Sept. 8, 1959 M. KOOS, JR 2,902,894

WIRE STRIPPER

Filed Jan. 11, 1957

Fig. 1

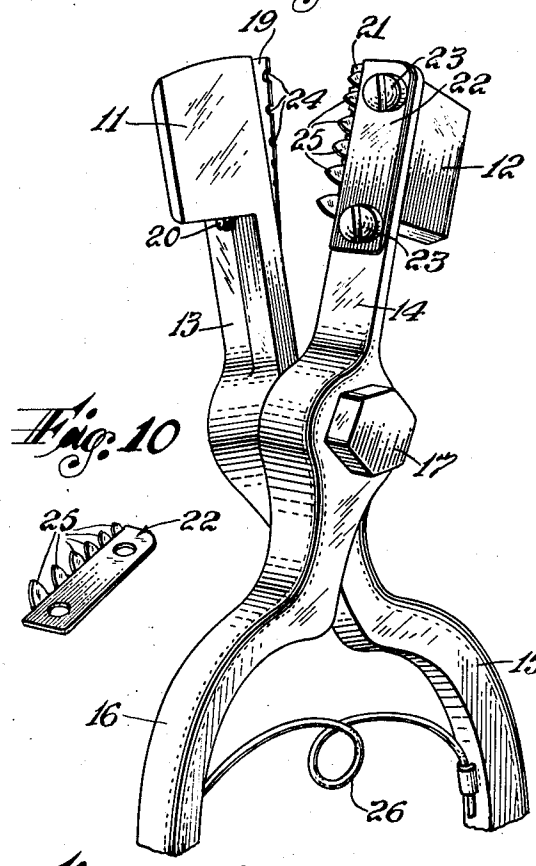


Fig. 10

Fig. 2

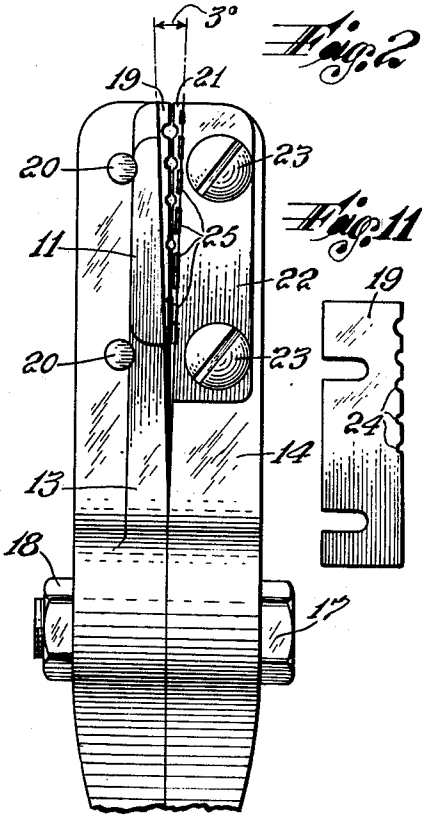


Fig. 11

Fig. 4

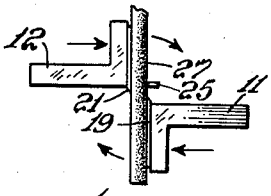


Fig. 5

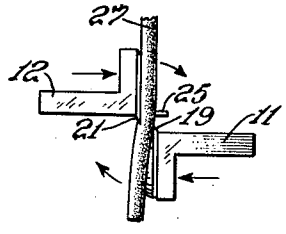


Fig. 3

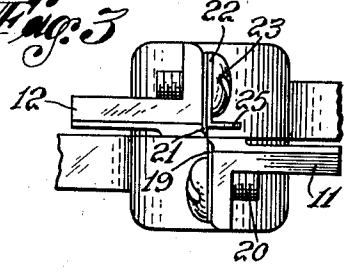


Fig. 8

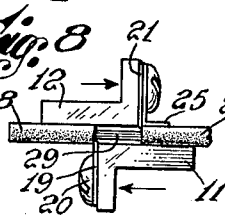


Fig. 9

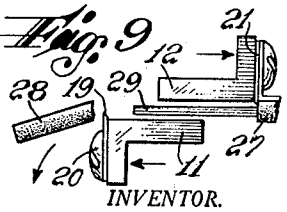


Fig. 6

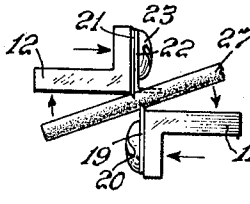
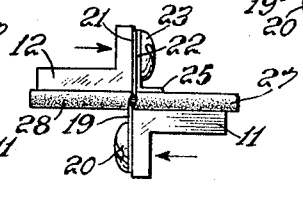


Fig. 7



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WIRE STRIPPER

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2 Claims. (Cl. 81—9.5)

My invention relates generally to wire strippers and more specifically to improved wire strippers for removing insulation from wires without impairing the strands of the wire itself.

It is among the objects of my invention to provide a wire stripper of simplified character having insulation cutting blades.

It is a further object of my invention to provide a wire stripper which is durable.

Yet another object of my invention is to provide a wire stripper which does not utilize any clamping means to hold the wire while the insulation is stripped off.

Another object of my invention is to provide a wire stripper which will strip a large number of different sizes of wire.

Among the other objects of my invention is to provide a wire stripper which will effect a clean, neat severance of the insulation without wire damage or without leaving any frayed edges on the remainder of the insulation.

These objects and advantages, as well as other objects and advantages, may be achieved by the device as illustrated in the accompanying drawing in which Figure 1 is a view in perspective of a wire stripper embodying my invention.

Figure 2 is a side elevation of the tool.

Figure 3 is a top plan view.

Figures 4, 5, 6, 7, 8 and 9 are a series of views progressively showing the operation of the tool: in Figure 4 the wire has been intruded transversely to the blades; in Figure 5 the blades have started to move toward each other; in Figure 6 the blades are nearly in exact opposition to each other; in Figure 7 the blades have ridden past each other at very close clearance and have cut through the insulation; in Figure 8 the upper blade is holding back the insulated portion of the wire, and the lower blade is exerting pressure on the severed piece of insulation to move it off the end of the wire; and in Figure 9 the lower blade has completely pushed the cut piece of insulation off the wire; Figure 10 shows a view in perspective of the wire guide that serves to indicate the proper size wire to be positioned between the jaws with respect to each blade notch; and Figure 11 is a view of the blade.

The invention shown in the drawings illustrates an embodiment of my invention. There is provided a pair of L shaped jaws **11**, **12** to which are appended legs **13** and **14**. The lower ends **15** and **16** serve as handles. The legs **13** and **14** are pivotally secured together by a bolt **17** and a nut **18**. The jaws **11** and **12** are disposed with respect to each other so that they pass each other without touching. These jaws diverge from each other at an included angle of approximately 3 degrees. This divergence permits the inclusion of successively larger diameter wires between the jaws **11**, **12** in correspondence with the successively increasing sizes of the notches in the blades **24**. Secured to the rear edge of the first jaw **11** is a blade **19**, which blade is held thereto by screws **20**. Secured to the rear edge of the other jaw **12**, is a corresponding blade **21**. Lying over the blade **21** is a guide member **22**. The guide member **22** and the blade **21** are secured to the jaw **12** by screws **23**.

The blades **19**, **21** are attached to the jaws in such a manner that each blade's sharp edge is disposed at an angle of approximately 1½ degrees with respect to the jaws, the sharp edges being disposed in parallelism with each other, and each clears the other by only the smallest practicable distance so that they sweep past each other without touching. The blades **19** and **21** have a series of semi-circular, dull notches or seats **24** disposed in opposition to each other and large enough to receive the metal portion of the wire so that it will not come into contact with the sharp part of the blade. The guide member **22** is provided with a plurality of perpendicular teeth **25** of gradually decreased size. The spaces between these teeth are progressively increased in size as the teeth grow smaller; the guide member is attached to the jaw **12** so that the largest space between the teeth is opposite the largest notch on the blades **24**, and the smallest space between the teeth **25** is opposite the smallest notch on the blades **21**. It will thus be seen that between the larger teeth there will be a small space for a small wire so that the small wire may fit into the smallest notch of the blade and between the smaller teeth there will be a large space for a large wire, so that the large wire may be seated in the largest notch in the blade. A spring **26** is secured to the handles **15** and **16** and normally urges the handles apart and (likewise) the jaws apart.

The operation of my wire stripper is as follows: A wire **27** is disposed between the jaws in parallelism with the blades as shown in Figure 8. The ends or handles are then compressed. It is important that the wire, in being so positioned, should be disposed opposite the space between the teeth **25** which substantially coincides with the diameter of the wire itself inclusive of the insulation, and then the metal core of the wire exclusive of the insulation will correspond in diameter with the size of the notch **24** bracketed by the teeth **25**.

When the device is operated, this will insure the wire lining up with the notch **24** in the blades **21** which corresponds with the sides of the metal portion of the wire. Thus, when a wire is positioned between the proper teeth **25**, and when the blades move from the position shown in Figure 5 to the position shown in Figures 6 and 7, the metal portion of the wire **27** will fall into the notch **24** which is of proper size to receive it, and the insulation portion of the wire will cut through by the blades **21**. As has been noted, the blades extend beyond the face of the jaws **11** and **12**, so the blade **21** as it sweeps past the opposite blade **19**, as shown in Figure 8, will move the severed end **28** of the insulation away from the portion **17** from which it has been severed and will eventually discharge the severed portion **28** or end of the insulation leaving a stripped end **29** of the wire exposed.

Particular note should be taken of the fact that the wire **27** is first laid parallel to the blades **19**, **21** and likewise parallel with the angular leg of the L-shaped jaws **11**, **12**. This is because of the necessity of fitting the wire between the teeth **25** so that the wire **27** will later fall into the proper notch **24**. The sweeping of the blades **19**, **21** past each other cause the wire to describe an arc of 90 degrees as the insulation is cut as shown in Figures 5, 6 and 7. The wire, which started out perpendicular to the face of the jaws **12**, now lies parallel and between them; it has become perpendicular to the plane of the blades.

The foregoing description is intended merely to illustrate an embodiment of the invention and many changes

may be made in the construction, selection and arrangement of the various parts thereof, all within the scope of the appended claims without departing from the spirit of the invention.

I claim:

1. A wire stripper comprising a pair of pivotally associated members, a handle on one end of each of said members, and a jaw on each of the other ends, blades attached to the jaws having their sharp edges in opposition, opposed dull notches on each of the blades, and said notches successively increasing in size, a guide adjacent to one of the blades, a plurality of teeth on the guide, said teeth successively decreasing in size, the spaces between them successively increasing in size as the teeth decrease in size, and said teeth perpendicular to the blades; and the spaces between the teeth opposite to the notches having the larger spaces opposite the larger notches, and the smaller spaces opposite the smaller notches.

2. A wire stripper comprising a pair of members pivotally associated together, one end of said members defining handles and the other end defining jaws, a spring connected to the handles normally urging the handles apart, said jaws being disposed in relation to each other whereby they sweep by each other when the handles are moved together, blades attached to the jaws perpendicular to the plane defined by the movement of the jaws toward each other, said blades sweeping past and almost touching their sharp edges together, a plurality of successively larger dull notches on the blade, an L-shaped guide member lying over one blade, a plurality of successively smaller teeth on the guide member perpendicular to the plane of the blades, successively larger spaces between the teeth, and the small spaces and large teeth adjacent to the small notches and the larger spaces and smaller teeth adjacent to the larger notches.

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