Oct. 18, 1949. R. L. LOCKE 2,485,393

DOOR GUIDE AND HOLDER

Filed April 10, 1948

Fig. 1

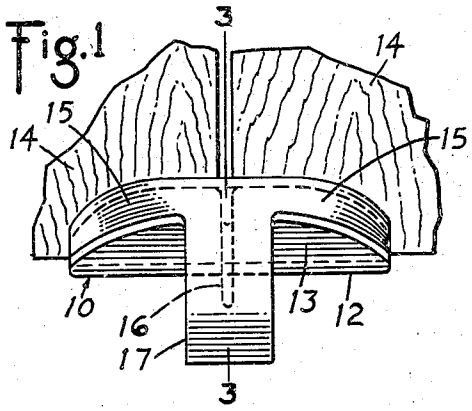


Fig. 2

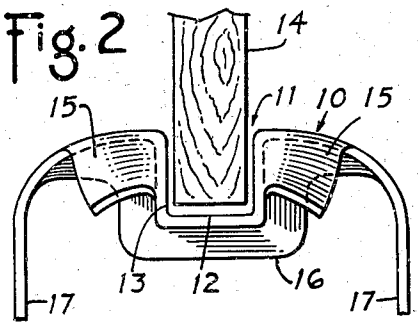


Fig. 3

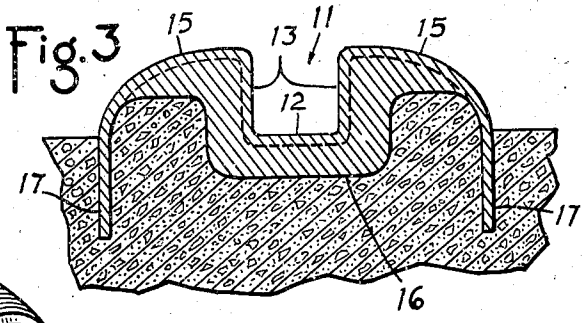


Fig. 4

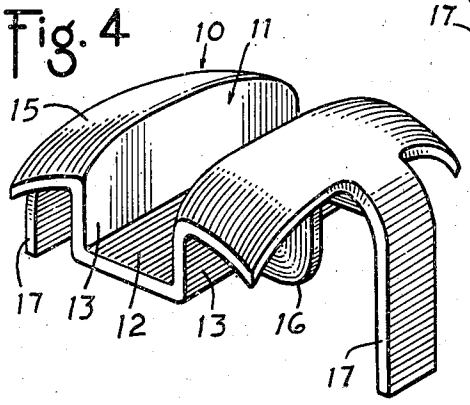
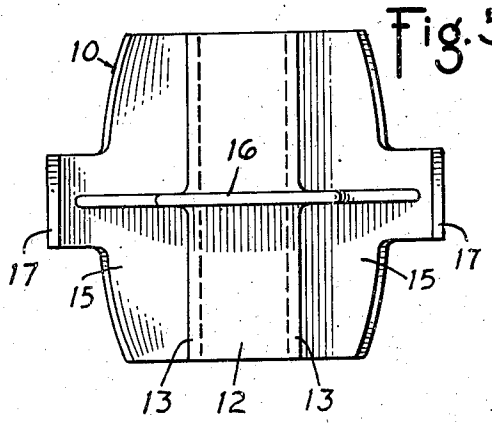


Fig. 5



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DOOR GUIDE AND HOLDER

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Application April 10, 1948, Serial No. 20,239

3 Claims. (Cl. 16—1)

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This invention relates to door guides and holders, and, without limitation thereto, has more particularly to do with one of the kind that, in use, is placed on the floor at the middle of the door opening of a building such as a barn, hangar or the like so as to guidingly receive and hold the meeting lower corner portions of a pair of horizontally sliding, top-hung doors from lateral movement when the doors are closed. That is to say, while the device of the present invention is primarily intended for the above noted particular use, it is adaptable for use with other kinds of doors. For example, it may be used to receive and hold the bottom edge portion of a vertically slidable door in its closed position.

The principal object is to produce a characteristic article of its kind, the protuberance of which, when installed upon the floor, will not cause damage to tires rolling thereover, particularly as when moving an inherently heavy vehicle or a loaded one into or out of the building.

Another and special object is to produce a device of its kind which can be securely fastened in place, particularly on a concrete floor, without the use of bolts, screws, nails or like separate and extraneous fastener elements.

Other objects and advantages to be attained will hereinafter more fully appear in the following description.

Generally stated, the invention consists in making the device substantially shell-like and concavo-convex in body form, with rounded outer surface contour and smooth crowned effect throughout its entire exposed surface. It further consists in the provision of web-like or ribbed reinforcement on the underside of the body shell, together with depending fastener extensions such as lugs, ears or the like which serve both as a reinforcement and a means of fastening the device embeddedly in a concrete floor, door-sill or the like.

A practical adaptation of the invention is illustrated in the accompanying drawings, in which:

Figure 1 is a side elevational view of the device and showing therewith fragmentary lower meeting corner portions of double doors in closed position;

Figure 2 is a view taken at right angles to that of Figure 1;

Figure 3 is a section of the device taken on or about the line 3—3 of Figure 1, but with the doors removed and the device shown as embedded in a portion of a concrete floor;

Figure 4 is a perspective view of the device alone; and

Figure 5 is a bottom plan view of the device

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showing the arrangement of the reinforcing web or rib and the fastener lugs or ears.

Referring now to the drawings in detail, the numeral 10 designates the device of the invention in its entirety. As shown, this device is shell-like and of minimum thickness throughout. In practice the same may be made of metal of ample strength and, obviously, either by a casting process, such as for example, ordinary molding or a die-casting procedure, or else by any approved die-stamping and forming method.

Medially of the device it is provided with an open-ended channel 11 of rectangular cross-section, that is to say, one having a flat bottom 12 and perpendicular or right-angled side walls 13. This channel 11 is to guidingly receive the meeting lower corner portions of a pair of sliding doors 14 when the doors are in closed position as indicated in Figure 1. For this purpose, of course, the channel 11 will be made to run transversely of the door opening of the building.

It is here noted that while the device is shown as used to receive the meeting lower corner portions of a pair of top-hung, horizontally slidable doors 14, it is to be understood that it may, for example, be used to receive in its channel 11 the bottom edge portion of a vertically slidable door of the overhead-mounted type.

In any case, the channeled portion 11 of the device receives the edge portion of a door slidably therein but holds the adjacent portion of the door as thus engaged from lateral movement.

At each side of the channel 11, the lateral body shell portion 15 of concavo-convex or inverted cupped form, being highest in the middle region of the device and inclining downwardly towards the opposite ends of the channel 11 and also inclining downwardly laterally from the channel, said body shell portions 15 being of round contour throughout their entire exposed top surfaces and giving a general crowned effect to the device in its protuberance above the normal floor surface. This is an essential and advantageous feature of the present invention in that all abrupt and sharp corners which might cut or cause injury to a vehicle tire riding over the device are eliminated and avoided. This rounded contour feature, together with the arrangement of the door-receiving channel 11 as located between the lateral body shell portions 15 and running transversely of the door opening, makes for ideal practicability of the device in avoidance of injury to a vehicle tire, because the tire in rolling over the device passes cross-wide over the channel 11.

The inventive idea, in addition to the form and arrangement of the body shell 10 as to the round-

ed contour and channeling thereof, further consists in a novel provision for reinforcement of the body shell and means for fastening the device to a floor, door-sill or the like, now to be described in detail.

As shown, the hollow shell-like body 10 is provided on its underside with a web or rib 16 which crosses under the channel 11 and terminates adjacent the outer margins of the lateral body shell portions 15. Obviously, this webbing or ribbing 16 materially stiffens and strengthens the body shell 10 whose thickness may, therefore, be appreciably minimized.

For fastening the body shell 10 to a floor, sill or other place without using bolts, screws, nails or the like, especially to one of concrete, as is the kind more generally in vogue in the present day practice, the body shell 10 is provided with lugs, ears or tongue-like fastener extensions 17 in any desired number and respective locations thereon. As shown in the drawings, there are two of these extensions 17, provided diametrically opposite each other, one at the outer margin of each lateral body shell portion 15 and in line with the transverse bottom webbing or ribbing 16, said extensions not only affording a means of fastening the device in place, as will be presently described, but also augmenting the stiffening and reinforcing effect of said webbing or ribbing 16.

With the round crowned form of the body shell 10 and its under webbing or ribbing 16 and fastener extensions 17, the device is embedded upon and in a concrete floor or other place of use by forcing it downward upon the body of concrete while the same is still wet and soft, the body shell 10 itself resting on the area of concrete thereunder and its webbing or ribbing 16 and fastener extensions 17 taking well into the body of the concrete and serving to tie the device in place after the concrete has set and hardened. It is thus apparent that not only does the body shell 10 rest throughout its own major extent on the concrete but its fastening in place is well assured by the engagement of the web or rib 16 and the fastener extensions 17 which are inserted deeply in the concrete so as to hold the device from lifting as well as lateral movement.

From the foregoing disclosure and description it is apparent that a practical and efficient door guide and holder is produced, which can be manufactured economically and sold at a reasonable price, is easily installed and secured in place without using bolts, screws, nails or other heretofore necessary separate and extraneous fastener elements, particularly where the flooring or means of support for the device is of concrete or a setting and hardening plastic or cementitious material.

In any case, regardless of how the device is fastened in place, or whether it is reinforced as hereinbefore described, or not, the making of the body shell with the crowned or inverted cupped and generally rounded form and surface contour throughout its exposed protuberance is of particular advantage in giving ample strength to the device with minimum wall thickness therein, as well as avoiding the possibility of a vehicle tire becoming damaged in riding over the device.

While the structure illustrated in the accompanying drawings is that of a practical embodiment of the invention the same is not in limitation thereof, as modifications and changes are possible within the spirit and scope of the invention as defined in the appended claims.

What is claimed is:

1. A door guide and holder of general inverted cupped shell-like body form with rounded surface contour throughout the extent of its protuberance above the normal surface of a floor or supporting base on which the article is mounted, said guide and holder having a transverse channel depressed therein to receive slidably the lower edge portion of a door and for holding the adjacent portion of the door as so received from lateral movement, and an integral reinforcing web or rib and fastener extensions on the underside of said guide and holder both the reinforcing web or rib and fastening extensions adapted to secure the article in place on the floor or supporting base.

2. A door guide and holder of the character described, the same being of general inverted cupped shell-like form and minimum thickness throughout the extent thereof, the body of the article having a transverse medial channel formation which is open-ended and has a flat bottom and straight vertical side walls, the body of the article laterally at opposite sides of the channel formation being of rounded surface contour throughout the extent thereof so as to give a general crowned effect to the article which is highest at its approximate center and the rounded surface inclined in every direction from center towards the ends of the channel formation and towards the margins of the article laterally from the channel formation, the body of the article having a reinforcing web or rib on its underside extending from diametrically opposite marginal points and cross-wise of the channel formation, and integral fastener extensions projecting downwardly and marginally from the body of the article.

3. A door guide and holder of the character described, the same being of general inverted cupped shell-like form and minimum thickness throughout the extent thereof, the body of the article having a transverse medial channel formation which is open-ended and has a flat bottom and straight vertical side walls, the body of the article laterally at opposite sides of the channel formation being of rounded surface contour throughout the extent thereof so as to give a general crowned effect to the article which is highest at its approximate center and the rounded surface inclined in every direction from center towards the ends of the channel formation and towards the margins of the article laterally from the channel formation, the body of the article having a reinforcing web or rib on its underside extending from diametrically opposite marginal points and cross-wise of the channel formation, said web or rib acting as fastening extensions, and other integral fastener extensions projecting downwardly and marginally from the body of the article.

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