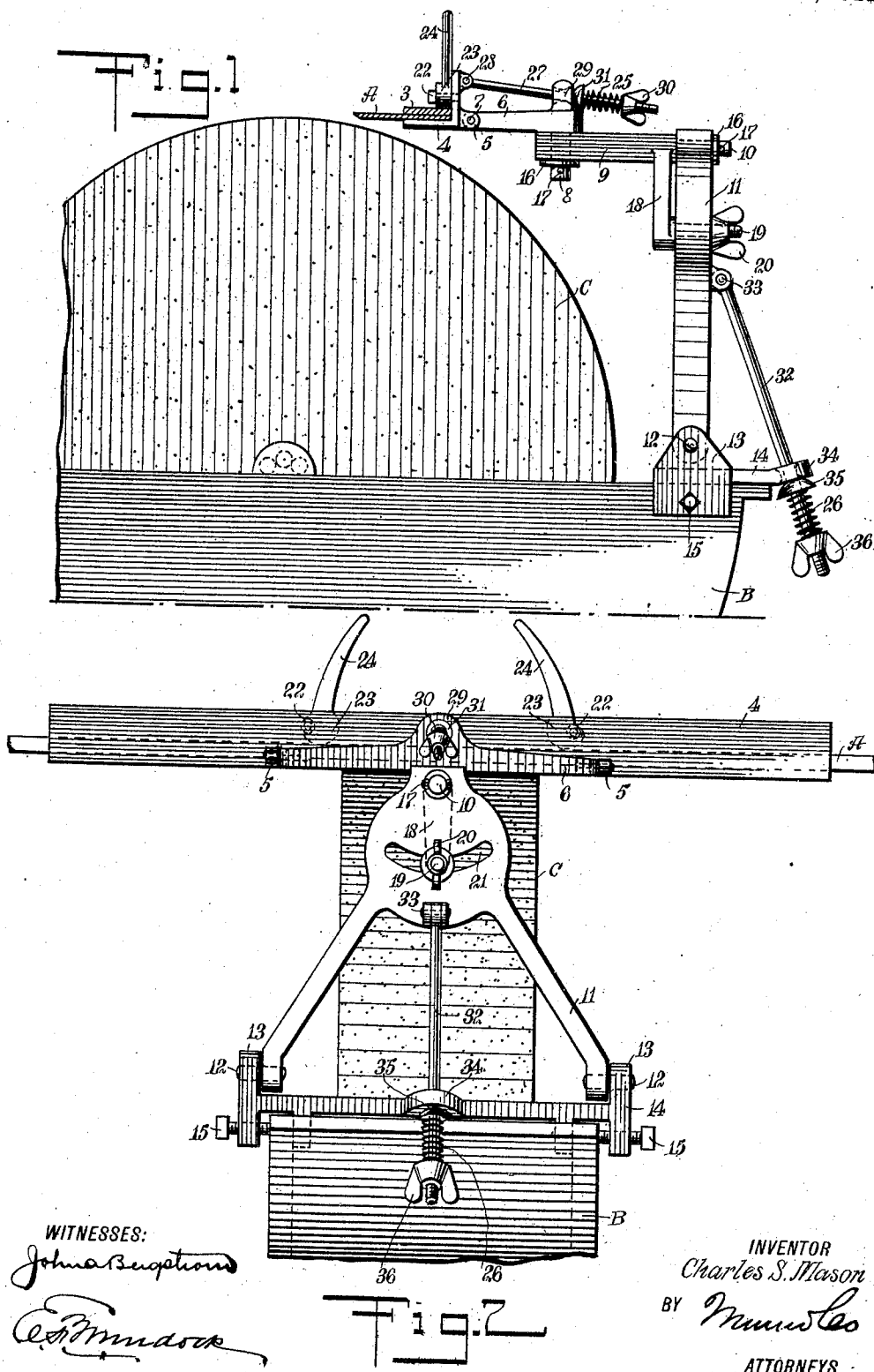


C. S. MASON.
 HOLDER FOR GRINDING TOOLS.
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HOLDER FOR GRINDING-TOOLS.

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Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, CHARLES S. MASON, a citizen of the United States, and a resident of Hershey, in the county of Lincoln and State of Nebraska, have invented a new and Improved Holder for Grinding-Tools, of which the following is a full, clear, and exact description.

Among the principal objects which the present invention has in view are: to provide means for holding in guided relation with a grinding tool a cutting blade; to provide a holder of the character described wherein may be accommodated the blade of a mowing machine sickle; to provide efficient and rapid clamping means for the blade; and to provide adjustments for varying the operative position of the blade holder.

One embodiment of the present invention is disclosed in the structure illustrated in the accompanying drawings, in which like characters of reference denote corresponding parts in both the views, and in which—
Figure 1 is a side elevation of a tool holder constructed and arranged in accordance with this invention, and illustrated as applied to the frame of a grindstone; and Fig. 2 is a rear elevation of the same.

The invention is illustrated in the accompanying drawings showing the application thereof to the blade A of a sickle or scythe. The blade is held between a movable clamping plate 3 and the lower and outward extension of an angle iron holder 4. The holder 4 is provided with hinged ears 5, 5, between which the arms of a yoke 6 extend, and to which the ends of the said arms are pivoted at 7. The yoke 6 is provided with a pivot extension 8, depended from the body of the said yoke, and adapted to pivot within the perforation provided to receive it in a head 9. The head 9 is provided with a pivot extension 10, which is set within a perforation provided in the upper end of a standard 11. The standard 11 is pivotally mounted at 12 between lugs 13, 13 of the clamp frame 14, which frame is fixedly mounted upon the supporting frame B of the grindstone C by means of set screws 15, 15. The pivot extensions 8 and 10 are held in position in the head 9 and standard 11 by washers 16, 16 and pins 17, 17 with which the said pivot extensions are provided. By this construction it will be observed a flexi-

ble holding frame is provided, the standard 11 pivoting to rock to and from the grindstone C, the head 9 rotating to change the horizontal angle of the holder 4 and the yoke 6 connected therewith, while the yoke 6 may be moved about the pivot 8 in the horizontal plane to change the angle at which the holder 4 is addressed to the grinding surface of the stone C. The adjustment of the head 9 is controlled or fixed in the desired position by means of an arm 18, which is provided with an extension 19 threaded to receive a wing nut 20 in the manner illustrated in Fig. 1 of the drawings. The extension 19 is mounted within a slot 21 formed in the standard 11 and made concentric with the center of the perforation provided in the said standard to receive the pivot extension 10 of the head 9. A shoulder which is provided on the arm 18, at the rear of the slot 21, together with a shoulder formed on the wing nut 20, constitute a clamp for gripping the standard 11 when the said wing nut is set up by being screwed upon the threaded extension 19. It is obvious that with the construction just described the vertical inclination of the holder 4 may be varied, and be rigidly fixed in any position.

The swing of the yoke 6 about the extension 8 is at all times free, this swing being adapted to accommodate the blade of the sickle, to hold which the present device is provided. It is obvious that with a fixed pivot such as the extension 8, the holder 4 may be moved about the said pivot to present to the stone C the edge of the blade held within the holder 4, which will accommodate the shape of the scythe or sickle.

If it is desired to clamp or fixedly dispose the blade A within the holder 4, this is accomplished by means of clamps illustrated in the drawings as pivoted on the vertical member of the angle iron forming the holder 4. The pivots will be seen at 22, 22. The clamps are provided with eccentric heads 23, 23 and handles 24, 24. The heads 23, 23 are arranged and constructed in such manner that the greatest diameter rests upon the lower and horizontal extension of the holder 4 when the handles 24 are depressed upon the said holder 4. The shortest diameter of the eccentric heads, when the handles are raised or thrown back, permits the extension between the heads and the

lower member of the holder 4, of blades of varying thicknesses. When the blade is adjusted under the heads 23, 23 the handles 24, 24 are thrown down, rotating the heads 23 on the pivots 22, and by reason of their eccentric construction, clamping the blade between the said heads and the holder 4. In this position it is obvious that the blade is held firmly during the process of grinding the same. It is also obvious that the grinding may be controlled by the operator gripping the holder 4 and rotating the same about its pivot 8, thereby advancing or receding the parts of the blade laterally extended from the median line of the grindstone C with which the pivot 8 is alined.

If unsupported, the structure, particularly when carrying the blade in the holder 4, would fall forward upon the grindstone C and hold the blade in grinding contact with the surface thereof. It is to prevent the unintentional grinding of the blade A, by reason of the support thereof permitting the same to rest upon the grindstone C, that I have provided the spiral springs 25 and 26. The spring 25 infolds the end of a rod 27, which is pivoted at 28 to the holder 4, and is extended through a perforation provided in an upturned ear 29 formed on the yoke 6 above the extension 8 thereof. The rod 27 is provided with screw threads at the outer end to receive a wing nut 30. The rod 27 is further provided with a rounded button 31, the spherical face of which rests within the opening of the perforation formed in the ear 29. It is between the bottom 31 and the wing nut 30 that the spring 25 is disposed. The operation of this construction is that as the wing nut 30 is set up against the spring 25, the said spring is compressed against the button 31 and the ear 29 to support the holder 4 in its normal position.

The spring 26 is extended about the outer and threaded end of a rod 32, which rod is pivoted at 33 upon the standard 11. The frame 14 is provided with an offset 34, the end whereof is perforated to pass the said rod. Threaded over the said rod 32 is a rounded button 35, against which the end of the spring 26 normally rests. The spring 26 is held between the said button 35 and a wing nut 36, which nut is threaded to engage the threaded end of the rod 32. It is by setting up the nut 36 that the normal position of the standard 11 is regulated.

By manipulating the nuts 36 and 30 the disposition of the holder 4, and blade contained therein, is altered with reference to the stone C. At the same time the operator may, by pressing forward on the holder 4, address the cutting edge of the blade A to the stone C with all the force that he may deem necessary. When in the course of grinding the operator releases his hold upon

the holder 4, the springs 25 and 26 operate to withdraw the stone C, and to maintain the same in position removed therefrom.

In conclusion it will be observed that the angle of inclination from the horizontal plane of the holder 4 and blade contained therein, may be varied at will by adjusting the arm 18 within the quadrant slot 21, and fixing the same by setting up the screw 20 when the holder 4 is in the desired position. It will also be observed that whatever the position of the holder, the said holder may be rotated about the center of the pivot 8, thereby accommodating the shape of the tools for the sharpening of which the present invention is particularly designed.

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

1. A holder for grinding tools, comprising a supporting frame adapted to be pivotally mounted on the structure of a grinding instrument; a holder pivotally connected with said frame; an articulated intermediate construction connecting said holder and said supporting frame for varying the angle of operation of said holder; means for locking said articulated construction in fixed position; and a spring-actuated member for normally maintaining the said holder removed from the grinding instrument.

2. A holder for grinding tools, comprising a supporting frame adapted to be pivotally mounted on the structure of a grinding instrument; a holder pivotally connected with said frame; an articulated intermediate construction connecting said holder and said supporting frame for varying the angle of operation of said holder; means for locking said articulated construction in fixed position; a spring-actuated member for normally maintaining the said holder removed from the grinding instrument; and adjusting devices for varying the normal position of said frame and holder.

3. A holder for grinding tools, comprising a supporting frame adapted to be pivotally mounted on the structure of a grinding instrument; a holder pivotally connected with said frame; a head pivotally mounted on said frame and horizontally extended therefrom, said head having a lateral extension to move over said frame in a path concentric with the pivot of said head; and a locking device for holding said extension in fixed position on said frame.

4. A holder for grinding tools, comprising a supporting frame adapted to be pivotally mounted on the structure of a grinding instrument; a holder pivotally connected with said frame; a head pivotally mounted on said frame and horizontally extended therefrom, said head having a lateral extension to move over said frame in a path concentric with the pivot of said head; a locking de-

vice for holding said extension in fixed position on said frame; and a yoke hingedly connected with said holder and pivotally mounted on said head to provide a horizontal throw for said holder and a vertical adjustment therefor.

5 5. A holder for grinding tools, comprising a supporting frame adapted to be pivotally mounted on the structure of a grinding instrument; a holder pivotally connected with
10 said frame; a head pivotally mounted on said frame and horizontally extended therefrom, said head having a lateral extension to move over said frame in a path concentric with the pivot of said head; a locking device
15 for holding said extension in fixed position on said frame; a yoke hingedly connected with said holder and pivotally mounted on said head to provide a horizontal throw for
20 said holder and a vertical adjustment therefor; a supporting rod connecting said holder and said yoke; and a spring mounted on said rod to normally lift the said holder to remove the blade therein from the grinding
25 ing instrument.

6. A holder for grinding tools, comprising a supporting frame adapted to be pivotally mounted on the structure of a grinding in-

strument; a holder pivotally connected with said frame; a head pivotally mounted on said frame and horizontally extended therefrom, said head having a lateral extension to move over said frame in a path concentric with the pivot of said head; a locking device for holding said extension in fixed position
30 on said frame; a yoke hingedly connected with said holder and pivotally mounted on said head to provide a horizontal throw for said holder and a vertical adjustment therefor; a supporting rod connecting said
35 holder and said yoke; a spring mounted on said rod to normally lift the said holder to remove the blade therein from the grinding instrument; a connecting rod for maintaining the normal position of said supporting
40 frame; and a spring mounted on said rod for maintaining the upright position of said frame.

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

CHARLES S. MASON.

Witnesses:

J. F. GANSON,
A. H. HORVEY.