United States Patent [19]

Viciulis

[11] **3,806,952**

[45] **Apr. 30, 1974**

[54] **SHIELD**

[76] Inventor: **Frank Viciulis,** 320 Forest, Royal Oak, Mich. 48067

[22] Filed: **Dec. 27, 1971**

[21] Appl. No.: **212,438**

[52] **U.S. Cl.** **2/16,** 2/270, 312/1

[51] **Int. Cl.** **A41d 19/00**

[58] **Field of Search** ..... 29/426; 2/159, 160, 161 R, 2/11, 16, 17, 270; 81/3.4, 119, 121 R, 90 D; 312/1

[56] **References Cited**

UNITED STATES PATENTS

3,570,009	3/1971	Spruell	2/16
1,747,097	2/1930	Young	2/17
3,370,302	2/1968	Karlyn	2/16
2,414,247	1/1947	Thompson	2/17
2,694,330	11/1954	Davies et al.	81/345
3,337,279	8/1967	Reinhardt et al.	2/270

Primary Examiner—Richard J. Herbst

Attorney, Agent, or Firm—David A. Maxon

[57] **ABSTRACT**

This invention relates to a shield. A substantially square transparent plexiglass shield having beveled edges with the beveled edges extending away from the operator and a glove in the middle of the shield and a handle on the other side is provided. Use of the shield prevents unnecessary splattering of the operator in such operations as removing the radiator cap from a hot automobile radiator.

10 Claims, 3 Drawing Figures

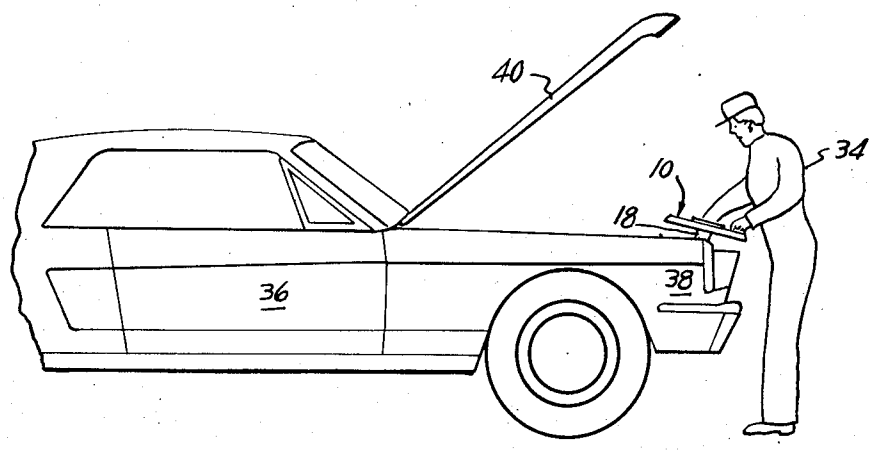


FIG. 1

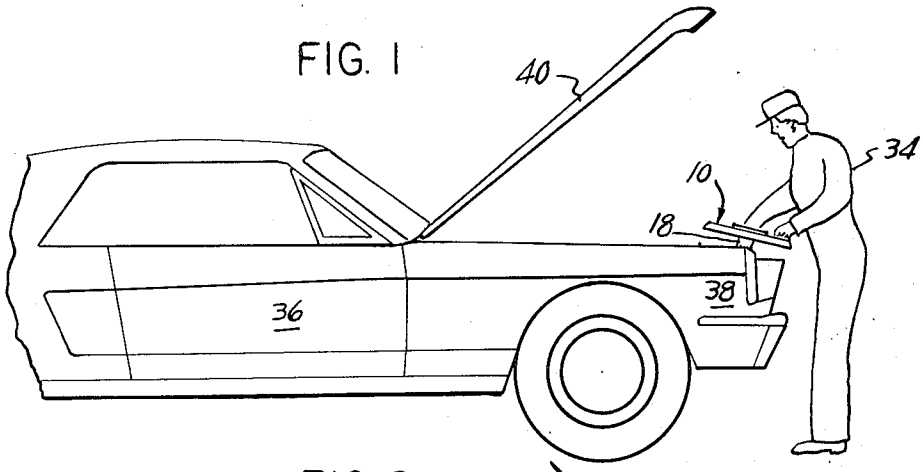
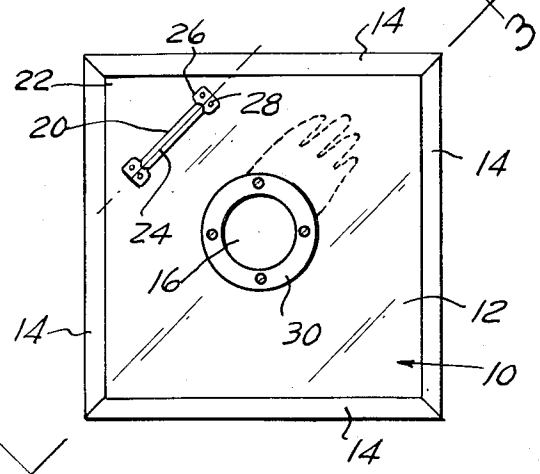


FIG. 2



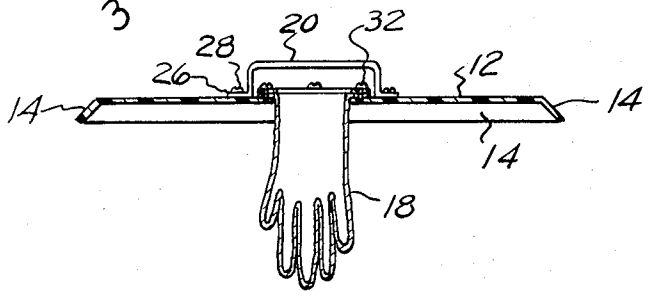


FIG. 3

SHIELD

This invention relates generally to shields. More particularly, this invention relates to a transparent plexiglass shield having a glove in the center thereof extending outwardly therefrom; and having beveled edges extending outwardly therefrom and having a handle extending inwardly therefrom spaced in relation to the glove such that when a hand of the operator grips the handle while the other hand reaches into the glove to turn a radiator cap. A purpose of this shield is to prevent an operator utilizing it in the manner described above from being splattered by hot liquid during the removal of a cap from an automotive radiator.

Articles have been devised in the past for utilization in reducing spray upon the operator during the removal of a radiator cap from an automotive radiator or for prevention of spray in handling other fluid conduits, reservoirs, valves or caps. The following is a list of representative such devices:

U.S. Letters Pat. No. 3,570,009 issued: Mar. 16, 1971 to Spruell on application Ser. No. 814,999 Filed: Apr. 10, 1969 discloses a Heat Resistant Spray Deflector Glove. A glove made of suitable heat resistant material is encased within the confines of an outwardly and downwardly flaring shield, more particularly, a truncated conical duff made of heat resistant material and which is permanently turned down over and encloses the glove and provides a spray trapping and deflecting shield for liquid spraying out of a hot radiator of an automobile. No plexiglass or other transparent plastic material is disclosed for the shield. No substantially square board portion is disclosed with the shield. No beveled sides of a shield are shown. No handle attached to the shield is shown. No handle attached near one corner of the square on a side opposite that of the glove is shown.

U.S. Letters Pat. No. 3,370,302 Issued: Feb. 27, 1968 to Karlyn. A glove extending through a plastic shield which is part of a box is disclosed. No portable shield is shown. No handle connected to one side of the shield with a glove extending to the other side is shown. This device is primarily for a dry box which is a device for containing radioactive material not for containing hot liquid sprays such as is incurred in handling hot automotive radiators.

U.S. Letters Pat. No. 3,009,164 Issued: Nov. 21, 1961 to Frey on application Ser. No. 13,773 Filed: Mar. 9, 1960, assigned to the Surety Rubber Company, Carrollton, Ohio discloses a detachably connected glove and sleeve. This is another device for a dry box and consists of a glove and hard sleeve attached to the dry box. No handle for attaching to a shield to which a glove is attached is shown. No device comprising a shield with a hand extending through one side and a glove on the other side and portable is disclosed. No shield having beveled edges extending toward the source of hot liquid spray is disclosed.

U.S. Letters Pat. No. 3,492,987 Issued: Feb. 3, 1970 to Parker on application Ser. No. 626,276 Filed: Mar. 27, 1967 discloses an Isolation Apparatus. A box or bed containing a patient having gloves for two hands extending through the side of the bed is disclosed. No handle attached to a shield device in which the gloves are affixed is disclosed.

U.S. Letters Pat. No. 2,694,330 Issued: Nov. 16, 1954 to Davies et al. on application Ser. No. 373,115

Filed: Aug. 10, 1953 discloses a Safety Wrench for Radiator Caps. A wrench or a monkey wrench type affair that has a spring loaded end and a device that acts as a lever at the other end and a shield in between for twisting off radiator caps is disclosed. No gloves extending through a shield where the shield in turn has a handle projecting from the flat side of the shield is disclosed. No beveled shield is disclosed. However, a transparent shield is disclosed.

Accordingly, it is an object of this invention to provide a shield for protecting an operator through the removal of a cap from a hot automotive radiator whereby he can see what he is doing; beveled sidewalls or edges are provided to deflect the spray from more than one direction; a handle is provided in addition to a glove that is suitably located with respect to the glove position to give maximum control and stability to the shield during the cap removal operation.

A further object of this invention is to provide an effective shield means for protecting an operator during the removal of a cap from a hot automobile radiator that is relatively uncomplicated and inexpensive to make, maintain and use.

Other objects of this invention will become apparent from the following specifications and claims.

These objects are carried out by the provision of a substantially square plexiglass shield having angularly extending sidewalls extending from the forward sides therefrom; a centrally designated aperture for containing a glove of heat resistant material; a handle on the side of the shield extending in the opposite direction from the beveled sidewalls and located with respect to the glove such that maximum stability and control of the shield is provided during utilization.

ON THE DRAWINGS

FIG. **1** is a rear view of the preferred embodiment of this invention;

FIG. **2** is a side view of an operator utilizing this invention in removing a radiator cap from an automobile; and

FIG. **3** is a transverse section taken along the lines **3—3** of FIG. **1.**

Before explaining the present invention in detail, it is to be understood that the invention is not limited in its application to the details in construction and arrangement of parts illustrated in the accompanying drawings since the invention is capable of other embodiments and of being practiced or carried out in various ways.

Also it is to be understood that the phraseology terminology employed herein are for the purpose of description and not of limitation.

AS SHOWN ON THE DRAWINGS

The shield **10** comprises a substantially square plexiglass portion **12.** Sidewalls **14** extend at an angle of approximately 45 degrees forward of the plexiglass portion **12** and are also preferably made of plexiglass. From the view in FIG. **2,** these beveled sidewalls **14** have beveled edges. An aperture **16** sufficient to negotiate a human hand is centrally located in the shield **10.** A glove **18** preferably made of a fire resistant material such as asbestos or heat resistant silicone rubber extends forward of flat square plexiglass portion **12.** A handle **20** is provided near a corner **22** of plexiglass square portion **12** and has a central axis **24** at substantially 45° to the edge of square portion **12.** The handle

20 is preferably made of a rather strong metal, such as steel, and is secured by bracket portion 26 to the square plexiglass portion 12 by means of rivets or screws indicated at 28. A circular annular ring 30 is provided to secure the glove 18 to the square portion 12 by means of rivets or screws designated at 32.

During the operation of this invention, the operator 34 grasps the handle 20 with one hand and fits his other hand through glove 18 and through the glove 18 contacts the radiator cap and screws off the cap while holding the shield 10 in position by means of gripping the handle 20. This is illustrated in FIG. 2 where the shield 10 is shown in the preferred position with regard to the automobile 36 with the operator standing in front of the forward portion 38 of the car with the hood 40 raised and the hand of the operator 34 reaching by means of the glove 18, the radiator cap (not shown).

I claim:

1. In an article of manufacture for deflecting fluids from an operator during the operation of opening a fluid conduit, the improvements comprising:

a first rigid member;

said rigid member being substantially planar and having a top and bottom surface;

an aperture in the center of said rigid member;

a heat resistant flexible hand covering blocking transmission of fluid through said aperture;

a handle rigidly secured to said rigid member on one side thereof;

said handle being located on the top surface of said rigid member spaced at a distance from said aperture, said distance being at least the same order of magnitude as the distance across said aperture;

the other side of said rigid member facing the opening of said fluid conduit during operation;

whereby said article can be gripped by the operator by said handle with one hand of the operator while the other hand of the operator is thrust through said aperture into said flexible hand covering.

2. The article in claim 1 wherein said rigid member has rigid sidewalls affixed thereto extending toward the fluid conduit during operation.

3. The article in claim 1 wherein said rigid member is translucent.

4. The article in claim 1 wherein said rigid member is transparent.

5. The article in claim 2 wherein said sidewalls are transparent and extend at an angle of approximately 45 degrees from adjoining surface of the rigid member.

6. The article in claim 1 wherein said hand covering is in the shape of a five fingered glove.

7. The article of claim 1 wherein said hand covering is secured to said rigid member by means of a circular annular ring pressing said hand covering inlet portion to said rigid member by means of screws.

8. The article of claim 1 wherein said rigid member is substantially square in shape and said handle has a longitudinal axis thereof intersecting the edge of said rigid member at approximately 45 degrees and said handle is located near a corner of said rigid member.

9. The article of claim 1 wherein said rigid member is made of plexiglass.

10. The article of claim 2 wherein said rigid member and said sidewalls are made of plexiglass sections joining together by epoxy into a firm rigid bond.

* * * * *