J. F. WEBER.

SHARPENER FOR SCRAPER BLADES.

APPLICATION FILED MAY 4, 1908.

947,875. Patented Feb. 1, 1910.

FIG. 1.

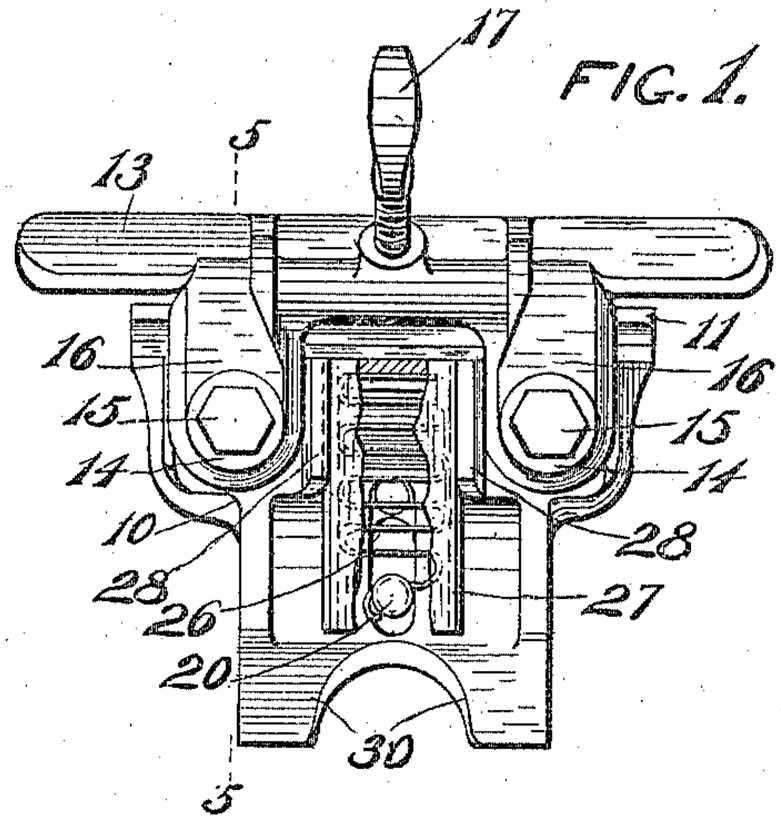


FIG. 3.

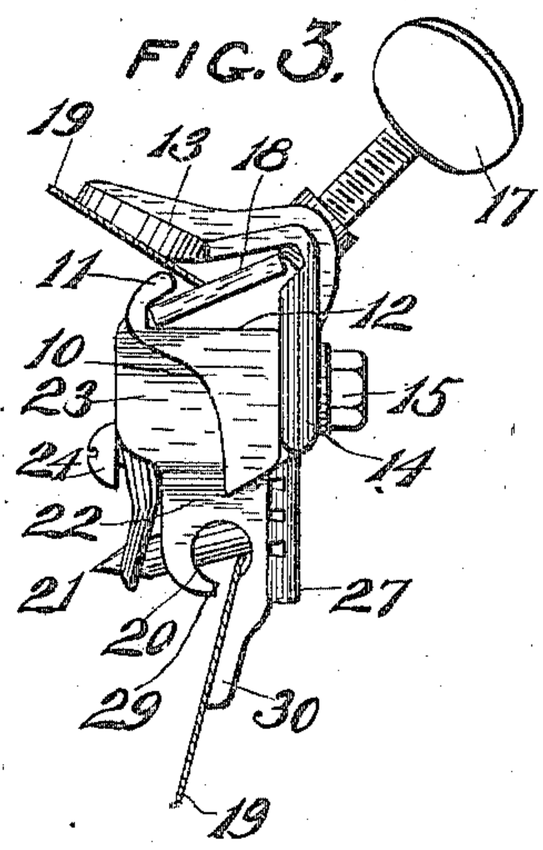


FIG. 4.

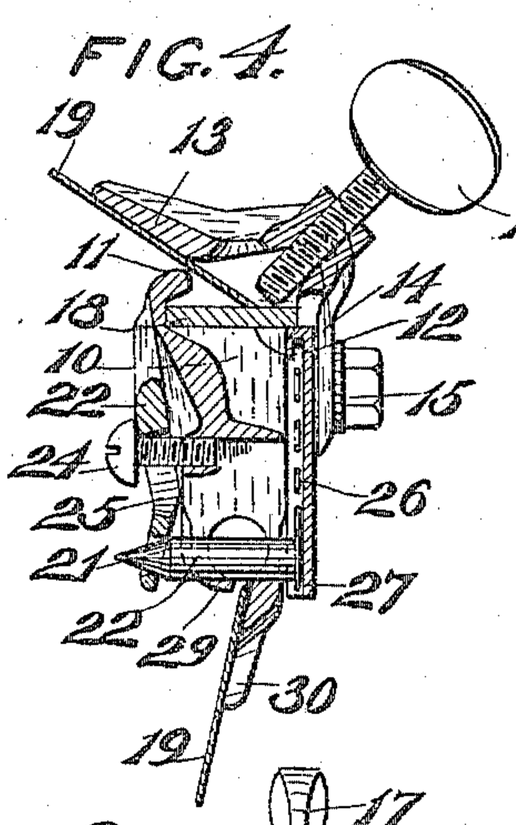


FIG. 5.

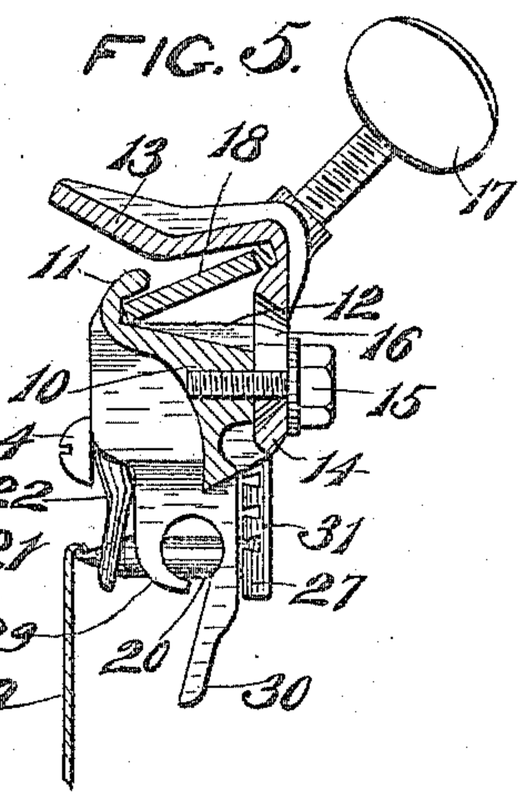
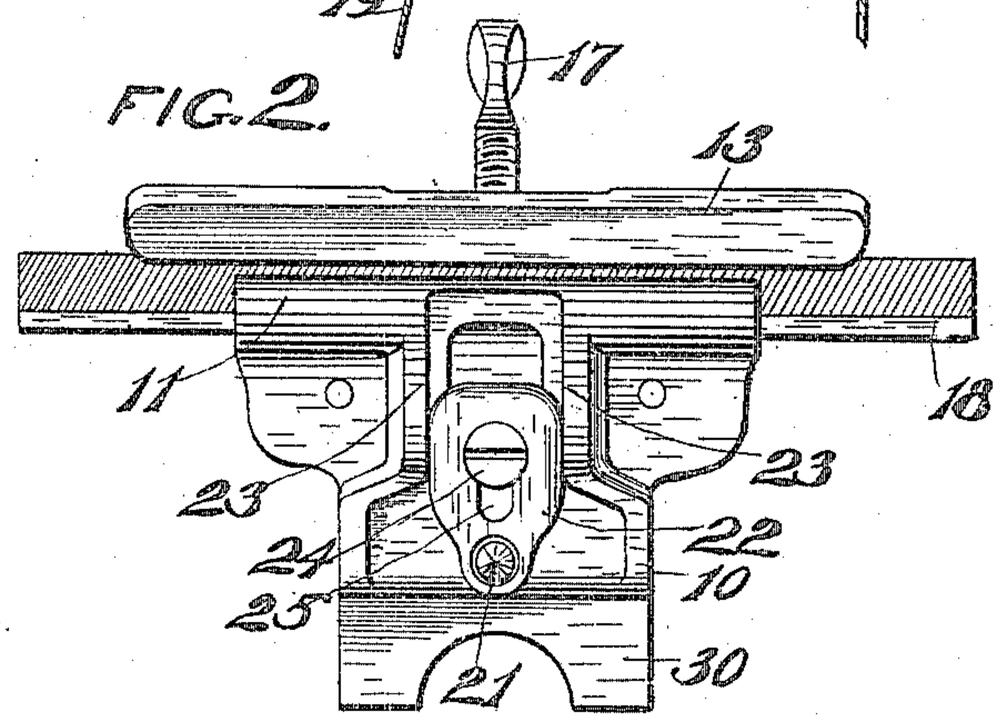


FIG. 2.



WITNESSES.

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SHARPENER FOR SCRAPER-BLADES.

947,875. Specification of Letters Patent. Patented Feb. 1, 1910.

Application filed May 4, 1908. Serial No. 430,655.

To all whom it may concern:

Be it known that I, JOHN F. WEBER, residing in Milwaukee, in the county of Milwaukee and State of Wisconsin, have invented new and useful Improvements in Sharpeners for Scraper-Blades, of which the following is a description, reference being had to the accompanying drawings, which are a part of this specification.

This invention has for its object to provide a sharpener for blades of floor scrapers and the like by means of which an old edge may be removed from a worn scraper blade and a new edge formed thereon and turned in the manner necessary for floor scraping.

Another object of this invention is to produce such a device which will be compact in form and simple in its construction while being durable and efficient in its operation.

With the above and other objects in view the invention consists in the sharpener for scraper blades herein claimed and its parts and combinations of parts and all equivalents.

Referring to the accompanying drawings in which like characters of reference indicate the same parts in the different views; Figure 1 is an elevation showing one side of a sharpener for scraper blades of this invention, the spring casing being broken away to show the spring; Fig. 2 is a similar view of the reverse side thereof with a file in place; Fig. 3 is an end elevation thereof with the file and edge turning pin in use; Fig. 4 is a central transverse sectional view thereof; and, Fig. 5 is a sectional end elevation on the plane of line 5—5 of Fig. 1.

In these drawings 10 represents a body portion which is shaped to form a hook flange 11 extending the full length thereof and bending over a shoulder 12. An inclined guide 13, somewhat longer than the hook flange, has a pair of ears 14 by which it is adjustably secured to the body portion 10, bolts 15 passing through elongated slots 16 thereof and threaded into the body portion 10 for that purpose. The adjustment of the guide 13 causes it to move nearer to or farther from the shoulder 12 and thereby diminish or increase the width of the slot formed between said guide and the hook flange 11. A set screw 17 is threaded through the angular portion of the inclined guide 13 and is adapted to engage a file 18 either in the inclined position shown in Figs. 3 and 5, where its one edge is engaged beneath the hook flange 11 and its other edge is engaged by the set screw, or in the position shown in Fig. 5, where the file rests upon the shoulder 12 and the set screw engages its upper surface. The file is thus securely held within the jaws of the sharpener and a scraper blade 19 may be passed through the slot between the guide 13 and the hook flange 11 to engage the surface of the file. The angle of such engagement is maintained by the scraper blade bearing flat against the plain surface of the guide 13. By moving the blade longitudinally through the slot while bearing thereon its edge may be filed at a predetermined angle which will be suitable for the purpose. When the angle of the blade edge is desired to be more acute, a smaller file is employed which will lie flat upon the shoulder 12, as shown in Fig. 4, and the operation is the same as before. The adjustment of the guide 13 enables it to be set the right distance from the hook flange 11 to just permit the blade to pass therebetween, which will assist in keeping the blade flat against the guide to produce the desired angle of the sharpened edge.

It is not only desirable to sharpen the edge of the scraper blade, but it is an object to turn it back. For this purpose an adjustable rounding pin 20 is provided, with a sharpened pointed end 21 projecting through an opening smaller than the pin in an adjustable fulcrum plate 22 which is slidably mounted between guide shoulders 23 of the body portion 10 and is held in its adjusted position by means of a screw 24 passing through an elongated slot 25 therein and threading in the body portion. The pin 20 may swing upon its pointed end as a fulcrum, being normally held forward in the position shown in Figs. 4 and 5 by a spring 26, which is of a sinuous form and is contained within a casing 27 sliding into place between guides 28 on the body portion. The spring bears at one end in a flange on the end of the casing and at the other end against a groove around the end of the pin 20. At the end of the body portion is an opening which is crossed by the pin 20 and produces a pair of lips 29 and 30 to receive between them the cutter blade 19, the lip 30 being broad to constitute a guide for the blade to rest against while being drawn through the slot between the lips and forced against the pin 20. The pin 20 is made

of hardened steel and serves to turn the edge of the blade after it has been sharpened on the file, the turning effect being produced more or less according to the position of the pin. When the blade is beveled by the sharpening operation on the file it is run through the rounding slot with its edge pressed tightly against the pin 20 so as to cause said pin to swing to an inclined position as shown in Fig. 3, to produce the first turning action on the sharpened edge as such edge is drawn through the slot. As the blade is worked back and forth and the turning action progresses its pressure against the pin is gradually reduced, the pin changing its position under the pressure of the spring in a manner to increase the turning effect. For blades that are highly tempered and will not permit of a turning action by the pin when the pin is backed by the spring only, the fulcrum plate 22 is adjusted to a position farther back, where the pin will stand in a normal position more inclined toward the blade, but will not be as much inclined when forced inwardly to its full extent as with the adjustment shown in the drawings. This enables the blade to meet the pin at about the angle shown in Fig. 4 after the pin has been pressed back against its stop. Another way of accomplishing this object is to insert a pin of any suitable character in the notches 31 in the side flanges of the casing 27, such pin then standing in the path of the spring pressed end of the pin 20 so as to limit the inward movement thereof to the desired angle with relation to the scraper blade.

In operation the blade is first moved back and forth in the slot between the flanges 11 and 13 and against the file 18, which is arranged to produce the desired angle of bevel for the blade edge, and is then forced back and forth within the slot between the lips 29 and 30, first bearing with force against the pin 20 to swing said pin to its innermost position, and then gradually releasing the pressure thereon, permitting the pin to swing forward and change its angle with relation to the blade so as to effectively turn the edge of the blade. When it is desired to resharpen a worn blade it is first necessary to return the edge thereof to its straight position, or nearly so, and this is done by drawing the turned edge over the projecting point of the steel pin 20 as shown in Fig. 5.

What I claim as my invention is;

1. A sharpener for scraper blades, comprising a body portion, a hook flange thereon, a guide adjustably slidable on the body portion and forming a slot between it and the flange, the space between the guide and the body portion being adapted to receive a file in various angular positions with relation to the guide, and a clamping screw threaded through the guide and adapted to clamp the file in place.

2. A sharpener for scraper blades, comprising a body portion, flanges thereon forming lips with a slot between them to receive the scraper blade, and a yielding swinging pin in the path of the scraper blade to turn the edge of the scraper blade more or less according to the position of the pin.

3. A sharpener for scraper blades, comprising a body portion, flanges thereon forming lips with a slot between them to receive the scraper blade, and a spring pressed swinging pin in the path of the scraper blade to turn the edge of the scraper blade more or less according to the position of the pin.

4. A sharpener for scraper blades, comprising a body portion, flanges thereon forming lips with a slot between them to receive the scraper blade, and a spring pressed adjustably fulcrumed swinging pin in the path of the scraper blade to turn the edge of the scraper blade more or less according to the position of the pin.

5. A sharpener for scraper blades, comprising a body portion, flanges thereon forming lips with a slot between them to receive the scraper blade, a plate adjustably mounted on the body portion and provided with an opening, a pin with a pointed end entering the opening of the adjustable plate and adapted to swing on the fulcrum formed by said pointed end in the opening, and a spring bearing on the pin for holding it in its normal position.

6. A sharpener for scraper blades, comprising a body portion, flanges thereon forming lips with a slot between them to receive the scraper blade, a plate adjustably mounted on the body portion and provided with an opening, a pin with a pointed end entering the opening of the adjustable plate and adapted to swing on the fulcrum formed by said pointed end in the opening, a casing slidably mounted on the body portion, a sinuously bent spring within the casing bearing at one end against an end of the casing and at the other end against the pin for holding the pin in its normal position.

In testimony whereof, I affix my signature, in presence of two witnesses.

JOHN F. WEBER.

Witnesses:
R. S. C. CALDWELL,
ANNA F. SCHMIDTBAUER.