April 29, 1958 H. L. WHEELER 2,832,074

PROTECTING DEVICE

Filed Dec. 16, 1955

Fig 1

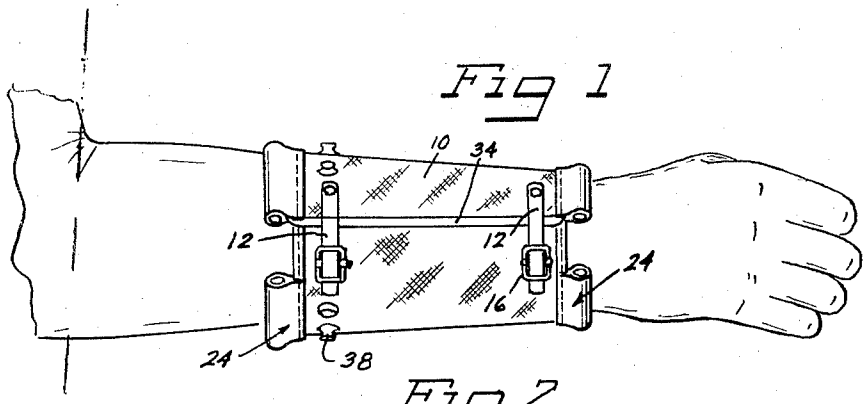


Fig. 2

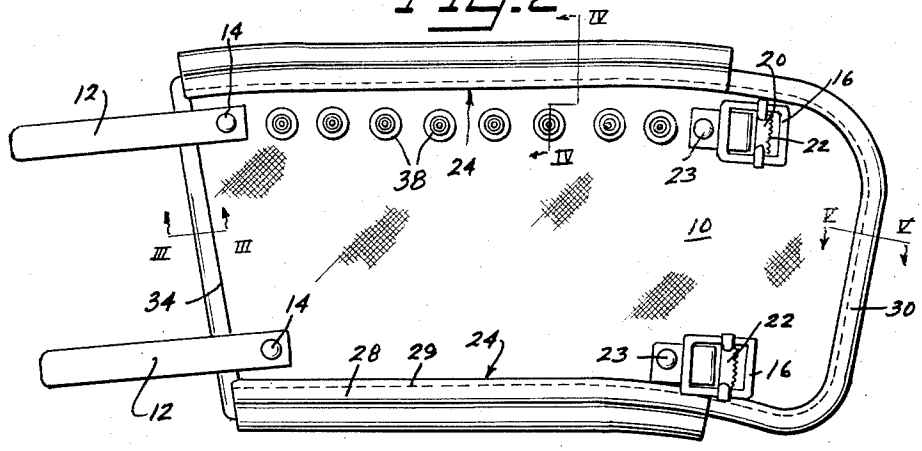


Fig. 4

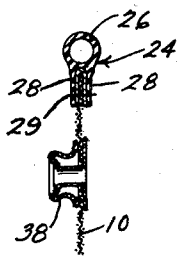


Fig. 3

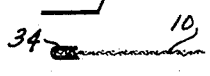
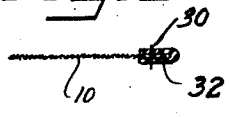


Fig. 5



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2,832,074

PROTECTING DEVICE

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3 Claims. (Cl. 2—16)

This invention relates to body-protecting shields and the like, such as arm protectors which may be worn by a person engaged in the handling of abrasive or hazardous materials, such as sheet steel, glass, and the like, for example.

It is an object of the present invention to provide an arm protector of simple and economical construction, manufacture, and assembly, which will provide desired characteristics of arm protection over an extended period of time and even though the device be subjected to hard usage.

Another object of the present invention is to provide an arm protector which will be comfortable when affixed to the arm of the wearer.

Another object of my invention is to provide an arm protector of a novel and improved construction.

These and other objects, features, and advantages of a novel and improved arm protector according to the present invention will be readily apparent from the following description of an exemplary preferred embodiment thereof, taken in conjunction with the accompanying drawing in which:

Figure 1 is a side elevational view of an arm protector according to a preferred embodiment of my device, the arm protector being shown as applied in a desired manner to the arm of the wearer;

Figure 2 is an elevational view of the arm protector device shown in Figure 1, the device in Figure 2 being rolled out generally flat;

Figure 3 is a cross sectional view, taken on the line III—III of Figure 2;

Figure 4 is a cross sectional view, taken generally along the line IV—IV of Figure 2.

Figure 5 is a cross sectional view, taken generally along the line V—V of Figure 2.

As shown in the drawing, the device includes a generally rectangular sheet of protective shielding such as fairly stiff wire cloth **10**. Straps **12** secured as by rivets **14** to the wire cloth **10** near an edge thereof, are provided to cooperate with buckle means **16** secured to the wire cloth **10** adjacent an edge thereof opposite the straps **12**, to permit the device to be strapped about the arm of the wearer as indicated in Figure 1.

The buckles **16** are desirably of a "take-up" type, including a barbed slide element **20** the barbs **22** of which are adapted to bite or gouge into the associated strap **12** to hold the device in any condition of tightened adjustment. The buckles **16** are held to the sheet as by rivets **23**.

The relatively long edges of the wire cloth **10**, that is, the edges which in use lie in generally planar paths perpendicular to the arm of the wearer, are desirably bound by resilient stripping **24** having a tubular body portion with a pair of flanges extending therefrom forming a U-shaped receiving member as shown in Figure 4. As there shown, the stripping **24** comprises a piece of elongated hollow tubing **26**, desirably of resilient, waterproof

rubber-like or plastic material. Along one side of the tube, there extends a pair of flanges **28** forming the U-shaped member adapted to receive an edge of the wire cloth **10** therebetween. The wire cloth edge is slipped between the two flanges **28**, where it is desirably stitched in place as by stitching **29**.

Stripping **24** of the general configuration shown provides several advantages. First, the resilient walls of the hollow tubing **26** effectively cushion the device on the wearer's arm. Moreover, the radius of the tubing **26** provides that the wire cloth **10** is carried somewhat away from the wearer's arm. Moreover, inasmuch as the core of the tubing **26** is open at both ends, air is permitted to circulate through the tubing **26**. The flanges **28** by straddling the edge of the sheet **10** provide convenient means for securing the binding to the sheet.

It should be observed that the binding **30** along the edge of the wire cloth sheet **10** adjacent the buckles **20** is fairly flat, such as is shown in Figure 5. The desired configuration of the binding **30** and the stripping **24** with respect to thickness is easily observed by comparing the showing of the binding members **32** and **24** in Figures 5 and 4 respectively. Inasmuch as the binding **30** is desirably fairly flat, it permits a fairly easy adjustment of the tightness of the arm protector as its edges are overlapped and tightened by the straps **12** and buckles **16**. The binding **30** is desirably made of a flexible material such as relatively resilient plastic channeling. It is affixed to the wire cloth **10** as by stitching **32**.

In order to provide for adjustable overlap of the edge associated with the binding **30**, the relatively flat binding **30** extends part-way along the long sheet edge, at least to positions generally adjacent the buckles **16**. Thus the ends of the sheet **10** may be adjustably overlapped, even to a small-size position in which the overlying end is adjacent the connecting means carried by the underlying end of the sheet.

A fairly stiff channel member **34**, desirably formed from metal such as aluminum, desirably binds the edge of the wire cloth sheet **10** opposite the binding **30** to give desired rigidity along that outer edge of the cloth sheet.

Desirably abutment means are provided to restrain the material being handled from sliding off the sheet. As shown, such means comprises studs **38** such as male members of a so-called "snap-type" fastener.

It will thus be seen from the foregoing description, considered in conjunction with the accompanying drawing, that the present invention provides a new and improved arm protector having the desired advantages and characteristics, and accomplishing its intended objects, including those hereinbefore pointed out and others which are inherent in the invention as described. The device may be easily applied and removed from the wearer's arm, and is easily adjustable to accommodate variations in arm size. It is light and cool. It is easily cleaned, and if desired it may be sterilized by immersion in boiling water. It provides good and effective protection to the arm of the wearer, yet it is confortable and relatively unobjectionable with regard to freedom of movement.

It will be understood that modifications and variations may be effected without departing from the scope of the novel concepts of the present invention.

I claim as my invention:

1. A device of the type described, comprising a generally rectangular sheet of wire cloth, a plurality of resilient binding strips stitched to the edge portions at opposite sides of the wire cloth, each binding strip embodying an elastic tube portion with a plurality of flanges integrally formed therewith, the flanges adapted to straddle the edge of the sheet of wire cloth and be stitched thereto and the tube portion adapted to carry the sheet spaced

from the person of the wearer, a generally flat resilient binding stitched along one end edge of the sheet, a metal binding affixed to the other end edge of the sheet, strap means carried by the sheet adjacent the end thereof having the metal binding, and buckle means carried by the sheet near the opposite edge but spaced therefrom to permit overlap of the strap-means-carrying edge of the cloth sheet.

2. A protector device, comprising a generally rectangular sheet of protective shielding, a plurality of resilient binding strips stitched to the edge portion at opposite sides of the protective shielding, the binding embodying an elastic tube portion with a plurality of flanges integrally formed therewith, the flanges adapted to straddle the edge of the sheet of protective shielding and be stitched thereto and the tube portion adapted to carry the sheet spaced from the person of the wearer, a generally flat resilient binding secured along an end edge of the sheet, a metal binding affixed to the other end edge of the sheet, and strap and buckle means carried by said sheet for securing and holding the device about the person of the wearer.

3. An arm protector, comprising a generally rectangular sheet of protective shielding, two resilient binding strips stitched to the edge portions at opposite sides of the sheet of protective shielding, the binding embodying an elastic tube portion with two flanges integrally formed

therewith, the two flanges forming a U-shaped member adapted to straddle the edge of the sheet of protective shielding and be stitched thereto and the tube portion adapted to carry the sheet of protective shielding spaced from the arm of the wearer, a plurality of stud type abutments having central projections extending outwardly from the outer surface of the protective shielding and arranged in a row adjacent one of said binding strips adapted to restrain the material being handled from moving off said shielding, a generally flat resilient binding strip stitched along an end edge of the sheet of protective shielding, a metal channel member affixed to the other end edge of the sheet to give rigidity thereto, and strap and buckle means carried by said sheet for securing and holding the arm protector about the arm of the wearer.

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