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DOORS

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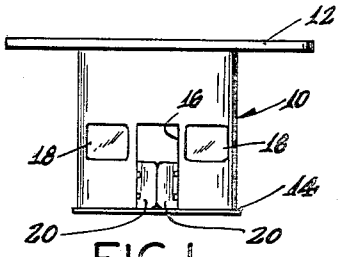



FIG. 1.

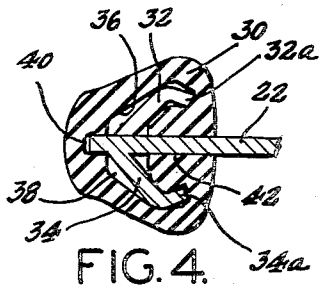



FIG. 4.




FIG. 3.

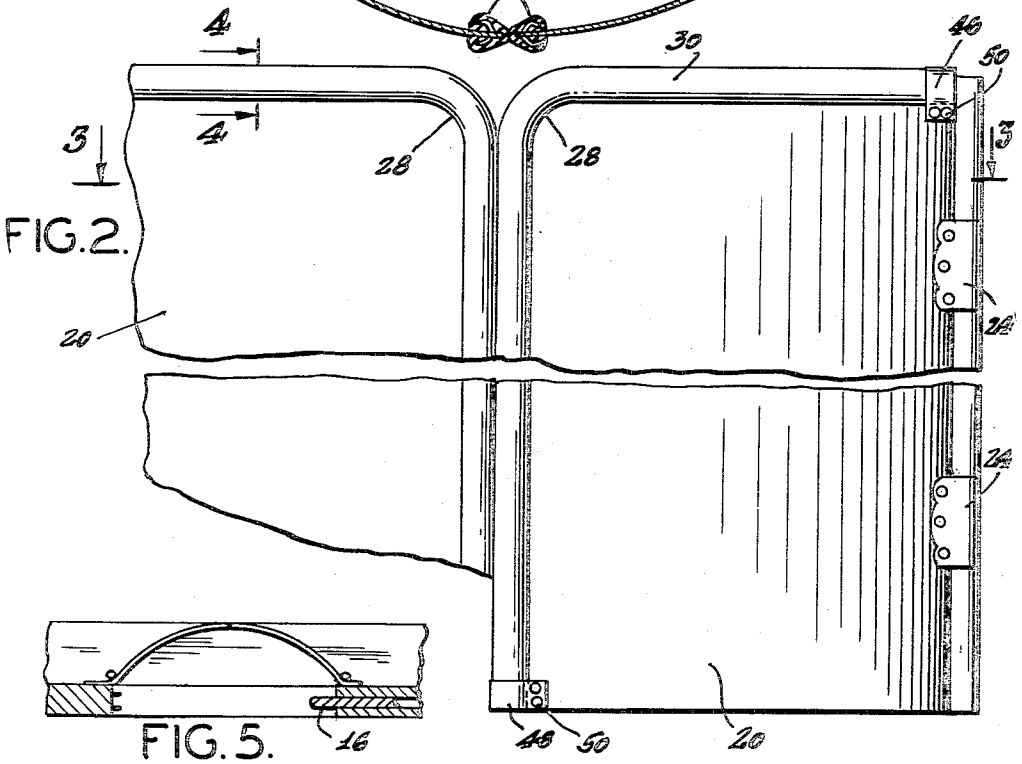



FIG. 2.

FIG. 5.

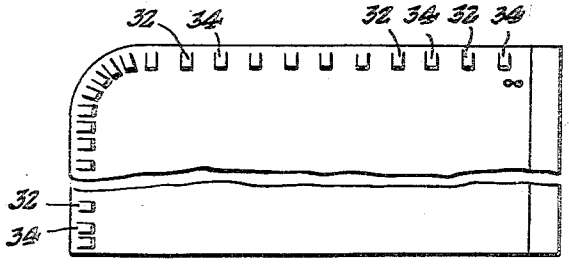



FIG. 6.

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2,848,759

# DOORS

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5 Claims. (Cl. 20—16)

This invention relates generally to doors and in particular to a novel door structure having a resilient guard disposed around portions of the periphery thereof.

The present invention appertains to a novel type weather door as particularly applied to toll booths. Toll booths are generally constructed of substantially rectangular shape with a sliding door centrally disposed in at least one side thereof. The sliding door is situated to facilitate the collection of tolls by vehicles entering the toll booth facilities. When a large volume of vehicles are using the toll facilities it has been found that the sliding door must remain open so that the toll collector may readily transact the toll collecting operations. During inclement weather, the toll collector is subject to the elements, without any protection other than the overhead canopy generally associated with structures of this type.

The novel doors, hereinafter described in detail, have been found to offer substantial protection while permitting the toll collector to readily perform the toll collection operations. The present invention consists essentially of a pair of arcuate resiliently hinged half doors conventionally classified as dutch doors. These arcuate doors are arranged to supplement the conventionally present sliding door and are disposed externally thereof.

Accordingly, one of the principal objects of the invention resides in the provision of a novel door structure having resilient trim thereon.

Another object of the invention resides in the provision of novel means for securing the resilient trim to the door structure.

A further object of the invention resides in the provision of the resilient trim having inherent means co-operable with the attaching means of the door structure.

Other ancillary objects will be, in part, hereinafter pointed out and will be in part, hereinafter apparent.

In the drawings:

Figure 1 is a side elevation of a toll booth with the invention applied thereto.

Figure 2 is a fragmentary front elevation of the novel doors.

Figure 3 is a cross sectional view taken along line 3—3 of Figure 2.

Figure 4 is a cross sectional detail of the resilient trim taken along line 4—4 of Figure 2.

Figure 5 is a plan view of the dutch doors as mounted on the wall of a toll booth.

Figure 6 is a fragmentary front view of a door with the trim omitted to further illustrate the attaching means formed in the door for securing the trim thereon.

Referring to the various figures in detail, **10** generally designates a toll booth having a canopy **12** and a base **14**. It will be understood that the direction of vehicular traffic passing the toll booth may be in either direction parallel to the side of the toll booth illustrated in Figure 1. The interior of the toll booth contains the toll registering equipment, not shown, and access thereto is through a sliding door generally designated as **16**. Windows **18** are provided to permit the toll collectors to observe oncoming vehicles. Secured to the frame of the door **16** are a pair of arcuate dutch doors **20**.



Dutch door **20** comprises an arcuately formed metallic member **22** having a height substantially one-half of the sliding door **16**. The member **22** has affixed thereto a pair of spring loaded hinges **24** adjacent to the inner edge thereof to which are in turn affixed to a plate **26** which is in turn affixed to the toll booths proper. Each dutch door **20** is further formed with a radius in the upper inner corner designated as **28** to facilitate the mounting of a rubber guard designated as **30**. Guard **30** performs the dual function of acting as a guard and also providing a trim that finishes off the exposed edges of the member **22**. The member **22** is preformed with a plurality of oppositely extended integral tongues **32** and **34**. As shown in Figure 6, tongues **32** and **34** are disposed in aligned relation adjacent to the outer and upper marginal edge of member **22**.

As shown in Figure 4, the rubber guard **30** is formed to provide a pair of oppositely disposed recesses **36** and **38** respectively, which are disposed longitudinally thereof. The apex at the intersection of the recesses **32** and **34** is formed to provide a longitudinal recess **40** for a purpose hereinafter apparent. The portion of the guard **30** diametrically opposed to the recess **40**, is formed with an opening **42** that communicates with the respective recesses **30** and **32** and the exterior of the guard **30**. The opening **42** is provided to permit the insertion of the guard **30** over the exposed upper and side edges of the arcuate member **22**. When assembled, the guard member **30** is distorted so that the portion intermediate the recess **36** and the opening **42** may be positioned under the related tongues **32**. In a like manner, the portion of guard **30** intermediate the opening **42** and recess **38** is distorted and disposed under the related tongues **34**. It will be noted that the oppositely extended tongues **32** and **34** are provided with inwardly extending terminal portions **32***a* and **34***a* respectively. The terminal portions **32***a* and **34***a* are provided for the purpose of compressing the intermediate portions of the guard **30** to effectively retain guard **30** on the member **22**. As shown in Figure 4, the exposed upper and side edges of the member **22** then reside in the recess **40** and are effectively covered by the guard **30**.

A pair of terminal clamps **46** surround the terminals of each guard **30** and are attached to the members **22** as by rivets **50**. It is, therefore, apparent that guard **30** will facilitate the gripping of the doors **20** when it is desired to open said doors and co-act as a shock absorber when the spring hinges **24** automatically return the doors to their normally closed relationship. The resilient composition of guard **30** absorbs the impact shock of the engaging doors and effectively seals the closed doors against wind, rain, etc. Further, the guard **30** offers a protection against sharp edges of the doors **20** which is important when considering that the toll collector usually reaches out to receive the toll from the driver of a vehicle and in so doing may lean against the upper edges of said doors. Without the novel guard, the relatively sharp edges of the member **22** could be a hazard and a possible source of injury to the toll collector.

In addition to the novel structure, the doors **20** provide an inexpensive, readily manufactured and efficient structure for it is obvious that the construction of the doors is simplified by use of the unitary body member and novel guard **30**.

Thus, it will be seen that there is provided a device in which the several objects of the invention are achieved and which is well adapted to meet the conditions of practical use.

While there has been shown and described a single embodiment of the invention, it is to be understood that

modifications and changes might be made without departing from the scope of the present invention, except as limited by the following claims:

The invention claimed is:

1. A door comprising an arcuate body member, hinged means disposed along one marginal edge of said body member for mounting said body member to a wall, a plurality of aligned, integrally formed and oppositely extending tongues disposed adjacent to the other marginal edges of said door, a resilient member having a pair of oppositely extending integrally formed recesses therein, and said resilient member being adapted to be disposed on the other marginal edges of said door wherein said tongues reside in said recesses and secure said resilient member on said body member.

2. A door comprising a body member, hinged means disposed along one marginal edge of said body member for mounting said body member to a wall, a plurality of aligned, integrally formed and outwardly extending tongues disposed adjacent to the other marginal edges of said door, a resilient member having an integrally formed recess therein, and said resilient member being adapted to be disposed on the other marginal edges of said door wherein said tongues reside in said recess and secure said resilient member on said body member.

3. A door comprising an arcuate body member, hinged means disposed along one marginal edge of said body member for mounting said body member to a wall, a plurality of aligned, integrally formed and oppositely extending tongues disposed adjacent to the other marginal edges of said door, a resilient member of substantial circular cross section, a pair of oppositely extending recesses disposed within said resilient member, a central longitudinal recess communicating with the oppositely extending recesses and the periphery of said resilient member, and said resilient member being adapted to be disposed on the other marginal edges of said body member wherein the oppositely extending tongues reside respectively in the oppositely extending recesses in said resilient member and the longitudinal central recess abuts against the respective sides of said body member.

4. A door comprising a body member, hinges affixed to a marginal edge of said body member and adapted to pivotally secure said body member to a supporting wall, a plurality of equally spaced tongues integrally formed from said body member and alternately, oppositely extending in aligned relation adjacent to the other marginal edges of said body member, a resilient member formed of substantially circular cross section and having a central longitudinal recess therein, said longitudinal recess communicating with the periphery of said resilient member, a pair of angularly and oppositely extending recesses within said resilient member communicating with said central longitudinal recess, and said resilient member being adapted to be disposed on the other marginal edges of said body member with the oppositely extending tongues disposed in the oppositely extending recesses.

5. A door comprising a body member, hinges affixed to a marginal edge of said body member and adapted to pivotally secure said body member to a supporting wall, a plurality of equally spaced tongues integrally formed from said body member and alternately, oppositely extending in aligned relation adjacent to the other marginal edges of said body member, a resilient member formed of substantially circular cross section and having a central longitudinal recess therein, said longitudinal recess communicating with the periphery of said resilient member, a pair of angularly and oppositely extending recesses within said resilient member communicating with said central longitudinal recess, said resilient member beng adapted to be disposed on the other marginal edges of said body member with the oppositely extending tongues disposed in the oppositely extending recesses, and said tongues having terminal portions angularly disposed relative to the remaining portions thereof and adapted to clamp the portions of said resilient member disposed between the tongues and body member in secured relation thereto.

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