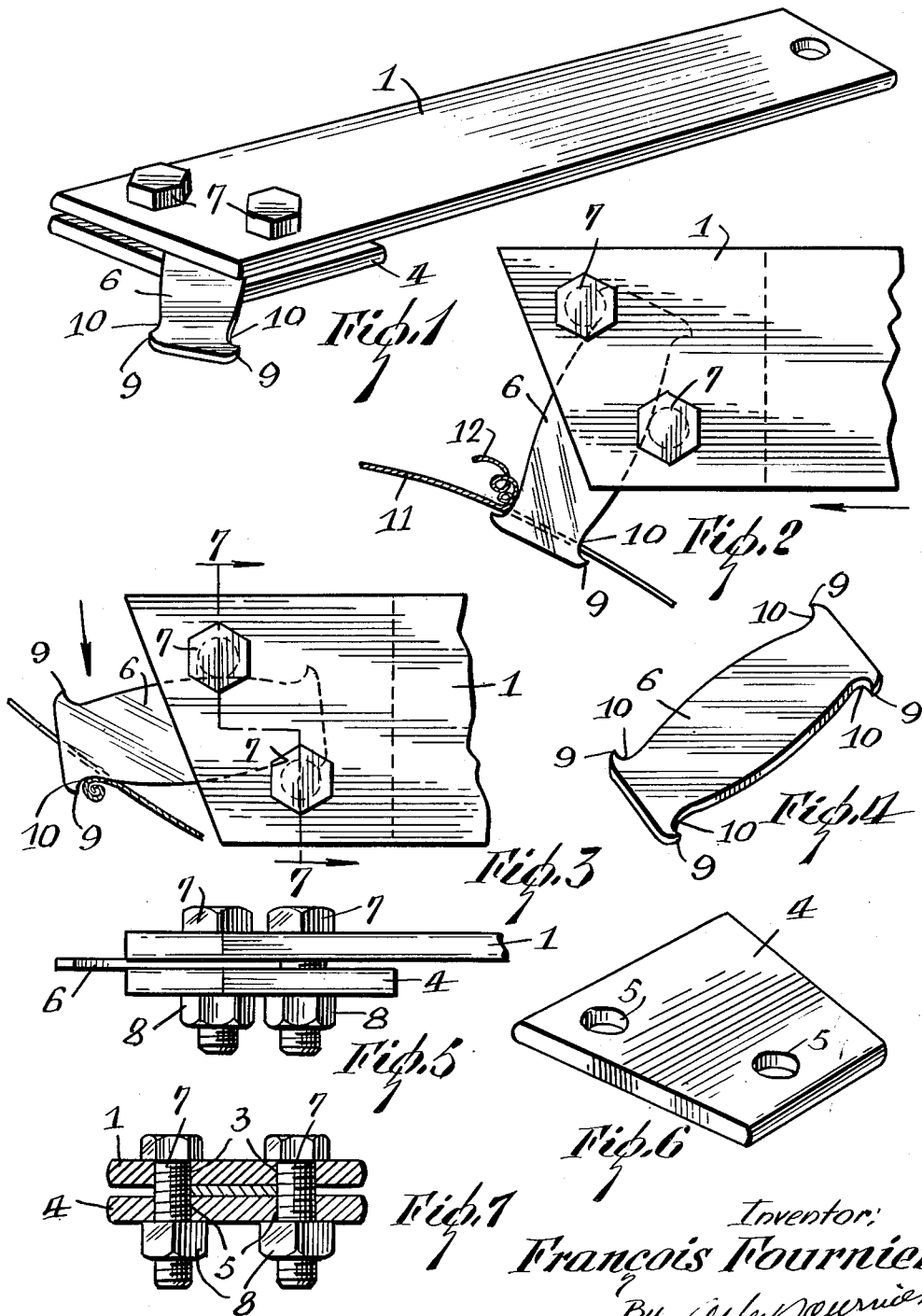


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METAL CUTTING KNIFE
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METAL CUTTING KNIFE

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1 Claim. (Cl. 30—320)

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The present invention pertains to a novel knife for cutting sheet metal such as automobile fenders and other body parts. This operation is performed in removing a rusted or defective area of metal to replace it with a matching piece welded in the hole.

Present cutters, such as shears, leave a bent or ragged edge on the metal. This edge must be trimmed before the new piece can be applied. The principal object of the present invention is to provide a cutter that leaves a clean edge initially. This result is accomplished by means of a tool which, in cutting, removes a thin strip of metal rather than merely bending the displaced metal out of the original plane.

A further object of the invention is to provide a handle capable of holding the blade in a number of angular positions, according to the requirements of the job. Still another object of the invention is to provide an extremely simple and inexpensive construction for the purposes set forth.

In the accomplishment of these objects there is provided a somewhat elongated flat blade sharpened at both its surfaces along one or more edges. At one or both ends of such double-sharpened edge or edges, sharp prongs are extended outwardly. The sharpened edge is shaped concavely immediately adjacent to each prong.

The prong is inserted where the metal is to be cut, and the blade is forced along the metal by pressure. In this movement the blade removes a narrow strip of metal that curls in the concavity. An area of metal is eventually severed, and the opening thus formed has a clean edge as a result of the removal of the curl in the advance movement of the blade.

The invention is fully disclosed by way of example in the following description and in the accompanying drawings in which:

Figure 1 is a perspective view of the device;

Figure 2 is a plan view showing the work in section;

Figure 3 is a similar plan view showing the blade in a different adjustment;

Figure 4 is a perspective view of the blade;

Figure 5 is an end view;

Figure 6 is a perspective view of the clamping plate, and

Figure 7 is a section on the line 7—7 of Figure 3.

Reference to these views will now be made by use of like characters which are employed to designate corresponding parts throughout.

In Figure 1 is shown an elongated metal plate

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1 that constitutes the handle of the knife. One end has a pair of apertures 3 and covers a shorter or clamping plate 4 that is similarly apertured at 5 to coincide with the apertures 3. A blade 6 is inserted between the plates and is secured by tightening bolts 7 passed through the registering apertures, by means of nuts 8.

The blade 6 is a somewhat elongated or strip-like member of a hard metal. Both ends of the strip are shouldered laterally at the corners to form outwardly extending prongs 9. Beneath the prongs, the longitudinal edges of the blade are rounded inwardly or concavely at 10, for a purpose that will presently be described. The edges of the blade are suitably sharpened at both surfaces.

In use, the blade is inserted between the plates 1 and 4 and secured therein by the means previously described. It is also set between the bolts 7 at the desired angle and in engagement therewith, so that it does not swivel under working pressure. The angle best suited for the particular job is selected, and considerable versatility in the use of the tool is possible by the angular relation of the blade to the handle.

In cutting sheet metal such as automobile fenders and body parts, the cut is started by first piercing the metal 11 with one of the prongs 9. Thereafter, as the blade is drawn through the metal, it removes a shaving or curl 12. The tool is advanced by tapping on the forward end of plate 1, in the direction shown by the arrow in Figure 3. The curl rolls up in the concavity 10.

The distinctive feature of the blade is that, in removing metal, it forms a clean cut with no ragged edge. Conventional cutters, on the other hand, leave a bent or twisted edge that must be trimmed.

After a defective or damaged area of metal has been removed, it may be replaced by an equivalent piece welded in the opening.

Although a specific embodiment of the invention has been illustrated and described, it will be understood that various alterations in the details of construction may be made without departing from the scope of the invention as indicated by the appended claim.

What I claim is:

A knife comprising a flat blade sharpened along opposite edges at both surfaces, a prong extending outwardly from each edge at both ends of said blade, said edges being concave immediately adjacent to said prongs, a handle plate and a clamp plate engaging opposite surfaces of said blade and lying parallel to said surfaces, a pair

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of bolts extending through registering apertures in said plates and clamping said plates together, said blade being received between said plates and securely held when said bolts are tightened, said bolts being spaced so that they engage opposite edge portions of said blade to securely hold said blade in various selected positions.

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