Aug. 14, 1934. H. EISENBERG 1,969,785

SCRAPER

Filed Feb. 10, 1933

Fig. 1

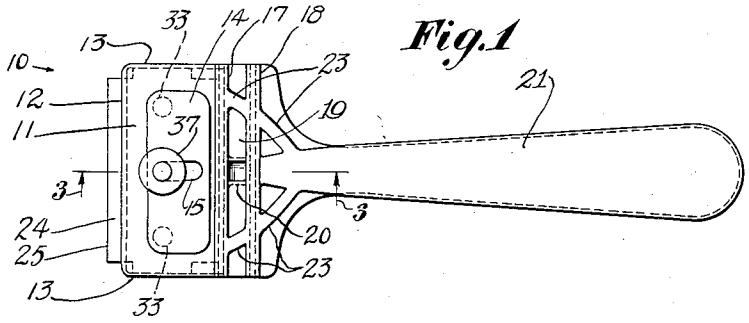


Fig. 2

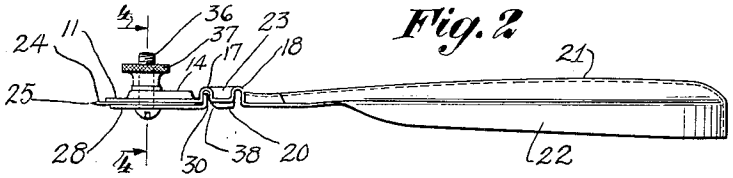


Fig. 3

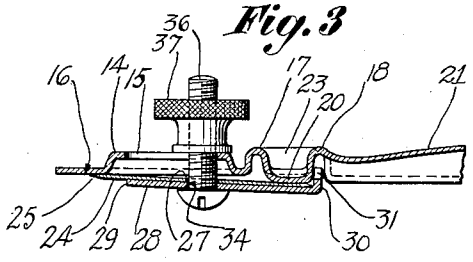


Fig. 5

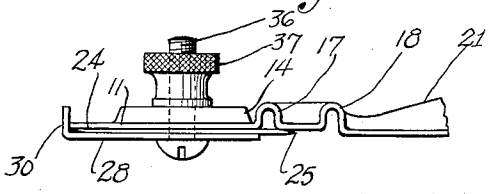


Fig. 6

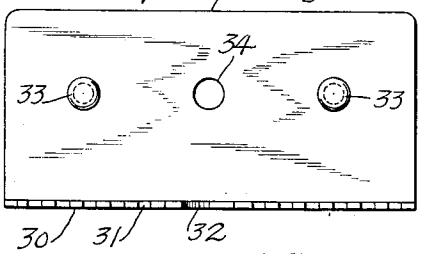


Fig. 4

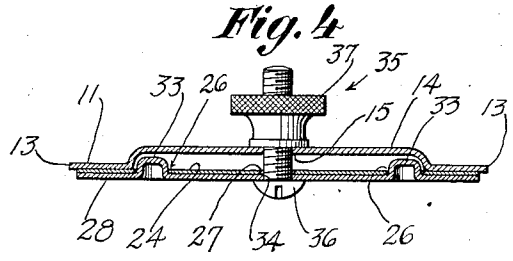
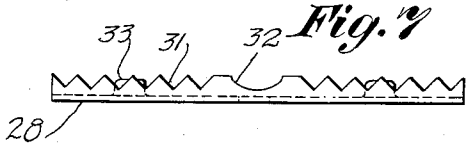


Fig. 7



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UNITED STATES PATENT OFFICE

1,969,785

SCRAPER

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Application February 10, 1933, Serial No. 656,119

14 Claims. (Cl. 15—236)

This invention relates to blade holding tools, especially of the type adapted to be used as scrapers.

One object of this invention is to provide an improved device of the character described including a movable blade carrying clamping element whereby the cutting edge of the blade can be projected or retracted relative to an edge of a body member having a handle, whereby increased safety is afforded when the device is not in use.

Another object of this invention is to provide a device of the nature set forth having improved abutment means for supporting the clamping member in the use of the tool; and further to provide such means as will reliably maintain the clamping member retracted.

Another object of this invention is to construct a tool of the class described having a blade and an associated scraping means that can be used interchangeably with the blade; and preferably wherein the edges of the blade and associated scraping means can be protectively covered when the tool is not used.

A further object of the invention is to furnish a device of the type mentioned having few and simple parts, and which is reliable and convenient in use, inexpensive and compact in construction, durable, and efficient.

Other objects and advantages of the invention will become apparent as the specification proceeds.

With the aforesaid objects in view, the invention consists in the novel combinations and arrangements of parts hereinafter described in their preferred embodiments, pointed out in the subjoined claims, and illustrated on the annexed drawing, wherein like parts are designated by the same reference characters throughout the several views.

In the drawing:

Figure 1 is a plan view showing a device embodying the invention.

Fig. 2 is a view in side elevation thereof.

Fig. 3 is an enlarged fragmentary sectional view thereof taken on line 3—3 of Fig. 1.

Fig. 4 is an enlarged sectional view taken on line 4—4 of Fig. 2.

Fig. 5 is a fragmentary enlarged view in side elevation of the device, showing a modification thereof.

Fig. 6 is an enlarged plan view of the clamping member.

Fig. 7 is an edge view thereof.

The advantages of the invention as here outlined are best realized when all of its features and instrumentalities are combined in one and the same structure, but, useful devices may be produced embodying less than the whole.

It will be obvious to those skilled in the art to which this invention appertains, that the same may be incorporated in several different constructions. The accompanying drawing, therefore, is submitted merely as showing the preferred exemplication of the invention.

Referring in detail to the drawing, 10 denotes a device embodying the invention. The same may include a body member 11 having at one end a straight or other edge 12, and the side edge 13 thereof being free and terminating in the plane of the body member. The body member may also have a relatively large continuous recessed portion 14, which may be provided with a slot 15 extending at right angles to the straight edge 12. The portions of the body member about said recess may lie in a plane to afford a flat seat 16. To the rear of the recessed portion 14, one or more grooved portions 17 and 18 may be provided, which may be of any desired length, and which are spaced from each other in the direction of the length of the slot. The said grooved portions may also be parallel to the straight edge 12. The part 19 intermediate of said grooves may lie in the plane of the seat 16, and may have a central transverse ridge such as 20 extending between the grooves. Integrally connected to the body member at the rear end thereof is a handle 21, which may have reenforcing side flanges 22, and reenforcing ribs 23 extending therefrom along a part of the body member 11. The body member and handle can be constructed as a one piece sheet metal stamping, strong and light in weight.

24 denotes a blade of any suitable type, such as a double edged blade known under the trademark "Gillette". This blade may have opposite working edges 25, and two end holes 26 and an intermediate hole 27 disposed along a straight line parallel to and centrally arranged between the working edges.

28 denotes a clamping member having a relatively blunt free edge 29 and an opposite scraping edge such as a flange 30. The latter is preferably parallel to the edge 29 and may extend at an angle to the plane of the clamping member. The edge of the flange may be serrated at 31, and the flange may have a central recess 32 for mating with the ridge 20. For releasably engaging the blade, the clamping member may have a pair of fixed studs 33 upstanding in the direction of said flange and engageable in holes

26 of the blade. Intermediate of and in alinement with the studs, a hole 34 may be provided in the clamping member. The hole 34 and studs 33 may be disposed relatively centrally between the flange 30 and edge 29, or somewhat nearer to the latter.

For movably interconnecting the body and clamping members, a suitable fastening such as 35 may be used, the same including a screw 36 extending freely through holes 34, 27 and slot 15, and a thumbnut 37 being removably threaded thereon and bearing on the body member. Broadly the means 35 is such as to permit the clamping member to be reversed so as to assume the position shown in Figs. 2 or 3, or that shown in Fig. 5.

In Fig. 5 is shown a construction similar to the foregoing except that the ridge 20 is omitted, the recess 32 being therefore rendered unnecessary.

The manner of assembling and using the device will now be described. The blade 24 is placed on the clamping member so that the studs 33 enter the holes 26 of the blade. One working edge 25 of the blade now projects beyond the edge 29 of the clamping member, while the other edge of the blade lies spaced from or closed to the flange 30. The blade and clamping member are now brought into engagement with the body member 11, the blade resting on the seat 16 thereof, and the studs 33 projecting into the recessed portion 14. Then the screw is inserted through holes 34 and 27 and slot 15 and the thumbnut applied. If the blade 24 is to be used for scraping or other work, the flange 30 is caused to enter the recessed portion 17 as shown in Fig. 2, whereby the working edge of the blade extends beyond the straight edge 12 of the body member. The flange 30 abuts a wall of the grooved portion to afford a strong and reliable support for the clamping member to enable the latter to take up the force exerted on the blade.

If the device is to be put away, and is, for example, to be carried in the pocket of the user, it is desired that the working edge of the blade be covered. For this purpose the thumbnut 37 is loosed sufficiently to permit the flange 30 to be released from groove 17 and entered in the rear groove 18, the clamping member being simultaneously moved rearward, and the screw 36 moving correspondingly along slot 15; then the thumbscrew 37 is tightened. The working edge 25 of the blade is now disposed rearward of the straight edge 12 so as to be completely and reliably covered thereby, particularly as the clamping member is somewhat inclined so as to bear with superior force on the blade near the working edge thereof. Due to the engagement of the flange in recess 18 in this retracted position of the device, there is no possibility of any turning of the clamping member and blade if the thumbnut 37 should become slightly loosened. In causing the retraction of the clamping member, the ridge 20 may guide the clamping member by engagement in groove 32, and since the forward end 38 of the ridge is of gradual incline, the blade will readily move thereon. Upon tightening the thumbnut, the clamping member may spring somewhat due to its resilience to assure that the thumbnut will be maintained tight. Moreover, it will be perceived that flange 30 constitutes a reenforcement for the clamping member.

An advantage of the device in the position shown in Fig. 3, is that, since the handle 20 is connected to the body member, the blade edge cannot be uncovered by any push exerted on the clamping member if the thumbnut accidentally loosens, as would occur if the handle were connected to the relatively retractible or clamping member.

Before using the blade 24, it is generally desirable to roughly scrape a surface. This is accomplished by the serrated edge 31 which may be used as follows: The thumbnut 37 is sufficiently loosened to permit the flange 30 to be released from groove 18, and then the clamping member may be swung about the screw 36 so that the flange 30 lies at the front of the straight edge 12. In this position, the clamping member can be tightly secured in any desired position, and may be moved rearward so that the serrated flange 30 may rest on the straight edge 12.

It will be appreciated that various changes and modifications may be made in the device as shown in the drawing, and that the same is submitted in an illustrative and not in a limiting sense, the scope of the invention being defined in the following claims.

I claim:

1. A tool of the class described, including a body member having a straight edge, a blade resting thereon and having a working edge parallel to the edge of the body member, and a clamping member having a pair of fixed upstanding studs arranged in a line parallel to said straight edge, the blade having two holes receiving said studs and a third hole between said two holes, the body member having a slot extending at right angles to the straight edge, and the clamping member having a hole alined with said third hole and adapted to register with the slot, a releasable fastening means extending through the alined holes and the slot whereby the clamping member is projectible and retractible along the body member with the fastening means movable along said slot, and the blade being fixedly held by the studs of the clamping member for movement therewith, the working edge of the blade extending beyond the clamping member in projected and retracted positions, and the working edge of the blade extending beyond said straight edge of the body member in the projected position and said straight edge overlying the said working edge of the blade in the retracted position of the latter, and a handle secured to said body member.

2. A tool of the class described, including a body member having a straight edge, a blade resting thereon and having a working edge parallel to the edge of the body member, and a clamping member having a pair of fixed upstanding studs arranged in a line parallel to said straight edge, the blade having two holes receiving said studs and a third hole between said two holes, said studs projecting through the blade toward the body member, and the latter having a continuous concavity for receiving the projecting ends of the studs, the body member having side edges lying in the plane thereof, the body member having a slot extending at right angles to the straight edge, and the clamping member having a hole alined with said third hole and adapted to register with the slot, a releasable fastening means extending through the alined holes and the slot whereby the clamping member is projectible and retractible along the body member with the fastening means movable along said slot, and the blade being fixedly held by the studs of the clamping member for movement therewith, the working edge of the blade extending beyond the clamping member in projected and retracted positions, and the working edge of the blade extending beyond said

straight edge of the body member in the projected position and said straight edge overlying the said working edge of the blade in the retracted position of the latter, and a handle secured to said body member.

3. A tool of the class described, including a body member having a straight edge, a blade resting thereon and having a working edge parallel to the edge of the body member, and a clamping member having a pair of fixed upstanding studs arranged in a line parallel to said straight edge, the blade having two holes receiving said studs and a third hole between said two holes, the body member having a slot extending at right angles to the straight edge, and the clamping member having a hole alined with said third hole and adapted to register with the slot, a releasable fastening means extending through the alined holes and the slot whereby the clamping member is projectible and retractible along the body member with the fastening means movable along said slot, and the blade being fixedly held by the studs of the clamping member for movement therewith, the working edge of the blade extending beyond the clamping member in the projected and retracted positions, and the working edge of the blade extending beyond said straight edge of the body member in the projected position and said straight edge overlying the said working edge of the blade in the retracted position of the latter, and a handle secured to said body member, and means for supporting the clamping member in the projected position thereof including a groove in the body member parallel to said straight edge, and a flange on the clamping member extending into said groove and releasable therefrom to permit retraction of the clamping member.

4. A tool of the class described including a clamping member, a blade removably attached thereto, a body member, said blade being disposed between said members, and means interconnecting said members so that the clamping member and blade are movable as a unit along the body member into projected and retracted positions, the working edge of the blade projecting freely beyond the body member in the projected position, and means for supporting the clamping member in projected position including a recess in one of the members and a projection in the other member releasably engaged in said recess.

5. A tool of the class described including a clamping member, a blade removably attached thereto, a body member, said blade being disposed between said members, and means interconnecting said members so that the clamping member and blade are movable as a unit along the body member into projected and retracted positions, the working edge of the blade projecting freely beyond the body member in the projected position, the clamping member having a flange spaced from an edge of the blade remote from the working edge, and the body member having a plurality of spaced grooves into which said flange interchangeably projects to maintain the clamping member and the blade attached thereto in the projected and retracted positions.

6. A tool of the class described including a clamping member, a blade removably attached thereto, a body member, said blade being disposed between said members, and means interconnecting said members so that the clamping member and blade are movable as a unit along the body member into projected and retracted positions, the working edge of the blade projecting freely beyond the body member in the projected position, the clamping member having a flange spaced from an edge of the blade remote from the working edge, and the body member having a plurality of spaced grooves into which said flange interchangeably projects to maintain the clamping member and the blade attached thereto in the projected and retracted positions, said interconnecting means being disposed substantially centrally of the said members so that said clamping member is swingable therearound into a position with said flange extending beyond the body member remotely from said grooves, and the edge of said flange being serrated for scraping, the serrations being receivable in said grooves in the first mentioned position of the clamping member.

7. A tool of the class described including a body member having a straight edge, a clamping member, a blade between the members, the clamping member having opposite edges one of which is a free edge and the other a serrated flanged edge and one of said edges being adapted to be adjacent to an end of the body member, and means movably interconnecting said members so that the free edge is adapted to be disposed at the end of the body member for exposing an edge of the blade or the flanged edge is adapted to lie at said end of the body member so as to afford a serrated scraping edge.

8. A tool of the class described, including a body member, a clamping member, a blade held therebetween, and means movably interconnecting said members, said clamping member having a serrated edge and being movable into different positions in one of which the clamping member exposes an edge of the blade and in another position the serrated edge is projected beyond the body member.

9. A tool of the class described including a plurality of members and a blade therebetween having a working edge, one of the members being longitudinally movable relatively to the other and having the blade attached thereto for projecting and retracting the blade to expose and cover said working edge, and one of said members having a serrated edge, said serrated edge being adapted to project into working position beyond said working edge in the covered position of the latter, and means for detachably interconnecting the members.

10. A tool of the class described including a body member having a straight edge, a blade resting thereon, a clamping member resting on the blade, the latter being attached to the clamping member, means movably interconnecting the members so that the clamping member is projectible and retractible, with an edge of the blade extending beyond and inward, respectively, of said straight edge, the clamping member having a rear edge provided with an abutment flange parallel to the straight edge, the body member having a groove for releasably receiving said flange for supporting said clamping member in the projected position thereof, said flange having a recess, and the body member having a ridge intersecting said groove, said recess receiving said ridge for guiding the clamping member in its movement.

11. A tool of the class described including a body member having a straight edge, a blade resting thereon, a clamping member resting on the blade, the latter being attached to the clamping member, means movably interconnecting the

members so that the clamping member is projectible and retractible, with an edge of the blade extending beyond and inward, respectively, of said straight edge, the clamping member having a rear edge provided with an abutment flange parallel to the straight edge, a plurality of spaced parallel grooves in the body member for interchangeably receiving the flange in the projected and retracted positions, respectively, of the clamping member.

12. A tool of the class described including a body member having a straight edge, a clamping member movable relatively to the body member, a blade therebetween, the clamping member having a cutting flange overlying and resting on the straight edge, means detachably connecting the blade to the clamping member, and means movably interconnecting said members so that the clamping member is slidable along the body member and is reversible to bring the flange to a point along the body member remote from said straight edge, said blade having a cutting edge extending beyond an edge of the clamping member opposite to said flange, the cutting edge of the blade extending beyond and terminating inward of said straight edge in projected and retracted sliding positions of the clamping member, and the body member having spaced portions for receiving and engaging said flange in the projected and retracted positions of the clamping member.

13. A tool of the class described, including a body member, a clamping member, a blade having a front working edge and connected to the clamping member and movably associated with the body member, the clamping member having a scraping edge at the rear of the blade in the normal position of the clamping member with the scraping edge being covered by the body member, and means interconnecting the members so that the clamping member is movable in said normal position along the body member so as to cause the working edge of the blade to be covered or exposed by the body member, and the clamping member being reversible relative to said normal position so as to cause the scraping edge to be exposed by the body member.

14. A tool of the class described, including a body member, a clamping member movable relatively thereto, a blade having a working edge and connected to the clamping member in movable association with the body member, the clamping member having a scraping edge and being movable with the blade in a normal position relative to the body member so that the working edge of the blade can be covered or uncovered between the members, and means interconnecting said members so that the clamping member is adapted for said movement in the normal position, and is adapted to be reversed with the scraping edge of the clamping member exposed.

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