

Sept. 16, 1924.

S. A. DE NORMANVILLE

VISUAL WEATHER SCREEN

1,508,761

Original Filed Oct. 10, 1922

3 Sheets-Sheet 1

Fig. 1.

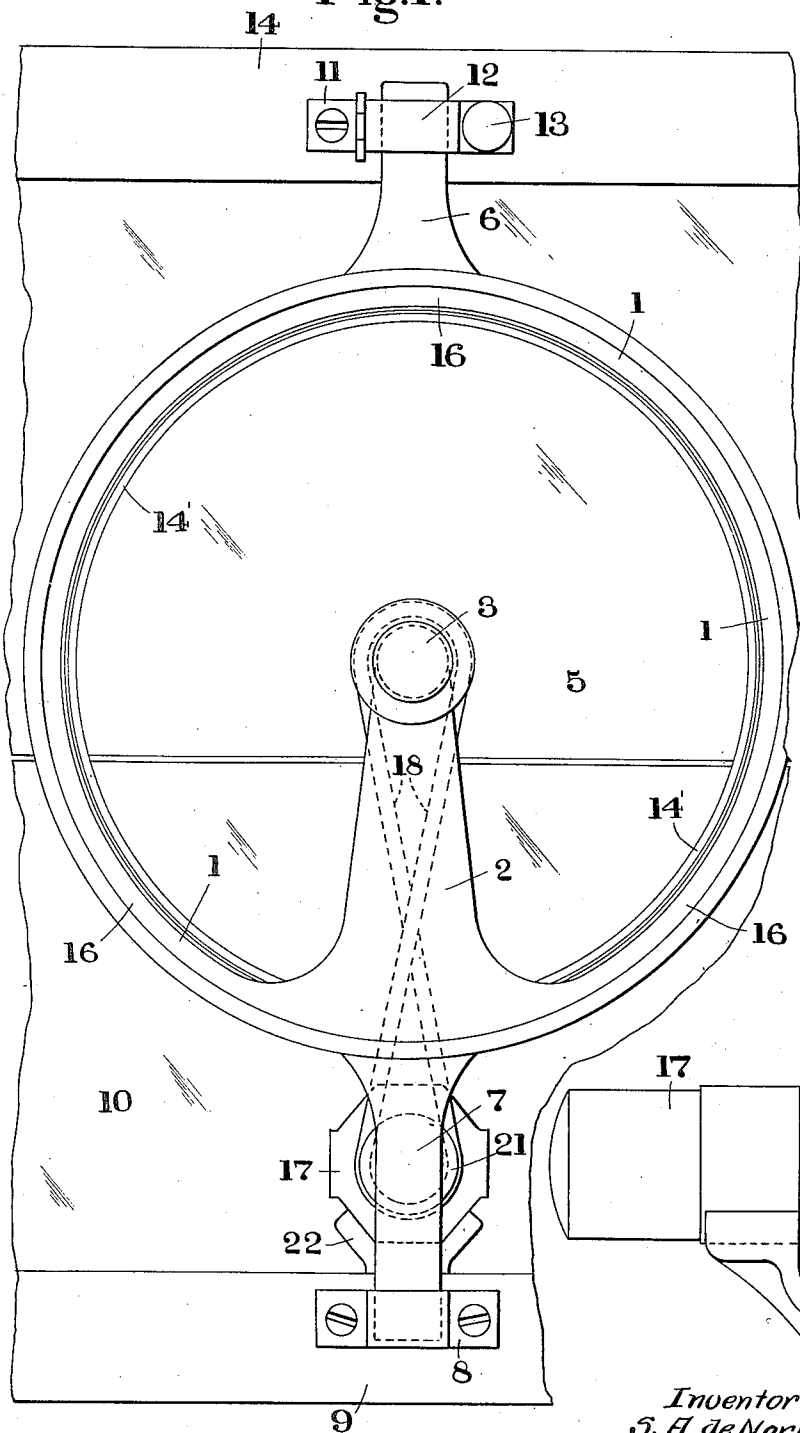
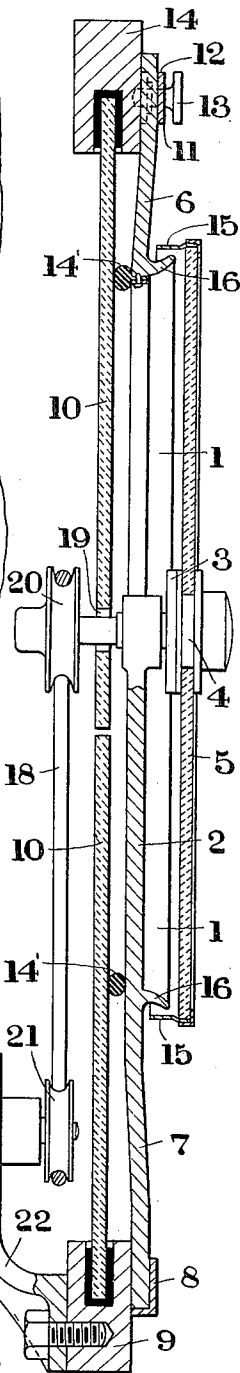


Fig. 2.



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Fig.4.

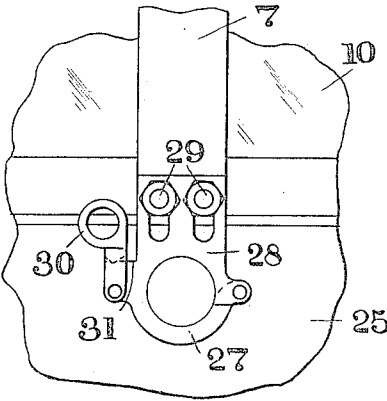
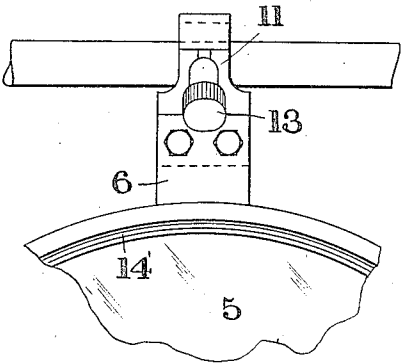


Fig.5.

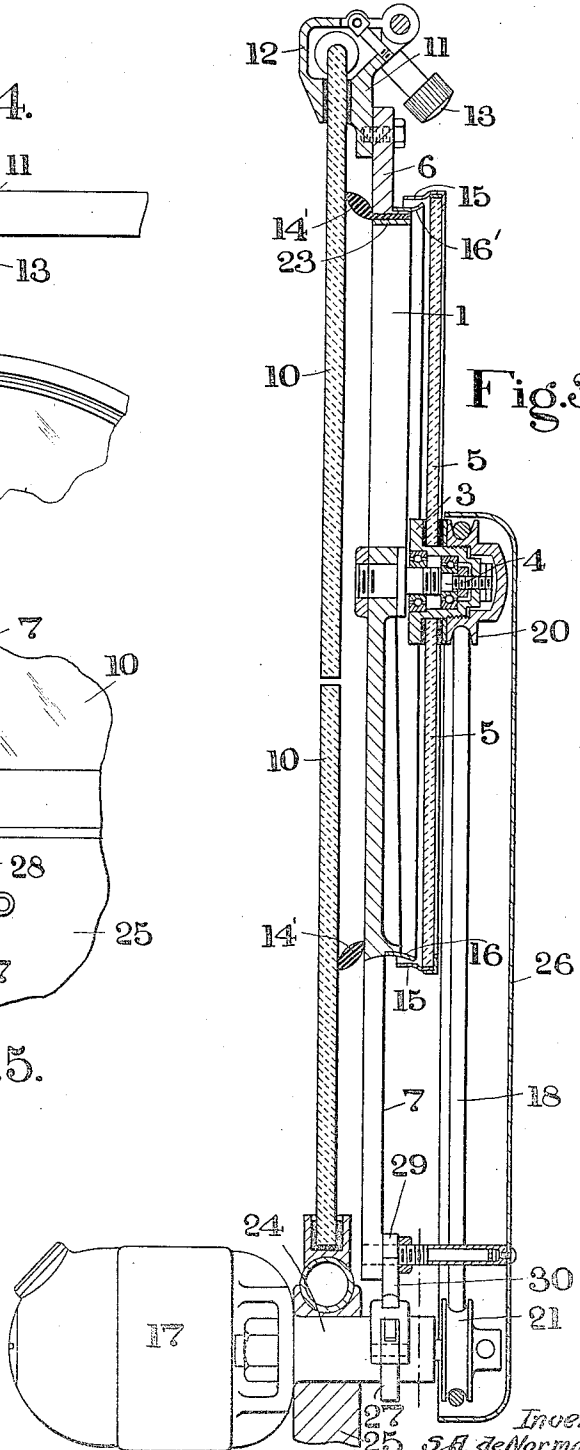


Fig.3.

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Fig. 6.

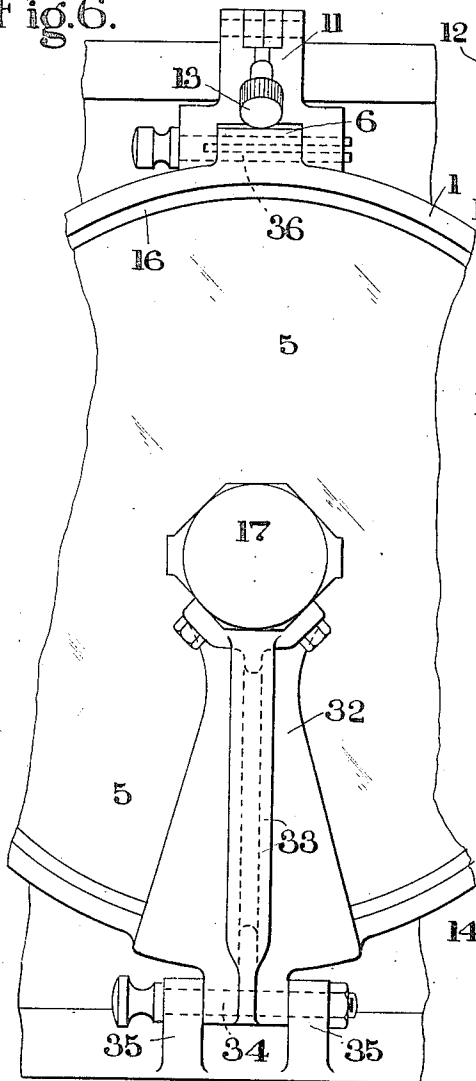
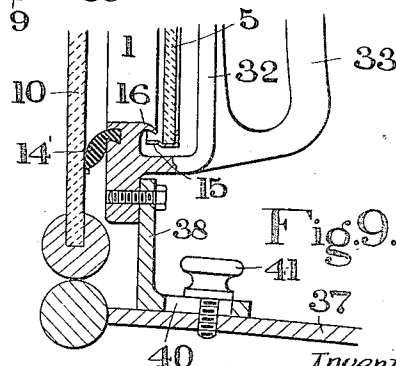
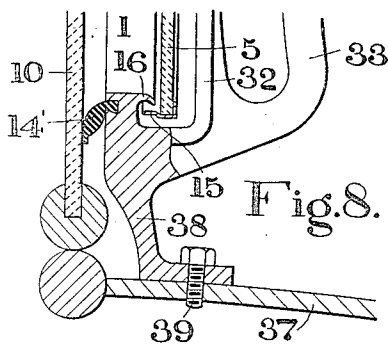
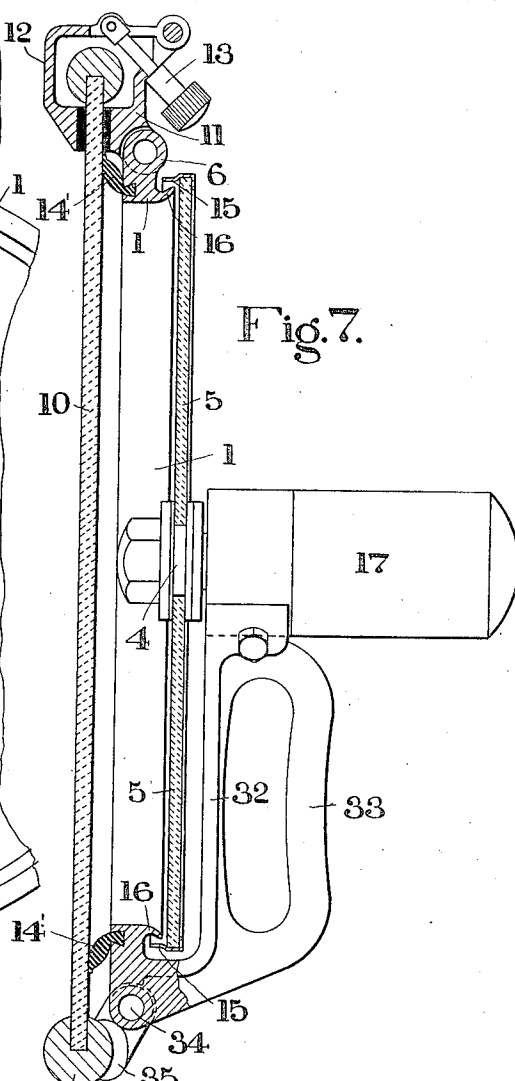


Fig. 7.



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UNITED STATES PATENT OFFICE.

SAMUEL AUGUSTINE DE NORMANVILLE, OF LONDON, ENGLAND.

VISUAL WEATHER SCREEN.

Application filed October 10, 1922, Serial No. 593,599. Renewed June 3, 1924.

To all whom it may concern:

Be it known that I, SAMUEL AUGUSTINE DE NORMANVILLE, a subject of the King of Great Britain, residing at London, England, have invented certain new and useful Improvements in Visual Weather Screens, of which the following is a specification.

This invention relates to visual weather screens, for instance of the rotary type.

The object of the present invention is to facilitate the application of the rotary screen to the usual stationary screen of a motor car, or other fixed screen, so that the rotary screen and its frame can be easily and quickly removed intact and stowed away in a small space when not required. Other objects are to avoid ingress of moisture between the rotary screen and the stationary screen, and to avoid relative vibration between the rotary and fixed screen and also between the parts of a two-part fixed screen or car screen, during running of the car.

A further object is to enable the removable screen to be readily adapted to screens of different heights and profile and so that the height of the disc centre may be determined to suit the driver of the car.

According to the invention an annular or other suitably shaped frame, having its opening behind the transparent disc, is provided with two or more lugs adapted to be engaged with fastenings on the frame of the fixed screen or adjacent parts, so as to hold the frame firmly in the operative position in close contact with fixed screen, while permitting ready removal of the frame when required. The invention includes means for trapping water tending to penetrate between the disc and the frame, and also includes the provision of packing around the opening in the frame to prevent the entry of water between the frame and the fixed screen.

In the accompanying drawings:—

Figures 1 and 2 are respectively a front elevation and a side sectional elevation of one form of the invention applied to a screen having a wooden frame.

Figure 3 is a side sectional elevation of another form applied to a screen having a metal frame.

Figure 4 is a front elevation of the upper clip shown in Figure 3.

Fig. 5 is a detail elevation showing the manner of mounting the lower end of the frame 1 in that form of the invention illustrated more particularly in Fig. 3.

Figures 6 and 7 are respectively a front elevation and side sectional elevation of a further form of the invention applied to a screen having a metal frame.

Figures 8 and 9 are detail side sectional elevations of modifications of the lower mounting of the form shown in Figures 6 and 7.

In one form of the invention an annular metal frame 1 is provided with an arm 2, extending radially inward from the bottom of the frame to the centre to support a bearing 3 for the spindle 4 of a glass disc 5. The frame 1 has two lugs 6 and 7 extending radially outwards, one from the top and one from the bottom. The lower lug 7 is adapted to be inserted in a socket 8 screwed to the lower rail 9 of the fixed screen 10 or to the scuttle or dashboard, while the upper lug 6 is inserted in a clip 11 screwed to the upper rail 14 of the fixed screen 10 and having a hinged cover 12 provided with a clamping screw 13 or bolt.

Other means may be used to hold the lugs in position on the fixed screen, for instance the lugs may be drilled to receive bolts fitted on the rails of the fixed screen and provided with thumbnuts.

The annular frame 1 is provided with a packing ring 14' of rubber or other material on the side adjacent to the fixed screen 10. When the frame 1 is secured in position it presses the packing ring 14' against the fixed screen 10 and so avoids the ingress of moisture between the periphery of the frame and the fixed screen. It also keeps the upper leaf of a two-part car screen tight in its proper position and prevents it rattling. The whole device comprising the frame 1 and the rotary screen 5 then constitutes, as it were, an integral part of the fixed screen 10 so that it shares its period of vibration due to the pitching of the car, and chattering or relative vibration between the two is avoided.

In order to form a rain trap between the periphery of the rotary screen 5 and the frame 1, the disc 5 is fitted with a metal or

other rim 15 adapted to project over a gutter 16 formed on or attached to the adjacent portion of the frame 1.

Instead of the trap described, the disc 5 may have a bevelled rim or one of other suitable form adapted to co-act with the adjacent surface of the frame, similarly to the devices described in specification No. 107,033.

The device so far described may be removed intact and stowed away in a shallow box or in a suitable recess in the car.

The spindle 4 of the disc 5 passes through a hole 19 in the fixed screen 10 and is fitted with a detachable pulley 20 to be driven by a belt 18 off the pulley 21 of a motor 17 mounted on a bracket 22 screwed to the bottom rail 9 of the fixed screen 10 or on the dashboard. The lugs 6 and 7 on the frame 1 may be made of ample length and of such ductility as to permit of them being cut and bent to suit the height and profile of any particular fixed screen to which the device is to be applied, and also to allow of the centre of the rotary screen 5 being set at the height required. The lugs 6 and 7 may be in one piece with, or secured to the frame 1. They may be adjustably secured thereto.

In the form shown in Figures 3 to 5 applicable to a fixed screen 10 having no upper rail or one too small to support a clip, the end of the upper lug 6 carries a clip 11, the hinged part 12 of which passes over the top of the screen and engages with the rear thereof, it being tightened by a bolt 13.

The packing ring 14' between the frame 1 and the fixed screen 10 is secured in place around the disc opening by a metal ring 23. This may be widened to project forwards and turned outwards from the disc centre so as to form the gutter above referred to overlapped by the disc rim, or a separate ring 16' may be fitted to the frame 1 for this purpose as shown in Figure 3.

When it is not desirable to perforate the fixed screen 10, an outside drive may be used for the rotary screen as shown in Figure 3, the boss 24 of the motor for the driving pulley spindle being suitably carried by the lower rail of the screen, dashboard 25 or other part. A dust cover 26 may be provided for the belt 18 and pulleys 20, 21.

The lower lug 7 of the frame 1 is shown in Figures 3 and 5 detachably secured to the boss 24 of the motor by means of a clip comprising a hinged part 27 and a part 28 adjustably secured by bolts 29 to the lug 7. The part 27 is secured by a catch 30 hinged to the part 27 and adapted to be moved into position over a lug 31 on the part 28, the catch preferably having a tooth to engage within a notch in the lug.

In the form shown in Figures 6 and 7 the rotary screen 5 is mounted on the motor spindle and the motor is mounted on a

bracket 32 in front of the rotary screen 5, the bracket being conveniently formed with a handle 33 to facilitate removal or replacement of the rotary screen when required. The bracket 32 is cast in one with the frame 1, the lug 7 of which is mounted on a hinge pin or bolt 34, carried by lugs 35 on the lower rail 9 of the fixed screen 10.

In order that the rotary screen may be removed without removal of the clip 11, the clip may be connected to the upper lug 6 by a removable spring split pin 36.

The bracket 32 preferably cast in one with the frame 1 may be mounted on the scuttle 37 by means of a foot 38 and screws 39, Figure 8. The foot 38 may be screwed to the bracket 32 and have a slot 40 for a thumbscrew 41 to allow for adjustment of the rotary screen relatively to the fixed screen.

I claim:

1. In combination, a stationary transparent screen, a rotary transparent screen, a frame for supporting said rotary screen, said supporting frame being situated between said screens, clamping means for securing said frame to the upper and lower ends of said stationary screen, and a water seal between it and each of said screens, substantially as and for the purpose hereinbefore set forth.

2. In combination, a stationary transparent screen, a rotary transparent screen, a frame for supporting said rotary screen, said supporting frame being situated between said screens, clamping means for detachably securing said frame to the upper and lower ends of said stationary screen, and a water seal between it and each of said screens, substantially as and for the purpose hereinbefore set forth.

3. In combination, a stationary transparent screen, a rotary transparent screen, a frame for supporting said rotary screen, said frame being situated between said screens and having means for clamping it to the upper part of said stationary screen, means for supporting it at the lower part of said stationary screen, and a water seal between said frame and said stationary screen, and means carried by the rotary screen to overlie a portion of said frame to provide a seal between said frame and said rotary screen.

4. A rotary transparent screen for application to a motor car screen and having a frame for supporting said rotary screen, a water seal between said frame and rotary screen, lugs on said frame adapted to be detachably secured to the upper and lower portions of the motor car screen substantially as and for the purpose hereinbefore set forth.

5. In combination a motor car screen, a rotary transparent screen, a circular frame,

means for supporting said rotary screen in a position adjacent to but outside said frame, a gutter on said frame adjacent to said rotary screen, a rim on said rotary screen surrounding said gutter, lugs on said frame, means for securing said lugs to the motor car screen, and packing on the inner side of said frame and in contact with said motor car screen, substantially as and for the purpose hereinbefore set forth. 10

In testimony whereof I have signed my name to this specification.

SAMUEL AUGUSTINE de NORMANVILLE.