

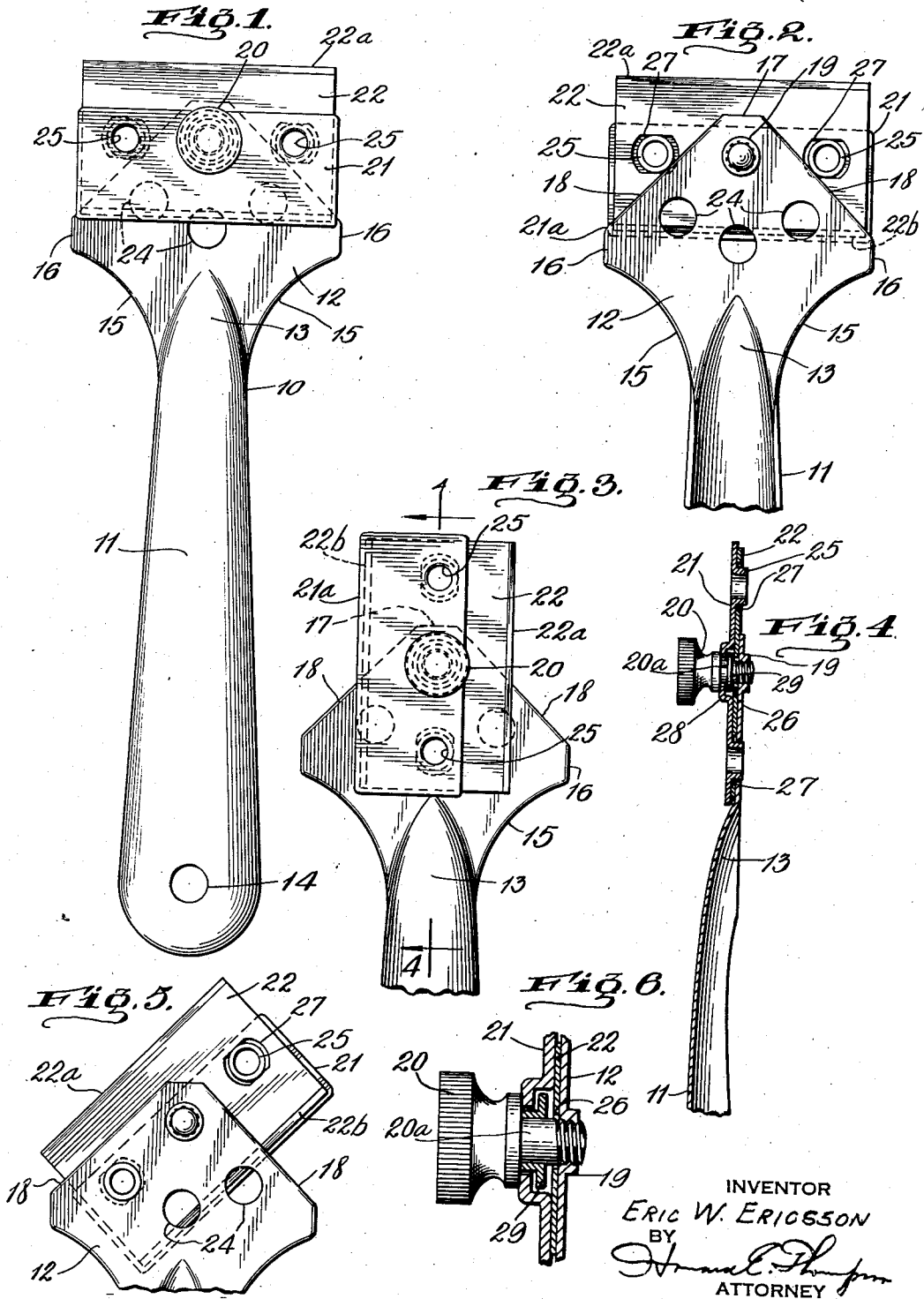
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SCRAPER

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SCRAPER

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This invention relates to scraper devices designed for use in removing paint, dirt and other matter from windows, or in the conventional use of scrapers generally in the removal of finishes on painted or stained surfaces; and the object of the invention is to provide a device of the class described which is of simple and economical construction, and further one which by virtue of the construction of the head or blade supporting end of the tool will permit universal mounting of a razor blade in connection therewith to permit other distinct uses for the tool, such for example as a knife, paper or cord cutter, seam ripping instrument and the like; a further object being to provide a tool of the class described, the blade supporting end of which is provided with converging outer side walls so formed as to provide bearings for the tubular studs or sleeves of a supplemental blade supporting plate to rigidly support said plate as well as a double edged razor blade in connection with the handle of the tool, and further, in providing a plurality of apertures in the handle to receive said studs in the different angular positions of adjustment of the blade and supporting plate with respect thereto; a still further object being to provide means for permanently coupling a clamp screw in connection with said clamp plate to prevent relative detachment of the screw and plate while at the same time permitting rotary movement of the screw in said plate; and with these and other objects in view, the invention consists in a device of the class and for the purpose specified, which is simple in construction, efficient in use, and which is constructed as hereinafter described and claimed.

The invention is fully disclosed in the following specification, of which the accompanying drawing forms a part, in which the separate parts of my improvement are designated by suitable reference characters in each of the views, and in which:

Fig. 1 is a plan view of a tool made according to my invention, indicating one method of its use.

Fig. 2 is a bottom view of the structure shown in Fig. 1, with part of the construction broken away.

Fig. 3 is a view similar to Fig. 1 showing parts in a different position.

Fig. 4 is a partial section on the line 4—4 of Fig. 3.

Fig. 5 is a view similar to Fig. 2 but showing another position of the blade in the holder; and,

Fig. 6 is a view similar to Fig. 4 on an enlarged scale and showing a modification.

In practice, I provide a holder proper 10 which is fashioned from a single sheet of metal or other suitable material to form a hollow handle portion 11 which is concavo-convex in cross sectional form and a flat, blade supporting plate 12, joining the handle portion 11 in the contracted and tapered part 13. The free outer end of the handle portion is apertured as seen at 14 to permit the hanging thereof on a nail or other support.

The plate 12 has curved side edges 15 continuous with the side edges of the handle 11 and which terminate in relatively short straight edges 16 which extend outwardly through the free contracted end 17 of the plate in beveled side edges 18 forming what might be termed a triangular outer end portion to the plate 12. The plate 12 is provided with a drawn tubular portion 19 which is internally threaded to receive a milled clamp screw 20 which is employed to move a clamp plate 21 in the protection of the plate 12 in securing a double edged razor blade 22 between said plates. The plate 12 is provided with three equally spaced apertures 24 which are so positioned with respect to each other and to the beveled edges 18 as to engage and support offset tubular studs 25 formed on the clamp plate 21 in several positions of adjustment to support the razor blade 22 with the free edge 22a thereof exposed in the manner shown in Fig. 2, or as shown in Figs. 3 and 5, or in a position at right angles to the showing in Fig. 5, that is to say, with the edge 22a parallel to the opposed beveled edge 18 of the plate 12 or the blade 22 may be moved into a position at 180° to that shown in Fig. 2 so that the other edge 22b of the blade is disposed outwardly and the edge 22a is arranged upon the plate 12 within the boundaries of the side walls 16 thereof.

In the latter position of the plate 21, the side edge 21a thereof is arranged over and projects beyond the edge 22b and acts as a guard therefor and this will be the normally inoperative position of the tool and the position in which the tool will be normally kept when not in use, and as it will be packed for shipment. The plate 21 is also of greater length than the length of the blade 22 so that the corners of the razor blade will be protected. The screw 20 passes through the center aperture 26 of the razor blade, whereas the studs 25 pass through the other apertures 27 of the blade in the conventional construction of double edged razor blades as are commonly used.

The plate 21 is offset as seen at 28 where the

screw 20 passes therethrough, and the shank portion of the screw is flanged or spun over as seen at 20a, note Fig. 4 of the drawing, so as to retain the screw 20 against displacement from the plate 21 while at the same time permitting free rotation of the screw in said plate. While this construction is not absolutely essential, it is preferred in order to eliminate the handling of an unnecessary number of parts. By coupling the screw 20 with the plate 21, only three parts will have to be handled, and in fact, after the parts are coupled together in one relationship, the screw is only loosened sufficiently to permit rotation of the projecting ends of the lugs 25 over the plate 12 in moving the same into different positions of adjustment as shown in Figs. 3 and 5, and as previously described.

When the parts are in the position shown in Fig. 2, the lugs 25 are disposed in juxtaposition to the walls 18 and serve to key and retain the plate 21 against relative movement of the plate 12, whereas when one of the lugs is positioned within one of the apertures 24, the plate 21 is likewise keyed against rotary movement with respect to the plate 12.

In Fig. 6 of the drawing is shown a slight modification wherein a flanged bushing 29 is substituted for the flange 28 and constitutes a pressed or drive fit upon the shank portion 20a of the screw 20 or may be sweated thereon to retain the screw against displacement from the plate 21. Otherwise, the device as shown in Fig. 6 is of the same structure as that shown in the other figures.

My invention is not necessarily limited to the particular form of the plate 21 herein disclosed, nor to the manner of arranging or constructing the studs 25 thereon, it being apparent that solid pins could be riveted to the plate and accomplish the same result. One of the distinctive features of the invention resides in the simple manner of coupling, keying and bracing the clamp plate with the blade supporting plate of the holder in the several positions of adjustment thereof in order to reinforce the mounting of the razor blade in the holder.

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

1. A tool of the class described comprising a handle portion, a blade supporting part at and integral with one end of the handle portion, said part having means for coupling a clamp screw therewith, a clamp plate movable toward and from the first named plate by said screw to clamp a blade between said plates, means on the clamp plate for keying the blade against

relative movement thereon, said first named plate having apertures spaced circumferentially of said clamp screw for receiving said last named means in keying the clamp plate and blade against relative movement thereon in several positions of adjustment, and side edges of the first named plate being angularly arranged with respect to the longitudinal plane of the handle portion to engage said keying means to provide in conjunction with said spaced apertures universal adjustments of the clamp plate and blade with respect to the axis of said clamp screw.

2. In a tool of the class described, a handle portion, a flat blade supporting plate at and integral with one end of the handle portion, said supporting plate having a threaded bearing, the outer end portion of the plate having beveled side edges forming a substantially triangular end to said plate, said plate having apertures arranged radially and spaced circumferentially with respect to the axis of said bearing, a clamp plate having spaced key lugs, a screw for detachably and adjustably mounting the clamp plate on said supporting plate with a razor blade therebetween, and said key lugs being adapted to register with the spaced apertures in the supporting plate and with the beveled side edges thereof in keying the clamp plate against rotary movement on the supporting plate in several positions circumferentially of said screw.

3. A tool of the class described comprising an elongated handle member, a flat cross head at one end of the handle member forming a blade supporting plate, the outer edges of said plate being arranged at substantially 45° to the longitudinal plane of the handle member, a clamp plate between which and said supporting plate a double edge razor blade is adapted to be clamped, a screw for securing said plates together to retain said blade therebetween, means for retaining the screw against displacement from one of said plates, the axis of the screw being arranged at the outer contracted end of said supporting plate, said supporting plate having three apertures circumferentially arranged with respect to the axis of said screw, and said clamp plate having key lugs adapted to engage outer edges of the supporting plate and the apertures of said plate in mounting the razor blade with at least one edge thereof longitudinally of the handle member, at right angles to the handle member and at 45° to the handle member in the several circumferential positions of adjustment of the blade on said supporting plate.

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