July 14, 1942. G. F. GRUVER 2,289,837

AWNING FITTING

Filed March 27, 1941

Fig. 1.

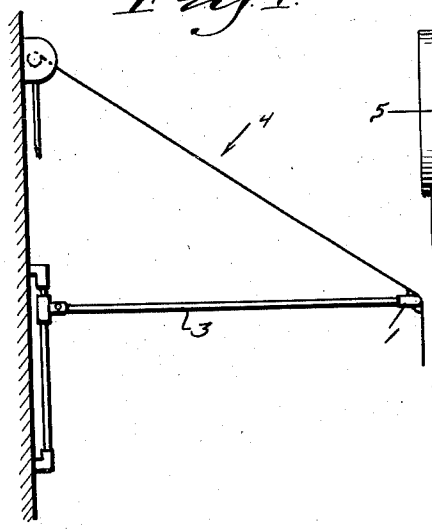


Fig. 2.

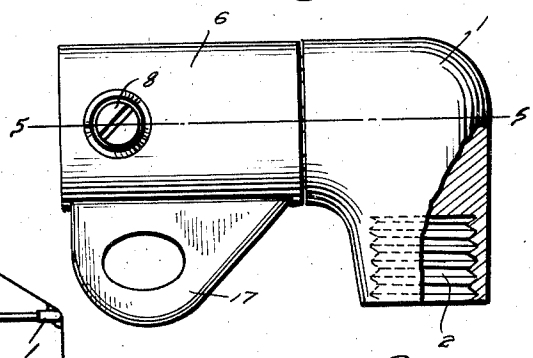


Fig. 3.

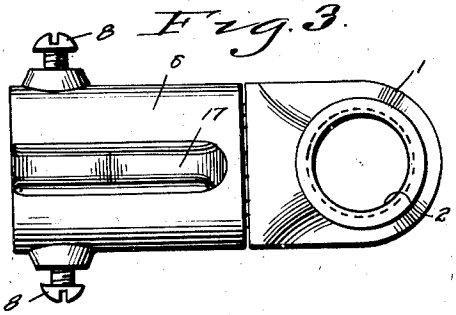


Fig. 4.

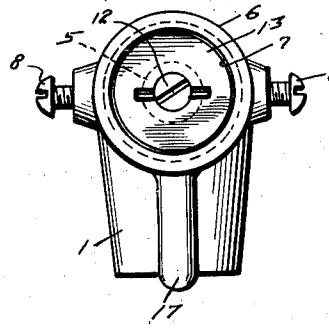


Fig. 6.

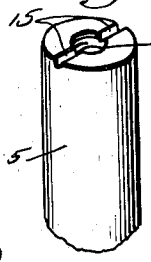


Fig. 5.

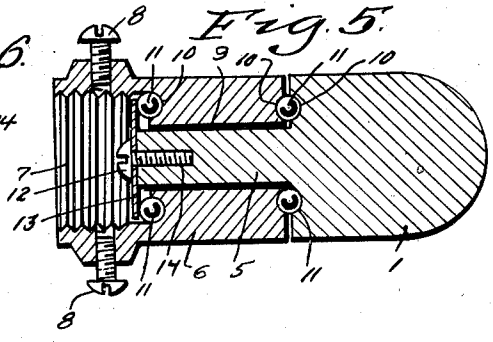


Fig. 9.

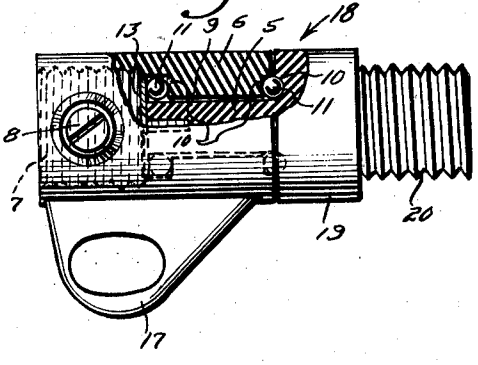


Fig. 7.

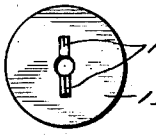
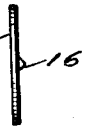


Fig. 8.



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UNITED STATES PATENT OFFICE

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AWNING FITTING

George Frank Gruver, Little Rock, Ark.

Application March 27, 1941, Serial No. 385,545

1 Claim. (Cl. 287—91)

The present invention relates generally to new and useful improvements in slide rod awnings and has for its primary object to provide, in a manner as hereinafter set forth, a fitting comprising a novel construction and arrangement of ball bearings whereby free and proper operation of the awning frame will be assured at all times.

Another very important object of the invention is to provide a fitting of the aforementioned character of such construction that said fitting may be expeditiously assembled or disassembled.

Other objects of the invention are to provide a fitting of the character described which will be comparatively simple in construction, strong, durable, highly efficient and reliable in use and which may be manufactured at low cost.

All of the foregoing and still further objects and advantages of the invention will become apparent from a study of the following specification, taken in connection with the accompanying drawing wherein like characters of reference designate corresponding parts throughout the several views, and wherein:

Figure 1 is a view in side elevation of a slide rod awning equipped with fittings constructed in accordance with the present invention.

Figure 2 is a view in side elevation of the device, a portion thereof being broken away in section.

Figure 3 is a bottom plan view.

Figure 4 is an end elevational view.

Figure 5 is a view in longitudinal section, taken substantially on the line 5—5 of Figure 2.

Figure 6 is a perspective view of the shank or shaft of the male member.

Figure 7 is a detail view in front elevation of the retaining disk.

Figure 8 is a view in side elevation of the retaining disk.

Figure 9 is a view in side elevation of a straight fitting with a portion thereof broken away in section.

Referring now to the drawing in detail, it will be observed that reference numeral 1 designates an angular cast male member or elbow having in one end portion a socket 2 for threadedly receiving the usual extension rods 3 of a conventional slide rod awning which is designated generally at 4. Projecting from the other end of the male member 1 is an integral shank or shaft 5.

Rotatable about the shaft 5 is a female member 6 comprising an internally threaded outer end portion 7 which projects beyond said shaft 5 for receiving the awning frame. Set screws 8 prevent loosening of the female member 6 on the awning frame.

The female member 6 further includes a reduced smooth bore 9 which accommodates the shaft 5.

The female member 6, also the adjacent end of the male member 1, have formed therein circular grooves or channels 10 constituting races for ball bearings 11. Secured by a screw 12 on the free end of the shaft 5 is a disk 13 for retaining the adjacent balls 11. The shaft 5 is tapped, as at 14, for the reception of the screw 12. The free end of the shaft 5 is further provided with radial grooves 15 which accommodate ribs 16 on the disk 13. Thus, the disk 13 is positively secured against rotation on the shaft 5.

It is thought that the manner in which the fitting functions will be readily apparent from a consideration of the foregoing. As hereinbefore set forth, the male member 1 is threadedly mounted on the extension rod 3 of the awning 4, the internally threaded socket 2 accommodating said extension rod. The female member 6 is threadedly mounted on the longitudinal member of the awning frame and secured by tightening the set screws 8. It will thus be seen that the extension rods 3 of the awning are free to swing relative to the longitudinal frame member of the awning. The ball bearing construction and arrangement is such as to assure free movement between the elements 1 and 6 at all times thereby resulting in smoother action in manipulating the extension rods and preventing distortion of the awning frame. The use of the fitting also greatly facilitates assembling the awning frame. An eye 17 is provided on the female member 6 to permit a stabilizing truss rod or cable to be conveniently connected thereto.

In Figure 9 of the drawing, reference numeral 18 designates generally a straight fitting for use with conventional T's, L's, etc. Toward this end, the fitting 18 includes a straight male member 19 having projecting longitudinally from its outer end a threaded shank 20 which is adapted to be screwed into a T, L, etc. In other respects the straight fitting 18 is substantially similar in construction and operation to that shown in Figures 1 to 8, inclusive, of the drawing.

It is believed that the many advantages of an awning fitting constructed in accordance with the present invention will be readily understood and although preferred embodiments of the device are as illustrated and described, it is to be understood that further modifications and changes in the details of construction may be resorted to which will fall within the scope of the invention as claimed.

What is claimed is:

In a device of the class described, a male member having a reduced part at one end thereof forming a shaft, the junction of the shaft with the rest of the member forming an annular shoulder having an annular groove therein, a female member having a bore passing therethrough for receiving the shaft, the inner end of the female member having an annular groove therein located opposite the first-mentioned groove, bearings in the grooves, said female member having a socket in its outer end into which the outer end of the shaft projects and said female member having an annular groove in the bottom of the socket surrounding the outer end of the bore, bearings in the last-mentioned groove, a disk and means for detachably connecting the disk to the outer end of the shaft with parts of the disk engaging the last-mentioned bearings for holding the same in place.

GEORGE FRANK GRUVER.