Jan. 1, 1929. 1,697,200

C. MORGANA ET AL

PAINT SHIELD

Filed April 4, 1927 2 Sheets-Sheet 1

Fig. 1.

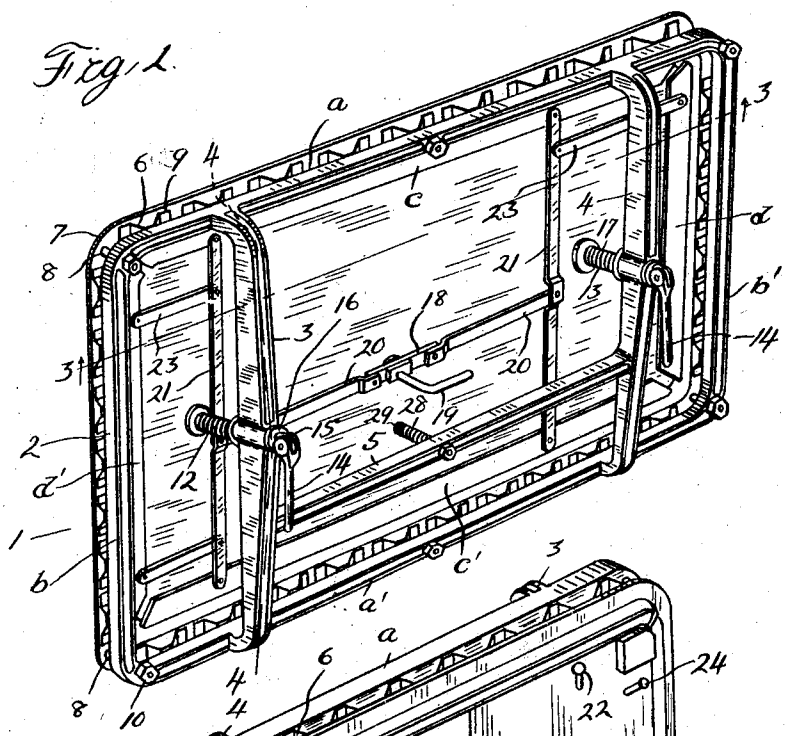


Fig. 2.

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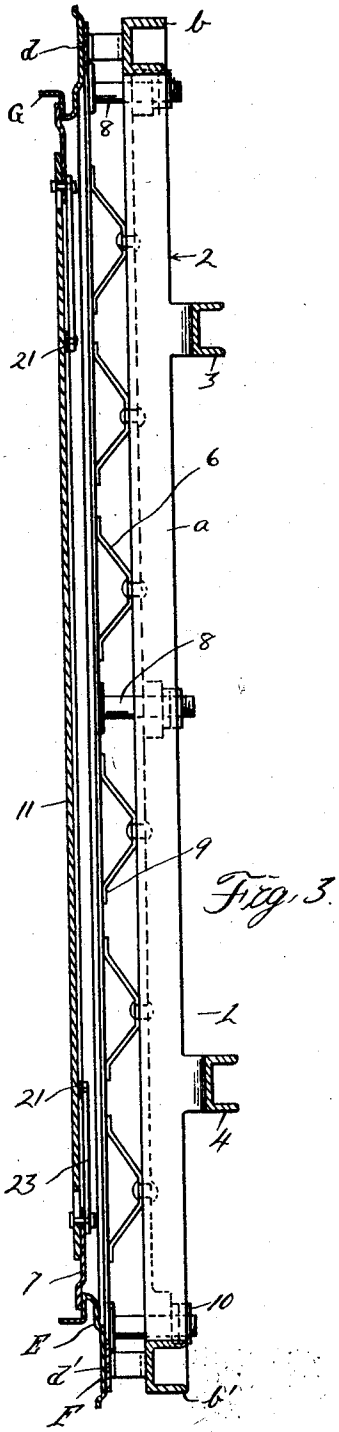


Fig. 3.

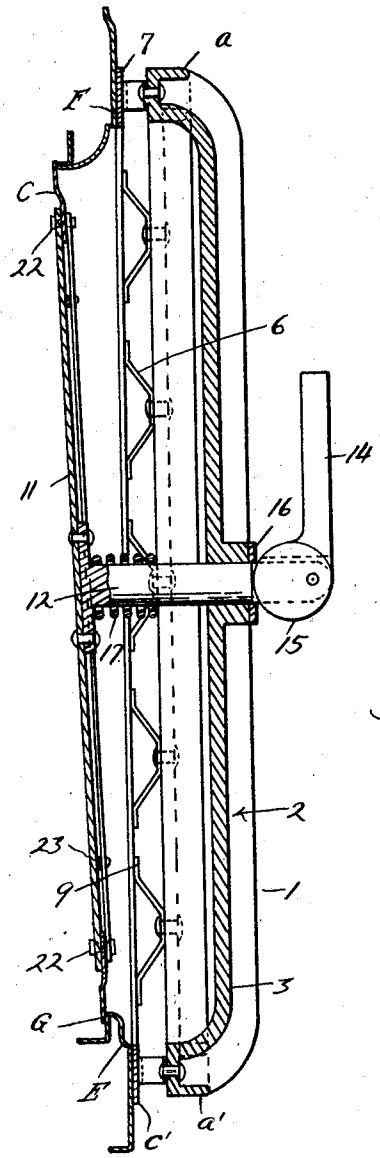


Fig. 4

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UNITED STATES PATENT OFFICE.

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PAINT SHIELD.

Application filed April 4, 1927. Serial No. 180,977.

This invention relates generally to paint shields and more particularly to shields for use in the painting of vehicle bodies.

One of the essential objects of the present invention is the provision of a paint shield so constructed and arranged that when it is applied to the vehicle it enables paint or other finishing liquid to be quickly applied with accuracy to the body.

Another object is the provision of a paint shield which may be quickly and easily attachable in a window opening for applying paint upon a window frame, the arrangement being such as to prevent the flowing of the paint beyond certain predetermined points, thereby insuring a neat and accurately painted frame.

In the accompanying drawings:—

Figure 1 is a perspective view of the front of the paint applying apparatus;

Figure 2 is a perspective view of the back portion thereof;

Figure 3 is a section taken on line 3—3 of Figure 1;

Figure 4 is a section taken on line 4—4 of Figure 1.

In the accompanying drawings wherein like characters of reference indicate like parts, the numeral 1 indicates generally a paint shield comprising a main frame member 2 preferably of retangular formation having the integrally connected inside portions *a*, *a'*, *b*, *b'*. Extending across the frame member from one to the other of the side portions *a* and *a'* are cross bars 3 and 4 integrally connected thereto and also connected to each other by means of the longitudinally extending bar 5.

Preferably the frame member 2 is of channel shaped formation with the channels facing outwardly. As shown the outer faces of the base portions of the channels have secured thereto a plurality of spaced leaf springs 6 which are adapted to yieldably space a rectangular spring metal frame 7 from the main frame member 2. Preferably guide members 8 are provided which are rigidly secured to the spring metal frame 7 and which are adapted to slide through openings provided at spaced intervals in the main frame 2.

As shown, the leaf springs 6 are secured to the main frame intermediate the bowed portions thereof and are provided with flat end portions 9 for engaging the spring metal frame 7. Preferably nuts 10 are screw threaded upon the ends of the guide members 8 and are adapted to seat within the channel portions of the main frame when the apparatus is not in use.

As shown in Figure 2 there is provided a sheet metal panel 11 of a size smaller than that of the main and spring metal frames and adapted to be spaced outwardly therefrom. Rigidly secured to the panel 11 are a pair of shafts 12 and 13 extending through openings in the cross bars 3 and 4 respectively. The end portions of each shaft is provided with a flattened portion to which is pivotally secured the bifurcated end portion of a cam lever 14 having the cam surfaces 15 for engaging the raised portion 16 of each cross bar. Preferably each shaft 12 and 13 has sleeved thereon a coil spring 17 for normally holding the panel 11 spaced from the frame 2.

Slidably secured to the outer edge portions of the panel 11 are back strips *c*, *c'* and *d*, *d'* which are adapted to be moved radially outward after the shield has been placed in position in a window opening. For operating these strips there is provided a single control toggle lever 18 pivotally secured to the panel 11 centrally thereof and having the handle 19 rigidly secured thereto.

To each end of the toggle lever 18 is pivotally secured a link 20 which in turn is pivotally connected to a transversely extending flexible strap 21.

Each strap 21 is provided at its ends with headed studs 22 one of which is pivotally secured to the strip C and the other to the strip C'. Likewise there are provided links 23 pivotally secured adjacent the end portions of the straps 21 and which are also provided with studs 24 engaging the strips *d*, *d'*.

For providing for the adjustment of the strips relative to the panel and for slidably securing the same thereto, the panel is provided with a plurality of slots through which the studs 22 and 24 extend, the headed portions of the studs being adapted to contact with the outer face of the panel. Likewise there are provided studs 26 which are adapted to slide in slots 27 for guiding the straps 20 when the toggle is operated.

While the present apparatus is particu-

larly adapted to be used in connection with the painting of the window frames of automobiles it may of course be used for applying a border of paint to any type of window frame. In operation and assuming that a border is to be painted upon the frame portion E shown in Figure 3, the main frame is so positioned that the spring metal frame 7 contacts at all points with the body panel above the frame E. At the same time the panel 11 will be positioned far enough within the frame E for allowing the back plates to slide laterally outward and engage behind the edges of the inturned marginal frame G when the toggle lever is actuated.

The cam levers 14 are then operated to move the main frame 2 toward the panel 11 so that the springs 6 will urge the spring metal frame 7 firmly against the body panel F, thus insuring a tight joint.

Paint may now be sprayed around the entire surface of the frame E whereupon the shield may then be quickly removed by simply operating the cam levers 14 and turning the toggle lever handle 18. The frame 7 is adapted to contact with the panel portion F of the vehicle body in such a manner that the portion of the panel adjacent the frame E is entirely protected thereby so that the paint is permitted to coat only the frame E of the vehicle, thus insuring a neat and accurately painted border.

During the painting operation a spray gun is preferably used and this is adapted to be actuated by an operator standing outside of the vehicle body. The operator will direct the spray of paint within the open frame member 2 and will move the gun entirely around the window opening so as to paint the desired border upon the vehicle body.

It should be stated that the straps 21 are so constructed as to allow for the flexing thereof when the toggle lever 18 is operated, thereby insuring the inward movement of the back plates c and c' with the plates d and d'.

If found desirable a shaft 28 may be secured to the panel 11 having its free end extending through an opening in the rod 5. As shown, a coil spring 29 is preferably sleeved thereon between the panel 11 and the rod 5 for cooperating with the springs 17 to retain the main frame and panel in spaced relation. If desired corner plates 30 may be provided upon the panel 11, these plates acting as reinforcing members and also constituting means for supporting the shield when not in use.

While the main frame may be composed of any suitable material we preferably construct the same of aluminum. Likewise coil springs or any other type of springs may be used in place of the leaf springs 6 between the main frame and the spring metal frame. It will also be apparent that our paint shield may be so constructed and proportioned as to fit any type of window openings regardless of the shape thereof.

While it is believed that from the foregoing description, the nature and advantage of our invention will be readily understood, we desire to have it understood that we do not limit ourselves to the specific construction shown and described and that such changes may be resorted to when desired as fall within the scope of the claims.

What we claim as our invention is:

1. A paint shield comprising a frame attachable to the marginal portions of a window opening, and means for maintaining the same in clamped position including a panel spaced from said frame and arranged to engage other marginal portions of the window opening.

2. A paint shield comprising a frame attachable to the marginal portions of a window opening, and means for maintaining the same in clamped position including a panel space from said frame and a plurality of back strips adjustably mounted on said panel and arranged to engage other marginal portions of the window opening for retaining the paint shield in operative position.

3. A paint shield comprising a frame attachable to the marginal portions of a window opening, and means for maintaining the same in clamped position including a panel spaced from said frame, and a plurality of back strips slidably mounted upon said panel and arranged to be moved radially outward to engage other marginal portions of the window opening for retaining the paint shield in operative position.

4. In a paint shield, the combination with an open frame member, of an open spring metal frame movably secured thereto and adapted to engage the marginal portions of a window opening, a plurality of springs positioned between said frame member and said spring metal frame, and means for maintaining said spring metal frame in clamped position whereby the paint applied will be prevented from marring the marginal portions of the window opening outside of said frame.

5. A paint shield comprising a member for engaging the marginal portions of one side of a window opening, a second member spaced from said first mentioned member for engaging the marginal portions of the other side of said window opening, and means associated with the said members for clamping the same in said window opening.

6. A paint shield comprising a member for engaging the marginal portions of one side of a window opening, a second member spaced laterally from said first mentioned member for engaging the marginal portions of the other side of said window opening, and means for yieldably urging the first

member towards the second member for clamping the said members in said window opening.

7. A paint shield including an open frame member for engaging the marginal portions of one side of a window opening, a panel member spaced from said frame member and insertable through the window opening and adapted to engage the marginal portions of the other side of the window opening, and means associated with the aforesaid members for clamping the same in said window opening.

8. A paint shield including an open frame member for engaging the marginal portions of one side of a window opening, a panel member spaced from the frame member and adapted to engage the marginal portions of the other side of said window opening, and means for clamping the said members in the window opening including shafts projecting from said panel member, cross bars secured to said open frame member provided with openings through which said shafts are adapted to extend, and cam members pivotally secured to said shafts for engaging the said cross bars.

9. A paint shield including a frame member adapted to engage the exterior marginal portions of a window opening, a panel member insertable through said opening, means associated with said panel member for engaging the interior marginal portions of the window opening, and means for clamping the frame member and panel member in the window opening.

10. A paint shield including a frame member adapted to engage the marginal portions of a one side of window opening, a panel member insertable through said opening, a plurality of back strips adjustably mounted on said panel and adapted to engage the marginal portions of the other side of the window opening, and means associated with the said frame and panel members for clamping the same in the window opening.

11. A paint shield including a frame member adapted to engage the marginal portions of one side of a window opening, a panel member insertable through said opening, a plurality of back strips slidably mounted upon said panel member and adapted to be moved radially outward to engage the marginal portions of the other side of the window opening, and means for clamping the frame and panel members in the window opening.

12. A paint shield including a frame member adapted to engage the exterior marginal portions of a window opening, a panel member insertable through said opening, a pair of back strips slidable on said panel member, straps secured to said back strips, links secured to said straps, and a toggle lever pivotally connected to said links and adapted to move said back strips radially outward for engagement with the interior marginal portions of the window opening for retaining the paint shield in operated position.

13. In a paint shield, the combination with an open frame member, of an open spring metal frame movably secured thereto and adapted to engage the marginal portions of one side of a window opening, a plurality of springs positioned between said frame member and said spring metal frame, a panel member for engaging the marginal portions of the other side of the window opening, and cams for moving said open frame member toward said spring metal frame against the tension of the said springs.

14. In a paint shield, the combination with an open frame member, of an open spring metal frame movably secured thereto and adapted to engage the exterior marginal portions of a window opening, resilient means interposed between said frame member and spring metal frame, means for engaging the interior marginal portions of the window opening, and means for moving said open frame member toward said spring metal frame against the tension of the said yieldable means for clamping the apparatus in the window opening.

15. A paint shield including a frame member adapted to engage the marginal portions of one side of a window opening, a panel insertable through said opening, and means carried by said panel and movable radially outwardly and engaging the marginal portions of the other side of the window opening for retaining the paint shield in operative position.

16. In a paint shield, the combination with an open frame member, of an open spring metal frame movably secured thereto and adapted to engage the marginal portions of a window opening, a plurality of leaf springs having flat end portions engaging said spring metal frame and secured intermediate their ends to said frame member, and means for maintaining said spring metal frame in clamped position in said window opening.

17. A paint shield comprising a frame member adapted to engage the marginal portions of a window opening, said frame member being of substantially open formation so as to permit the paint to be applied interiorly thereof, and means associated with said frame member for clamping the same to the window opening.

In testimony whereof we affix our signatures.

HENRY T. PLATZ.
CHARLES MORGANA.