United States Patent [19]

Brandle

[11] **3,710,655**

[45] **Jan. 16, 1973**

[54] **BATTERING APPARATUS FOR OPENING JAMMED AUTOMOBILE DOORS**

[76] Inventor: **Marvin M. Brandle,** 318 Holbrook, Saginaw, Mich. 48603

[22] Filed: **May 17, 1971**

[21] Appl. No.: **144,138**

[52] **U.S. Cl.** **81/52.35**

[51] **Int. Cl.** **B25b 19/00**

[58] **Field of Search** 81/52.35; 294/8.6; 29/275, 29/277

[56] **References Cited**

UNITED STATES PATENTS

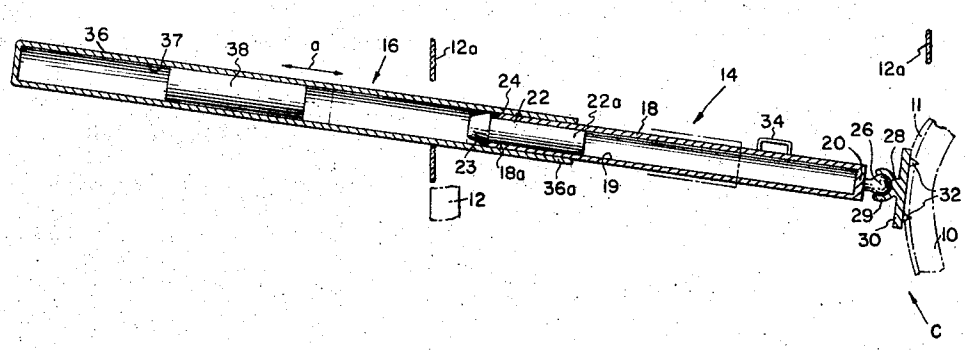
140,522	7/1873	Michael et al.	294/8.6
3,529,497	9/1970	Brooks	81/52.35
2,475,041	7/1949	Mattson	81/52.35

Primary Examiner—James L. Jones, Jr.
Attorney—Learman & McCulloch

[57] **ABSTRACT**

A battering ram for quickly opening jammed automobile doors, and the like, including a longitudinal support member, an upholstery penetrating member swivelably mounted on one end of the support member, and a ram, reciprocally movable on the other end of the support member, for striking the other end of the support member a series of sharp blows to drive the support member into battering engagement with the interior of the jammed door to open it outwardly.

6 Claims, 3 Drawing Figures



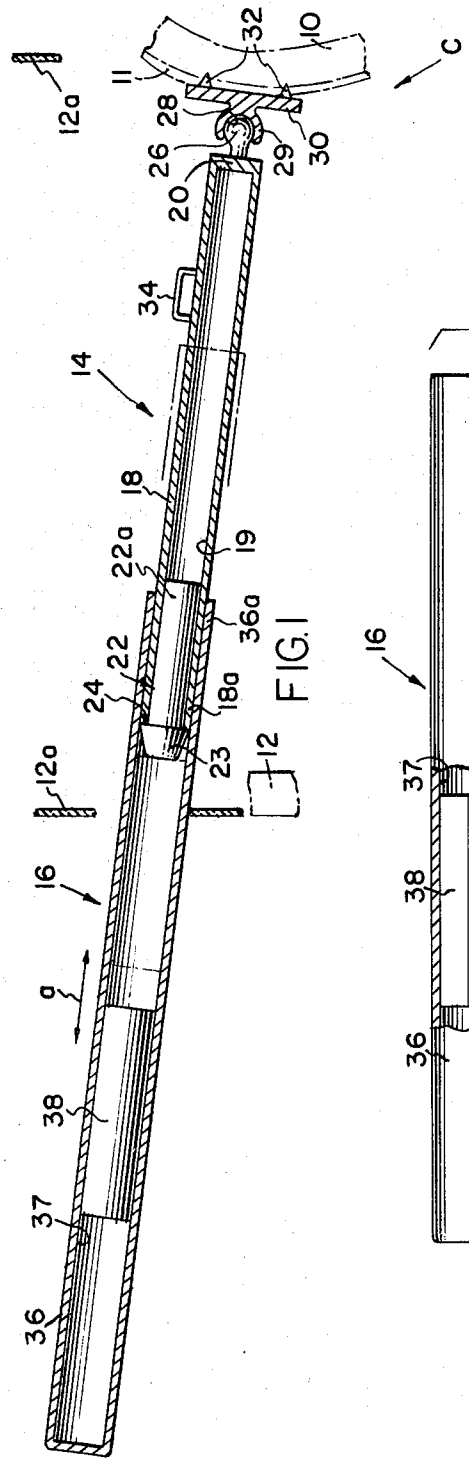


FIG. 1

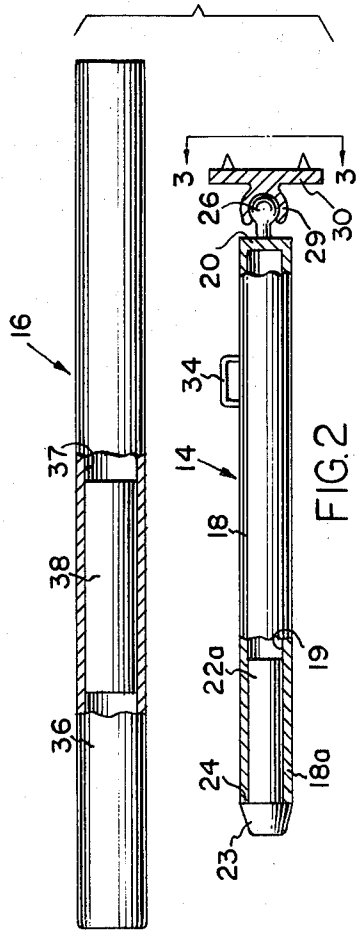


FIG. 2

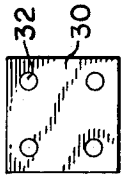


FIG. 3

INVENTOR
MARVIN M. BRANDLE

BY
Learman & McCulloch
ATTORNEYS

BATTERING APPARATUS FOR OPENING JAMMED AUTOMOBILE DOORS

FIELD OF THE INVENTION

This invention relates to safety equipment which facilitates the quick removal of passengers from a vehicle, that has been involved in an accident, and more particularly, to apparatus for battering the inside of a jammed automobile door to open the door outwardly and permit the passengers to be easily removed.

BACKGROUND OF THE INVENTION

Accident victims frequently die at the scene of the accident because of the inability of rescue workers to quickly remove the victims from the vehicles so that the victims may receive proper medical attention. Since a person can bleed to death in less than a minute, it is readily apparent that the time required to rescue a bleeding accident victim is critical.

Occasionally, the fuel tank of a vehicle involved in an accident will rupture and highly flammable fuel will disperse throughout the accident area. The safety of the accident victims, as well as that of the rescue workers and innocent bystanders, is further jeopardized by the possible ignition of such fuel and thus it is important that the accident victims should be removed from the vehicle as soon as possible to permit the rescue workers, as well as the victims, to quickly depart the accident area.

Although rescue workers commonly carry pry bars, and the like, for prying open a jammed automobile door so that the vehicle passengers may be removed, rescue workers find the use of such pry bars physically exhausting as well as time consuming. Accordingly, it is an object of the present invention to provide apparatus for quickly opening a jammed vehicle door.

It is difficult for rescue workers, exerting forces on only the exterior portions of a jammed vehicle door, to pry the door outwardly. It is another object of the present invention to provide apparatus which will permit a rescue worker positioned on one side of a vehicle to open a jammed vehicle door on the opposite side of the vehicle by exerting force on the interior surfaces of the jammed door.

Occasionally a rescue worker must work alone and thus rescue apparatus must be provided to permit a single individual to operate such apparatus. It is also important that such rescue apparatus be constructed so that a rescue worker can quickly, easily, and efficiently apply sharp blows to the jammed door in different locations and in different directions at each location.

Other objects and advantages of the present invention will become apparent as the description thereof proceeds.

SUMMARY OF THE INVENTION

Battering apparatus for battering interiorly upholstered automobile doors and the like comprising a longitudinally extending support member, an upholstery engageable member swivelably mounted at one end of the support member, and ram means supported on the other end of the support member for movement in a to-and-fro longitudinal path relative thereto to strike a sharp blow to the other end of the support member and drive it, and the upholstery engaging member, longitudinally toward the door so as to exert a sharp blow to the interior of the door tending to move the door outwardly.

The present invention may more readily be described by reference to the accompanying drawings in which:

FIG. 1 is a sectional side elevational view of apparatus, constructed according to the present invention, disposed in operative relation with an automobile, schematically illustrated in end cross section;

FIG. 2 is a partly exploded, side elevational view of apparatus constructed according to the present invention, parts being broken away for purposes of clarity; and

FIG. 3 is an end view, taken along the line 3—3 of FIG. 2, particularly illustrating the fabric engaging plate.

DESCRIPTION OF THE PREFERRED EMBODIMENT

Apparatus constructed according to the present invention is particularly adapted for use with an automobile, schematically illustrated at C, having a pair of opposed side doors **10** and **12**, each including conventional windows **12***a*. The interior of each of the doors **10** and **12** is upholstered with fabric material **11**, in the normal manner. The door **10** is illustrated as being damaged in such a manner to protrude inwardly a sufficient distance to jam the door **10** and prevent it from being opened in the normal manner.

Apparatus constructed according to the present invention is particularly adapted for opening the jammed car door **10** and includes a pair of telescoping sections, generally designated **14** and **16**. The section **14** comprises a tubular support member **18** having an end closure wall **20**, at one end thereof, and a solid mass member **22**, of steel or the like, welded or otherwise suitably fixed to the opposite end **18***a* of the tubular member **18**. The mass member **22** includes a shaft portion **22***a*, received in the tubular passage **19**, which extends through the tube **18**, and a head portion **23** having a slightly enlarged flange **24** in abutting relation with the opposite end **18***a* of the tube **18**. The head **23** is tapered axially inwardly, in a rearward direction, to assist in guiding the members **14** and **16** into telescoping relation.

Fixed to the end wall **20** of the support member **18** is a ball shaped member **26** which is received in a socket **28** defined by a socket forming member **29** fixed to a denticulated battering plate **30**. The denticulated battering plate **30** includes a plurality of pointed, protruding studs, or claws, **32** for penetrating the fabric **11** on the interior of the jammed door **10**. A handle **34** is fixed to the upper exterior side wall of the tube **18**, adjacent the end wall **20**, for carrying and supporting the tube **18** while it is being moved to a position in which the studs **32** engage the fabric **11**.

The other telescoping member **16** comprises a ram and includes a tubular member **36** having a passage **37** therethrough receiving a mass member **38** which is secured to the tubular member **16** a distance inwardly from the end **36***a* of tubular member **36**. The end **36***a* is telescopically received on the tubular member **18**. The member **14** and **16**, when telescoped together in either of the positions illustrated in FIG. **1**, are together of sufficient length so that when the studs **32** penetrate the

fabric 11, the ram 16 extends through the window 12*a*, of the opposite side door 12, a sufficient distance to permit the ram 16 to be manually grasped and moved in the to-and-fro longitudinal path of travel, designated by the arrow *a*, into striking engagement with the tubular member 14.

THE OPERATION

When the automobile C has been involved in an accident such that the car door 10 is jammed and not openable in the normal manner, a rescue operator passes the telescoping members 14 and 16 through the window 12*a* of the opposite side door 12 until the studs 32 penetratingly engage the fabric 11 on the interior of the jammed door 10 so that the end 20 of the support rod 14 is supported thereby. The swivel mount 20, comprising the ball 26 and socket 28, permits the ram portion 16 to be swiveled to the most convenient position, so that the battering force may be applied in any one of a plurality of different directions. The member 16 is manually moved in a reciprocal path designated by the arrow *a*, from the solid line position shown in FIG. 1 to the chain line position shown in FIG. 1, so that the mass 38 of ram 16 delivers a blow to the mass 23 of support rod 14 to drive the rod 14 and plate 30 toward the door tending to drive it outwardly. The plate 30 can, of course, be moved to another location by merely grasping the handle 34 and moving the studs away from the fabric 11 and repositioning the plate 30 in another location. The mass 38 is repeatedly moved in the reciprocal path to deliver a series of sharp blows to the door until it is opened. The trapped victim can then be removed to a safe location to receive proper medical treatment.

It is to be understood that the drawings and descriptive matter are in all cases to be interpreted as merely illustrative of the principles of the invention, rather than as limiting the same in any way, since it is contemplated that various changes may be made in various elements to achieve like results without departing from the spirit of the invention or the scope of the appended claims.

I claim:

1. Battering apparatus for interiorly battering interiorly upholstered, jammed automobile doors, and the like, which cannot be opened in the normal manner, comprising:

a longitudinally extending support member;

upholstery engaging means, swivelally mounted at one end of said support member and engageable with the upholstery on the interior of the jammed door for vertically supporting said one end of said support member on said jammed door; and

ram means, including a handle portion at one end and an opposite end supported on the other end of said support member for sliding movement in a to-and-fro longitudinal path of travel between a longitudinally removed position and a striking position, for sharply striking the other end of said support member and driving said support member and said upholstery engaging means longitudinally toward said jammed door to outwardly open the door, said ram means including an impact surface interjacent said handle portion and said opposite end of said support member for impacting the other end of said support member.

2. The apparatus of claim 1 wherein said upholstery engaging means includes protruding claw means for clinging to the upholstery of said jammed door to support said one end of said support member when said ram means is moving in said to-and-fro path of travel.

3. The apparatus as set forth in claim 2 wherein said projecting claw means comprises a plate having a plurality of pointed stud means for penetrating said upholstery of said jammed door.

4. The apparatus of claim 3 wherein said ram means comprises a hollow cylindrical member having a passage at one end thereof telescopically receiving said other end of said support member; and

mass means received in said passage axially inwardly from said one end of said hollow cylindrical member and rigidly fixed to said cylindrical member for striking said other end of said support member as said ram means is moved in said path of travel.

5. The apparatus of claim 3 wherein said other end of said support member converges radially inwardly toward the longitudinal axis of the support member to facilitate mating of said support member and said ram means.

6. For use with an automobile including a pair of opposed interiorly upholstered side doors having windows therein, one of said side doors being jammed so that it cannot be opened in the normal manner;

battering apparatus for quickly opening said jammed door including:

a longitudinal support member;

denticulated plate means, mounted on one end of said support member and engageable with the upholstery on the interior of said jammed door for vertically supporting said one end of said support member; and

a longitudinal, tubular ram, having a handle at one end and an internal passage at the other end receiving the opposite end of said support member, manually movable in a to-and-fro path of travel between a longitudinally removed position and a striking position for sharply striking the support member to drive said support member and said plate means toward said one door to open said one door outwardly, said ram including an impact surface interjacent said handle and said other end for impacting said support member, said ram and said passage being of sufficient length that said opposite end of said support member remains within said passage when said ram is in said striking position;

said ram and said support member, together, being of sufficient length such that when said plate means is in engagement with the upholstery on said one door and said ram is in said striking position, said ram extends outwardly past the window of the door opposite the jammed door, a sufficient distance to permit the ram to be manually grasped and moved in said to-and-fro path of travel.

* * * * *