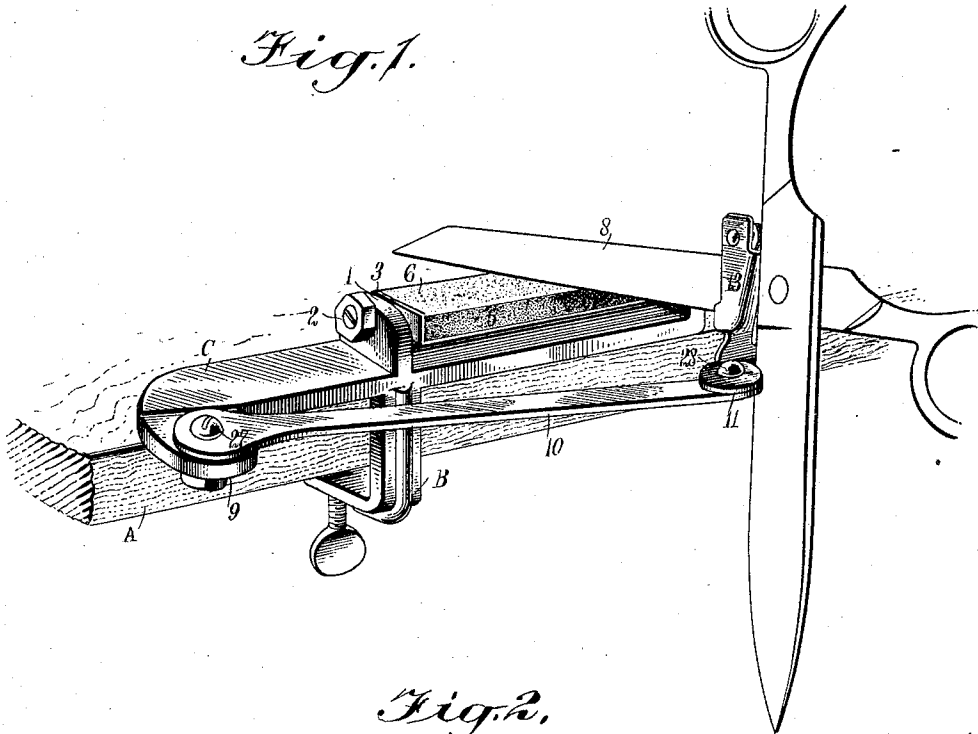


Fig. 2.

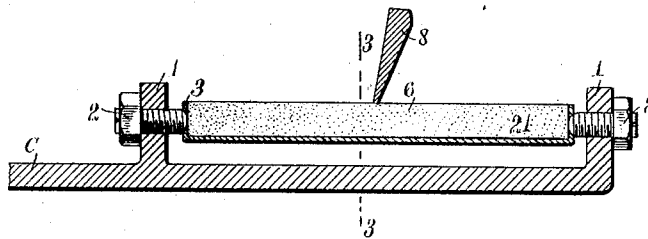


Fig. 3.

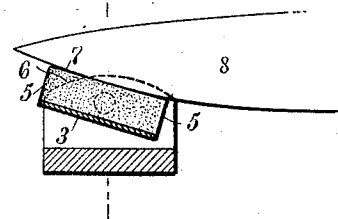
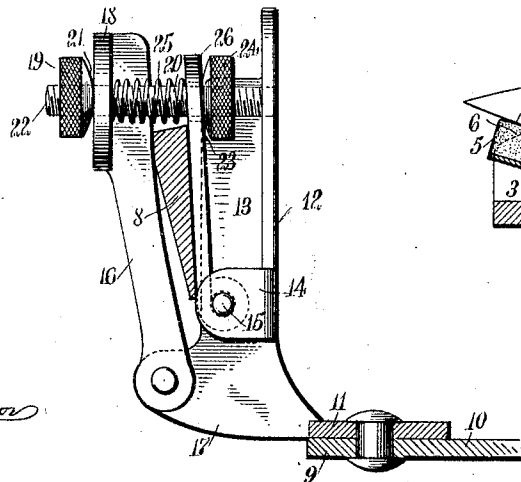


Fig. 4.



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SHEAR-GUIDE.

1,005,082.

Specification of Letters Patent.

Patented Oct. 3, 1911.

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To all whom it may concern:

Be it known that I, FRED H. SUMNER, a citizen of the United States, and a resident of San Francisco, in the county of San Francisco and State of California, have invented a new and Improved Shear-Guide, of which the following is a full, clear, and exact description.

This invention relates to a shear guide and blade-sharpening device, particularly adapted for sharpening shears.

I have for an object, the construction of a simple and improved device, whereby a blade is held in adjustment against a sharpening stone in such a manner as to allow of a free swinging movement of the edge of the blade across the sharpening stone.

A further object of the invention is to provide means whereby the inclination of the blade on the sharpening stone may be varied at will, and held in its adjusted position.

A further object of the invention is to provide means whereby the stone will always be kept in contact with the edge of the blade.

I attain these objects by pivotally mounting a cutting stone upon a support and from the same support pivot a blade-carrying mechanism having adjustable arms admitting of movement in two directions, between which are inserted the blade.

With the above and other objects in view, as will more fully hereinafter appear, the present invention consists in certain novel details of construction and arrangement of parts hereinafter fully described, illustrated in the accompanying drawings, and more particularly pointed out in the appended claims.

In the accompanying drawings, forming part of this specification, the reference characters of which indicate corresponding parts in the several figures,—Figure 1 is a perspective view of a preferred embodiment of my invention; Fig. 2 is a transverse sectional view showing the stone and the position of the blade upon said stone; Fig. 3 is a detailed sectional view on the line 3—3 of Fig. 2, showing a blade having a curved edge positioned on the cutting stone; and Fig. 4 is a detailed elevation showing a preferred embodiment of my blade-holding device.

Positioned upon the support A by means

of any suitable bracket B, is a plate C. From the upper side of the plate C, projects a pair of spaced-apart lugs 1, between which is pivoted, by any suitable means as threaded bolts 2, a frame 3 opened on its longitudinal side 5. Firmly mounted in this frame 3, is a sharpening device 6, preferably carborundum stone. By means of this construction, the plate is adapted to be pivoted on the bolts 2, so as to be always tangent to the curved surface 7 of the shear blade 8, which blade is moved across the stone 6 and in the same plane therewith. Pivoted upon a lug 9 projecting from one end of the plate C, is a swinging arm 10, the outer end of which is pivoted to an offset 11, extending at right angles to the supporting upright 12 of the blade-carrying device. This supporting upright 12 is bent at right angles to itself, to form a flanged portion 13, and the side of the supporting upright opposite the flange 13, is bent into a parallelly-disposed ear 14. The flange 13 and the ear 14 constitute a bearing for a pin 15, which pin carries a vertically-disposed plate 26.

From the lower end of the supporting upright 12, is an arm 16, pivoted to the offset lug 17. The upper end of the arm 16 is bent into a flange 18 to afford a bearing for the milled-head nut 19. Permanently affixed to the supporting arm of the upright 12, and passing through apertures 20 in the plate 26 and through apertures 21 in the flange 18, is a threaded screw 22. Positioned on the screw 22 and working in a recess 23 in the flange 13, is a milled-head nut 24. This milled-head nut 24 bearing against the plate 26, moves this plate in position at different angles with reference to the upright 12. Surrounding the screw 22 and positioned between the plate 26 and the inside of the flange member 18, is an extension spring 25, which spring will keep the arm 16 and the plate 26 separate. Between the arm 16 and the plate 26, is positioned the shear blade 8, which it is desired to sharpen.

In sharpening blades of this character, it is always desirable to have the flat edge of the blade in contact at the same angle on the stone without any rocking movement, but, at the same time, to have all points of the edge come in contact with the stone at some portion of the swing. In order to accomplish this, the blade is inserted be-

tween the arm 16 and the plate 26, and by adjusting the nut 24, the blade 8 is moved on its pivot until the flat face of the edge rests squarely upon the stone; then by turning the nut 19, the arm 16 acts against the force of the spring 25 and firmly clamps the blade in position. By a swinging movement, the blade swinging on the two pivots 27, 28, is drawn across the face of the stone. As the outer curved end 7 of the blade approaches the stone, the latter will rock on its pivotal adjustment, thereby always bringing the edge of the blade squarely against the stone.

As many changes could be made in the above construction and many apparently widely different embodiments of this invention could be made without departing from the scope thereof, it is intended that all matters contained herein in the above description or shown in the accompanying drawings shall be interpreted as illustrative and not in a limiting sense. It is also to be understood that the language used in the following claims is merely intended to cover all the generic and specific features of the invention herein described, and all statements of the scope of the invention, which, as a matter of language, might be said to fall therebetween, and that materials, sizes and relativities of parts are non-essential, except as called for in the claims.

Having thus described my invention, I claim as new and desire to secure by Letters Patent:

1. In a blade-sharpening device, a supporting plate, an arm pivoted to said plate, a blade carrying member pivoted to said arm, means on said member whereby a swinging motion is given to the shears, and means coacting with said plate, whereby a curved edge of the blade is kept squarely to the surface of the plate.

2. In a shear guider, a shear-carrying member, comprising a pivoted upright, a side angularly disposed to said upright, an arm pivoted to said side, a flange on said arm, a threaded screw attached to said upright and passing through said flange, and means on the end of said screw, whereby the shears may be clamped between said arm and upright.

3. In a shear guider, a shear-carrying member, comprising a pivoted upright, a side angularly disposed to said upright, an arm pivoted to said side, a flange on said arm, a threaded screw attached to said upright and passing through said flange, means on the end of said screw, whereby the shears may be clamped between said arm and up-

right, and a coil spring between said upright and arm adapted to separate the two.

4. In a shear guider, an upright, an arm pivoted to said upright, a plate between said upright and arm, and means affixed to said upright and passing through said plate and arm, adapted to clamp the shear between said plate and arm at different angles.

5. In a shear-sharpening device, a pivoted stone, a shear-carrying device moving in the plane of said stone, and means coacting with the device, whereby the face of the stone is kept flat on the edge of the shears.

6. In a shear-sharpening device, a movable sharpening stone and an arm, a blade-carrying device pivoted to said arm and moving in the plane of said stone, whereby curved blade held in said device moves the sharpening stone to fit the edge of the blade.

7. In a shear guider, an upright, a lug projecting from said upright, an arm pivoted to said lug, a plate pivoted at one end of said upright, means whereby the shears to be sharpened are clamped between said arm and plate, and means for regulating the position of said clamped shears.

8. In a shear guider, an upright, a lug projecting from said upright, an arm pivoted to said lug, a plate pivoted at one end of said upright, means adapted to clamp a blade of the shears between said arm and plate, means varying the angle of said clamped blade, and means locking said clamped blade in position.

9. In a shear guider, an upright, an arm movable on said upright, a plate movable with relation to said upright, a blade supported by said arm and plate and adapted to clamp the blade in position, and means controlling the relative position of the plate and arm, said means comprising a threaded screw, a nut on said screw, and a spring holding the arm in adjusted position against the nut.

10. In a shear guider, an upright, an arm movable on said upright, a plate movable with relation to said upright, adapted to clamp a blade of a shears in position, and means controlling the relative position of the plate and arm, said means comprising a threaded screw, and a nut on said screw between said upright and plate, whereby the angle of the plate is varied.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

FRED H. SUMNER.

Witnesses:

GEORGE M. ALTIZER,
R. S. CHAPMAN.