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A. WEBER

2,648,363

SAFETY RAZOR BLADE PLANE

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Fig. 1.

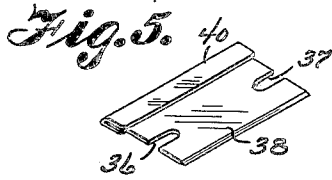
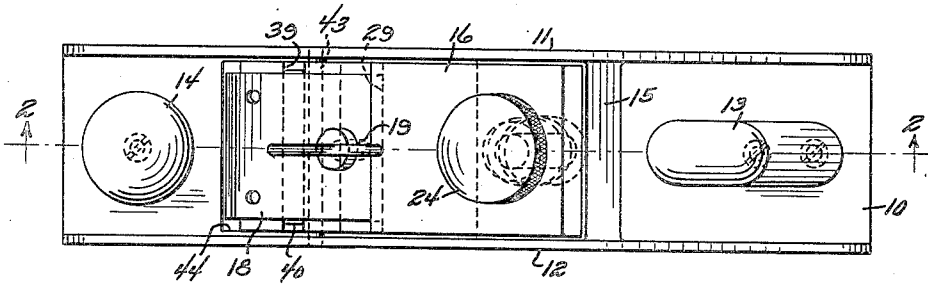


Fig. 2.

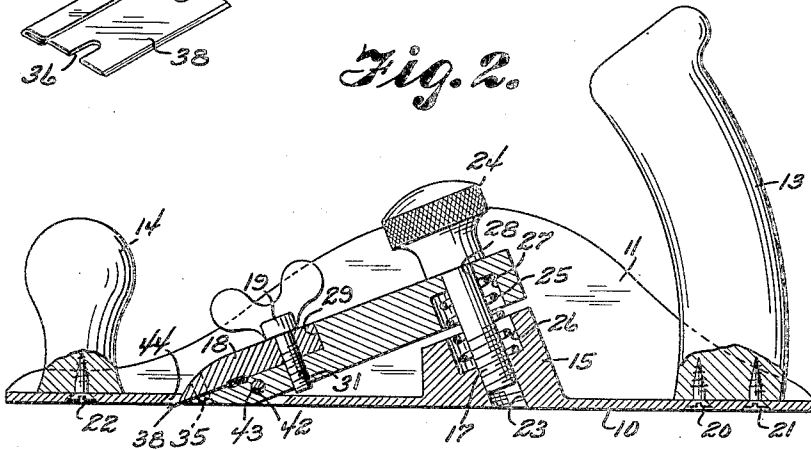


Fig. 4.

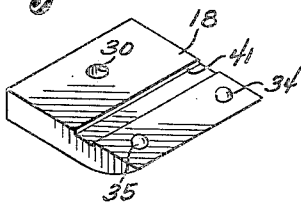
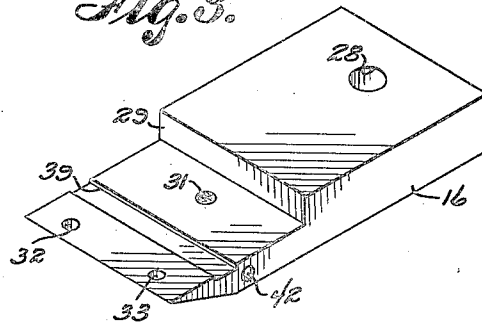


Fig. 3.



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UNITED STATES PATENT OFFICE

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SAFETY RAZOR BLADE PLANE

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1 Claim. (Cl. 145-12)

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This invention relates to planes used in wood working and which are particularly adapted for making models and the like, and in particular a plane body having the conventional handle and knob thereon with a clamp device pivotally mounted in the body and provided with means for clamping a safety razor blade therein with the blade positioned to extend through an opening in the base plate of the plane.

The purpose of this invention is to eliminate the necessity of stoning or honing blades of planes so that an amateur may have the advantage of planing with a sharp blade.

In the conventional type of plane cutting blades are formed with comparatively heavy plates and, because of the angle of the cutting edge, it is very difficult for an amateur to sharpen the cutting edge. With this thought in mind this invention contemplates a plane in which the cutting edge is provided by using a safety razor blade that may readily be discarded and replaced.

The object of this invention is, therefore, to provide means for mounting a safety razor blade in a plane whereby the position of the cutting edge is adjustable and in which the cutting blade may readily be removed and replaced.

Another object of the invention is to provide a plane in which safety razor blades now on the market and also discarded blades may be used to provide the cutting edge, without changing the blades.

A further object of the invention is to provide a plane having means for providing a continuous sharp cutting edge therein, which is of a simple and economical construction.

With these and other objects and advantages in view the invention embodies a plane having a base plate with side walls extended upwardly therefrom and having a handle at one end and a knob at the other, a safety razor blade holder adjustably mounted on the base plate, and means clamping safety razor blades in the said holder with the blades extended through an opening in the said base plate.

Other features and advantages of the invention will appear from the following description taken in connection with the drawings wherein:

Figure 1 is a plan view of a plane of the improved design.

Figure 2 is a longitudinal section through the plane taken on line 2-2 of Figure 1.

Figure 3 is a detail illustrating the safety razor blade holder of the plane.

Figure 4 is a view showing a clamping plate

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adapted to be positioned in a recess in the holder shown in Figure 3.

Figure 5 is a view showing a typical safety razor blade of the type adapted to be used in the plane.

Referring now to the drawings wherein like reference characters denote corresponding parts the improved safety razor blade plane of this invention includes a base plate 10 having side walls 11 and 12, a handle 13, a knob 14, and a web 15, and the plane is provided with a safety razor blade holder 16, an adjusting screw 17, a clamping plate 18 and a thumb screw 19.

The base plate 10 with the sides 11 and 12, handle 13 and knob 14 may be of any suitable size or design and the handle and knob may be mounted thereon by any suitable means.

In the design shown the handle 13 is secured to the base plate 10 by screws 20 and 21 and the knob 14 is secured to the plate by a screw 22. The web 15 is integral with the base plate and sides and extends across the plane, as shown in Figures 1 and 2.

The web 15 is provided with a threaded hole 23 in which the adjusting screw 17 is threaded and the upper end of the screw is provided with a thumb nut 24. A spring 25 is positioned around the adjusting screw with the lower end positioned in a recess 26 in the web 15 and the upper end positioned in a recess 27 in the under surface of the holder 16. The holder is also provided with an opening 28 through which the upper part of the screw 17 extends.

The holder 16 is also provided with a recess 29 that is positioned to receive the clamping plate 18 and the thumb screw 19, which extends through an opening 30 in the plate 18 is threaded into a threaded opening 31 in the holder 16. The holder 16 is also provided with openings 32 and 33 that are positioned to receive pins 34 and 35, respectively of the plate 18. The pins 34 and 35 are positioned to register with openings or slots, as indicated by the numerals 36 and 37 in a razor blade 38. The holder 16 is also provided with a slot 39 that is positioned to receive the back 40 of the blade and the plate 18 is provided with a similar slot 41 that receives the upper part of the back 40.

The holder 16 is also provided with a transversely disposed opening 42 through which a pin 43 extends for pivotally mounting the holder 16 in the body of the plane and, as illustrated in Figure 1 the ends of the pin 43 extend through the side walls 11 and 12 of the plane.

With the parts positioned in this manner the

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lower cutting edge of the safety razor blade extends through a slot 44 in the base 10 of the body of the plane and the distance the cutting edge of the blade extends from the lower face of the base is adjusted by the adjusting screw 17 where- 5 by the depth of a cut made by the plane is readily adjustable.

It will be understood that although the holder and clamping plate are designed for holding a particular type of safety razor blade, blades of 10 any suitable type or design may be used in the holder or plane.

It will be understood that modifications may be made in the design and arrangement of the parts without departing from the spirit of the 15 invention.

What is claimed is:

In a safety razor blade plane, the combination which comprises a flat base plate having a trans- 20 versely disposed slot therethrough and with side walls extended upwardly therefrom, a handle mounted on one end of the base plate, a hand gripping knob mounted on the opposite end thereof, a safety razor blade holder having a 25 transversely disposed recess in one end and an opening communicating with a recess in the opposite end positioned above the base plate, means pivotally mounting the holder in the side walls of the base, a transversely extending web having

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a recess therein positioned on the base plate rearwardly of the said slot, an adjusting screw extended through the opposite end of the holder and threaded into the base plate, a spring around the adjusting screw and positioned in the recess in the holder and web between the end of the holder through which the adjusting screw extends and base plate, a clamping plate positioned in the transversely disposed recess positioned in the holder, a thumb screw extended through the clamping plate and threaded into the holder for clamping a safety razor blade in the transversely disposed recess of the holder, and means positioning the safety razor blade in the transversely disposed recess of the holder with the blade extended through the transversely disposed slot of the base plate.

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