

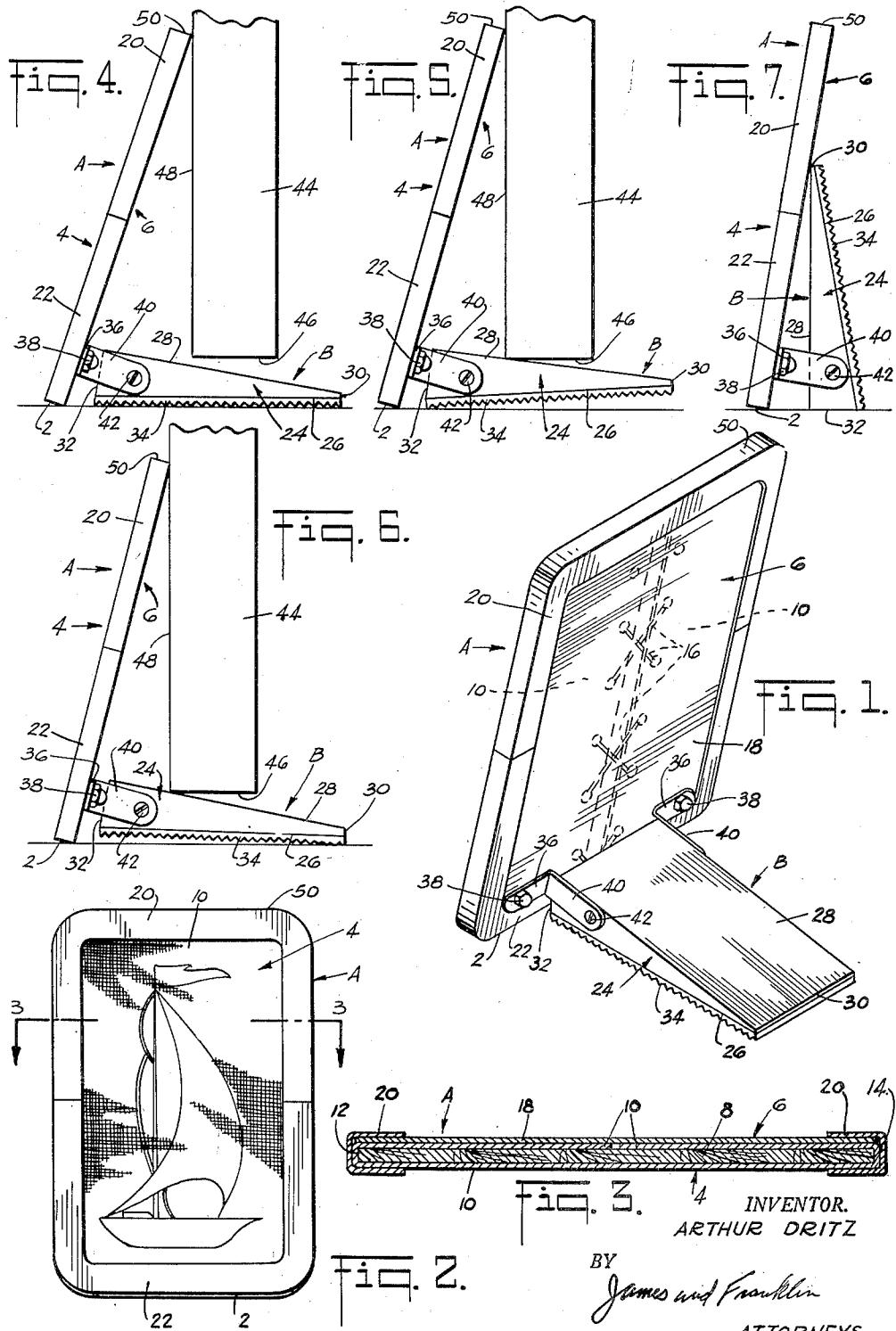
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DOORSTOP

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DOORSTOP

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1

The present invention relates to a novel door stop construction which functions efficiently with doors the bottoms of which are either close to or remote from the floor, which may be placed in a convenient position against the wall when not in use, and which whether in use or in stand-by condition, will present a neat and decorative appearance.

A basic problem involved in the construction of door stops is the fact that different doors have their bottom surfaces spaced at widely different distances from the floor. Since the common type of door stop is one which is interposed between the floor and the bottom surface of the door, an obvious problem is thus presented in designing a door stop which is capable of wide flexibility of use. This problem is accentuated by the fact that when a floor covering such as a carpet is employed the door bottom may be relatively close to the top of the carpet, but when the carpet is removed from the floor, as is normally done for the summer months, the distance between the floor and the door bottom is materially greater than the distance between the top of the carpet and the door bottom. The more luxurious the floor covering, the greater is the difference in spacing. It is therefore necessary, from a practical point of view, that a given door stop be useable whether a floor covering is employed or not, since people will in general not wish to purchase separate door stops for winter and summer.

When a door is closed no door stop is required. Whenever a door is opened it is most desirable that the door stop be readily at hand so that it can be put in place with the least possible trouble. However, no conventional door stop can, from an esthetic point of view, be placed in close proximity to the closed door because of its functional and undecorative appearance. Moreover, a conventional door stop, when not in use and resting on the floor near the door, constitutes a safety hazard, since people may inadvertently trip over it or catch their clothes on it. In order to minimize these esthetic and safety drawbacks and yet facilitate placing the door stop where it is readily accessible for use, it is necessary that the door stop, when not in use, take up as little space as possible and yet be attractive and self-sustaining.

The door stop of the present invention goes far toward solving all of the problems and satisfying all of the desiderata set forth above, and this by means of a structure which is substantial, uncomplicated, and easy and inexpensive to manufacture. In essence, the door stop of the present invention comprises a frontal member which may be decorated in any appropriate manner and to which is secured a supporting member

2

which, as specifically disclosed, takes the form of an inclined wedge.

The supporting member is movable between a plurality of positions in one of which it supports the decorated frontal member in an upright or approximate upright position while it alone functions in the manner of a conventional wedge door stop in conjunction with doors having bottoms relatively close to the floor. In this situation the frontal member displays an ornamented face and masks the supporting member from view, but performs no additional functions.

When the spacing between the bottom of the door and floor is greater the door will engage the rearwardly inclined frontal member before it engages the wedge-shaped supporting member. When this occurs the frontal member and supporting member together, by reason of their articulate connection, will cooperate in acting as a door stop, the frontal member at the same time performing its ornamental and masking functions.

In this way a simple door stop construction is made capable of functioning effectively with doors the bottoms of which are spaced at widely varying distances from the floor.

When the door stop of the present invention is not in use (as when the door is closed) the supporting member may be moved to another position with respect to the floor member, in which position the supporting member is substantially parallel to the frontal member but nevertheless supports the frontal member in an upright position so that its decorated face is still visible. The supporting member will then extend only a very short distance behind the frontal member, so that the frontal member can be placed very close to a wall of the room, there occupying but a small space and constituting only a negligible safety hazard, and the door stop will continue to have a decorative appearance, the ornamental frontal member obscuring the supporting member from view, thus enhancing the appearance of the room. In this way the door stop may be maintained in stand-by condition close to the door and therefore readily at hand when needed without constituting an esthetic or safety hazard.

To the accomplishment of the foregoing, and to such other objects as may hereinafter appear, the present invention relates to a door stop construction as defined in the appended claims and as described in this specification, taken together with the accompanying drawings, in which:

Fig. 1 is a three-quarter rear perspective view of the door stop of the present invention;

Fig. 2 is a front elevational view of the frontal member thereof;

Fig. 3 is a top cross-sectional view of the frontal member taken along the line 3—3 of Fig. 2;

Figs. 4, 5 and 6 are side elevational views showing the manner of functioning of the door stop when used in connection with a door having a bottom widely spaced from the floor; and

Fig. 7 is a side elevational view of the door stop showing it in stand-by condition.

Broadly considered, the door stop of the present invention comprises a frontal member generally designated A to which a supporting member generally designated B is articulately secured. The supporting member B may assume an operative or door stopping position with respect to the frontal member A, as illustrated in Figs. 1, 4, 5 and 6, in which position the frontal member A is supported in a substantially upright door stopping condition and in which the supporting member B, either alone or in conjunction with the frontal member A, depending upon the distance between the door bottom and the floor, acts to retain the door in open position. The supporting member B is movable to another position with respect to the frontal member A, which position is designated the stand-by position and is illustrated in Fig. 7, in which position the supporting member B is approximately parallel to the frontal member A and supports that frontal member A substantially in upright condition while at the same time extending rearwardly therefrom a small distance when compared to the rearward distance taken up by the supporting member B in its door-stopping position. Hence, when in its stand-by condition, the door stop may be placed close to a wall and out of the way, and this without detracting from its decorative appearance.

The frontal member A has a lower edge 2, a front side 4 and a rear side 6, the lower edge 2 being adapted to rest on the floor, the front side 4 being adapted to be ornamented, and the supporting member B being articulately connected to the rear side 6 close to the lower edge 2.

As here specifically disclosed, the frontal member A is defined by a suitably shaped body member 8, in the form of a rigid self-sustaining sheet of wood, metal, or any other structural material. A decorated ornamental sheet 10 covers the front side of the body member 8 and preferably extends around the side edges 12 and 14 of the body member 8 and covers at least a part of the rear side of the body member 8, being there secured in place by any appropriate means, as by the lacing 16 (see Fig. 1). For protection a cardboard or other sheet 18 may be placed over the back of the thus formed assembly, and U-shaped edge retainers 20 and 22, each having a U-shaped cross-section, may then be slid over the edges of the frontal member A to provide a decorative trim, keep the various parts of frontal member A in place, and protect the raw edges thereof.

As here disclosed the supporting member B takes the form of a wedge-shaped structure 24 of wood or the like having a lower surface 26, an upper surface 28 angularly inclined with respect to the lower surface 26 and meeting said lower surface at vertex 30, and an end surface 32 at the end of the body 24 opposite the vertex 30. If desired a tread 34 of rubber, felt or other frictional material may be secured along the lower surface 26 of the supporting member B.

In order to secure the supporting member B to the frontal member A brackets 36 are removably secured to the frontal member A as by means of the nuts 38 cooperable with screws (not shown) passing through the body member

3 and through appropriately positioned apertures in the ornamental sheet 10 and the cardboard sheet 18. These brackets 36 have arms 40 extending rearwardly therefrom, and the supporting member B is articulately secured to the arms 40, as by means of the screws 42 passing through the arms and into the wooden body 24. By tightening screws 42 any desired degree of friction between the supporting member B and the arms 40 may be obtained.

The brackets 36 are preferably mounted on the frontal member A close to the lower edge thereof and projecting rearwardly therefrom so that when the supporting member B is angularly disposed with respect to the frontal member A, as illustrated in Figs. 1, 4, 5 and 6, with the tread 34 on its lower surface 26 resting on the floor, the frontal member A is supported in an upright but preferably somewhat rearwardly inclined position so as to expose to view the ornamental sheet 10 on its front side 4. Since in this position the supporting member B is completely hidden from view by the frontal member A, whatever functional appearance the door stop may have will be effectively masked. When the door stop, in this position, is used in conjunction with a door 44 the bottom surface 46 of which is relatively close to the floor, the supporting member B will act as a wedge-type door stop in conventional manner.

If, however, the door 44 has a bottom surface 46 which is relatively widely spaced from the floor, the frontal member A and supporting member B will cooperate as illustrated in Figs. 4, 5 and 6. As the door 44 starts to close, its front surface 48 will engage the top edge 50 of the frontal member A before its bottom edge 46 will engage the upper inclined surface 28 of the supporting member B, as shown in Fig. 4. As the door continues to close the frontal member A will be pivoted about its lower edge 2, thus lifting the supporting member B and bringing its upper inclined surface 28 into engagement with the lower surface 46 of the door 44, the point of engagement being rearwardly spaced with respect to the screws 42 which constitute the pivotal connection between the supporting member B and the arms 40 of the brackets 36. This is illustrated in Fig. 5. As the door continues to close, the continued pivotal motion of the frontal member A about its lower edge 2 toward the vertical will cause the supporting member B to pivot in a clockwise direction about the screws 42, being forced in that direction by pressure exerted on its inclined surface 28 by the lower surface 46 of the door 44, until that end of supporting member B remote from the frontal member A, that is to say, the end near the vertex 30, is pressed down against the floor, as illustrated in Fig. 6. When this occurs the supporting member B and frontal member A combinedly act as a wedge to prevent further movement of the door 44.

The use of the preferably compressible frictional tread 34 on the lower surface 26 of the supporting member B adds to the positiveness of the operation of the device.

When the door stop is not in use, the supporting member B is positioned as disclosed in Fig. 7, being substantially parallel to the frontal member A. When in this position the door stop is supported in a stable manner on the lower surface 2 of the frontal member A and the end surface 32 of the supporting member B, the length of the supporting member B extending vertically so that the rearward projection thereof with re-

spect to the frontal member A is considerably less than when the supporting member B assumes its operative or door stopping position as disclosed in Fig. 1. When the supporting member is in the stand-by position illustrated in Fig. 7, the door stop may be placed on the floor next to the door and close to a wall, thus taking up very little space and being readily available for use when desired, the frontal member A being maintained in upright position so that its ornamented front side 4 is exposed to view and so that it masks or hides the supporting member B from view. Consequently the decorative nature of the door stop is not impaired, and at the same time the door stop may be placed in a position where it will not constitute a safety hazard.

When it is desired to remove the ornamented sheet 10, the brackets 36 may be removed by unscrewing the nuts 38. The edge trimming strips 20 and 22 may then be slid off the frontal member A, the cardboard backing 18 may be removed, and the sheet 10 may be disengaged, as by undoing the lacing 16. A new ornamental sheet 10 can then be placed in position by a reversal of the above steps, it being necessary only to form apertures therein for the passage therethrough of the screws which are secured to the body member 19 and cooperate with the nuts 38.

The door stop structure above disclosed is simple, easy to manufacture, easy to assemble and results in a sturdy yet attractive door stop which functions efficiently with doors the bottom surfaces of which are spaced from the floor to widely differing degrees. When not in use, the door stop may nevertheless, without losing its decorative nature and without constituting a safety hazard, be placed on the floor in close proximity to the door so as to be readily at hand whenever its use as a door stop is desired.

It will be understood that many variations may be made in the specific disclosure above set forth as to size, shape and specific details of construction without departing from the spirit of the invention as defined in the following claims.

I claim:

1. A door stop comprising a frontal member having a lower edge adapted to rest on the floor, and a supporting member having a lower surface, an upper surface acutely angularly inclined with respect to said lower surface, and an end surface, said frontal member being taller than said supporting member and having an ornamented front face, said supporting member being spaced rearwardly from and articulately secured to the rear face of said frontal member above the lower edge thereof so as to extend rearwardly from said frontal member and be movable between one position angularly disposed with respect to said frontal member, in which the lower surface of said supporting member rests on the floor and supports said frontal member in upright door stopping condition with its lower edge on the floor and its front face exposed, the upper inclined surface of said supporting member being in position to be engaged by the bottom of a door, and another position approximately parallel to said frontal member, in which said end surface of said supporting member rests on the floor and supports said frontal member in upright stand-by condition with its lower edge on the floor and its front face exposed.

2. The door stop of claim 1, in which, when said supporting member is in said one position, said frontal member is supported in a rearwardly inclined position extending at least partially over

said supporting member so that it may be engaged by the side of a door, the action of said door on said frontal member tending to swing it toward a vertical position and thus lifting said supporting member until its upper surface engages the bottom of said door, said supporting member thereafter moving with respect to said frontal member until part of its lower surface engages the floor and stops the further motion of the door.

3. A door stop comprising a frontal member having a lower edge adapted to rest on the floor, and a supporting member having a lower surface, an upper surface acutely angularly inclined with respect to said lower surface, and an end surface, a bracket on said frontal member near the lower edge thereof and having arms extending rearwardly therefrom, said supporting member being articulately mounted between said arms and spaced from said frontal member so as to be movable between one position angularly disposed with respect to said frontal member, in which the lower surface of said supporting member rests on the floor and supports said frontal member in upright door stopping condition, the upper inclined surface of said supporting member being in position to be engaged by the bottom of a door, and another position approximately parallel to said frontal member in which said end surface of said supporting member rests on the floor and supports said frontal member in upright stand-by condition.

4. A door stop comprising a frontal member having a lower edge adapted to rest on the floor, and a supporting member having a lower surface, an upper surface acutely angularly inclined with respect to said lower surface, and an end surface, a bracket removably mounted on said frontal member near the lower edge thereof and having arms extending rearwardly therefrom, said supporting member being articulately mounted between said arms and spaced from said frontal member so as to be movable between one position angularly disposed with respect to said frontal member, in which the lower surface of said supporting member rests on the floor and supports said frontal member in upright door stopping condition, the upper inclined surface of said supporting member being in position to be engaged by the bottom of a door, and another position approximately parallel to said frontal member in which said end surface of said supporting member rests on the floor and supports said frontal member in upright stand-by condition.

5. A door stop comprising a frontal member having a lower edge adapted to rest on the floor, and a supporting member having a lower surface and an upper surface acutely angularly inclined with respect to said lower surface, said frontal member being taller than the maximum distance between the lower and upper surfaces of said supporting member, and means for articulately securing said supporting member to and rearwardly spacing said supporting member from said frontal member, said supporting member extending rearwardly from said frontal member, the distance between the lower edge of said frontal member and the point on said frontal member where said supporting member securing means is secured thereto being greater than the distance between the lower surface of said supporting member and the point on said supporting member where said securing means is secured thereto, said supporting member being thus movable between one position in which all of its lower sur-

face rests on the floor and supports said frontal member in a rearwardly inclined position extending at least partially over said supporting member, said supporting member acting as a wedge-shaped door stop for doors with low bottoms, and another position in which said frontal member is inclined more toward the vertical and in which only that end of the lower surface of said supporting member remote from said frontal member rests on the floor, the upper surface of said supporting member engaging the bottom of a door with a high bottom and stopping further motion of the door.

6. A door stop comprising a frontal member having a lower edge adapted to rest on the floor, and a supporting member having a lower surface, and an upper surface acutely angularly inclined with respect to said lower surface, said frontal member being taller than the maximum distance between the lower and upper surfaces of said supporting member, a bracket mounted on said frontal member near the lower edge thereof and having arms extending rearwardly therefrom, said supporting member being articulately mounted between said arms and spaced from said frontal member, the distance between the lower edge of said frontal member and the point where said bracket is secured thereto being greater than the distance between the lower surface of said supporting member and the point where said bracket arms are secured thereto, said supporting member thus being movable between one position in which all of its lower surface rests on the floor and supports said frontal member in a rearwardly inclined position extending at least partially over said supporting member, said supporting member acting as a wedge-shaped door stop for doors with low bottoms, and another position in which said frontal member is inclined more toward the vertical and in which only that end of the lower surface of said supporting member remote from said frontal member rests on the floor, the upper surface of said supporting member engaging the bottom of a door with a high bottom and stopping further motion of the door.

7. A door stop comprising a frontal member having a lower edge adapted to rest on the floor, and a supporting member having a lower surface, an upper surface acutely angularly inclined with respect to said lower surface, and an end surface, said frontal member being taller than the maximum distance between the lower and upper surfaces of said supporting member, and means for articulately securing said supporting member to and rearwardly spacing said supporting member from said frontal member, said supporting member extending rearwardly from said frontal member, the distance between the lower edge of said frontal member and the point on said frontal member where said supporting member securing means is secured thereto being greater than the distance between the lower surface of said supporting member and the point on said supporting member where said securing means is secured thereto, said supporting member being thus movable between one position in which all of its lower surface rests on the floor and supports said frontal member in a rearwardly inclined position extending at least partially over said supporting member, said supporting member acting as a wedge-shaped door stop for doors with low bottoms, another position approximately parallel to said frontal member in which the end surface of said supporting member rests on the floor and supports said frontal member in stand-by condition,

and a third position in which said frontal member is inclined more toward the vertical than in said one position and in which only that end of the lower surface of said supporting member remote from said frontal member rests on the floor, the upper surface of said supporting member engaging the bottom of a door with a high bottom and stopping further motion of said door.

8. A door stop comprising a frontal member having a lower edge adapted to rest on the floor, and a supporting member having a lower surface, an upper surface acutely angularly inclined with respect to said lower surface, and an end surface, said frontal member being taller than said supporting member, a bracket mounted on said frontal member near the lower edge thereof and having arms extending rearwardly therefrom, said supporting member being articulately mounted between said arms and spaced from said frontal member, the distance between the lower edge of said frontal member and the point where said bracket is secured thereto being greater than the distance between the lower surface of said supporting member and the point where said bracket arms are secured thereto, said supporting member thus being movable between one position in which all of its lower surface rests on the floor and supports said frontal member in a rearwardly inclined position extending at least partially over said supporting member, said supporting member acting as a wedge-shaped door stop for doors with low bottoms, another position approximately parallel to said frontal member in which the end surface of said supporting member rests on the floor and supports said frontal member in stand-by condition, and a third position in which said frontal member is inclined more toward the vertical than in said one position and in which only that end of the lower surface of said supporting member remote from said frontal member rests on the floor, the upper surface of said supporting member engaging the bottom of a door with a high bottom and stopping further motion of said door.

9. A door stop comprising a frontal member having a lower edge adapted to rest on the floor, a front side and a rear side, an ornamental sheet covering the front side and at least part of the rear side of said frontal member, a supporting member having a lower surface and an upper surface acutely angularly inclined with respect to said lower surface, a bracket securable to said frontal member near the lower edge thereof and having rearwardly extending arms, and securing means passing through said ornamental sheet and removably securing said bracket to the rear side of said frontal member, said supporting member being articulately mounted between said arms and spaced from said frontal member so as to have a degree of freedom of motion with regard thereto.

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