

June 3, 1924.

1,496,581

F. KUSTERLE

PANEL FRAME

Filed May 14, 1923

Fig. 1.

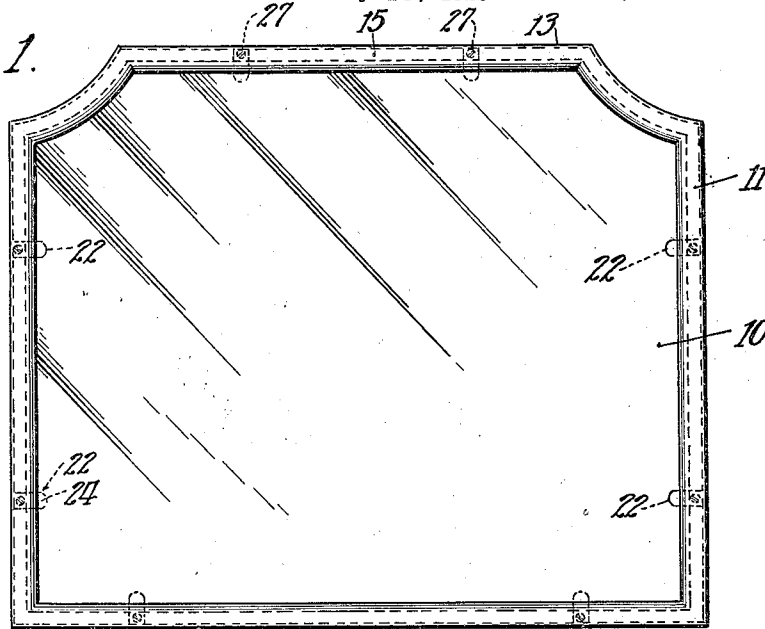


Fig. 2.

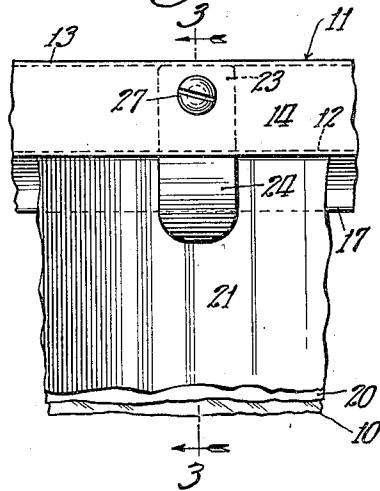
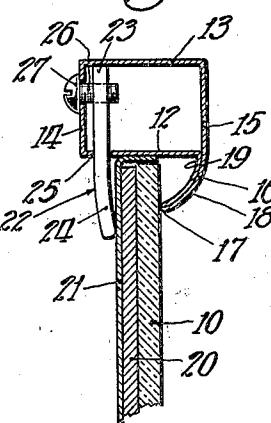


Fig. 3.



Inventor.
Frank Kusterle.

Fisher Towle Clapp & Soans Attys.

UNITED STATES PATENT OFFICE.

FRANK KUSTERLE, OF KENOSHA, WISCONSIN, ASSIGNOR TO SIMMONS COMPANY, OF KENOSHA, WISCONSIN, A CORPORATION OF DELAWARE.

PANEL FRAME.

Application filed May 14, 1923. Serial No. 638,703.

To all whom it may concern:

Be it known that I, FRANK KUSTERLE, a citizen of the United States, residing at Kenosha, in the county of Kenosha and State of Wisconsin, have invented certain new and useful Improvements in Panel Frames, of which the following is a specification.

My application relates to improvements in panel frames and has particular value as applied to a mirror frame constructed of sheet or other metal.

The principal objects of the invention are to provide a light-weight border frame for panels which can be rapidly and economically constructed of sheet metal; to provide a construction which includes an ornamental trim around the panel sheet as well as provides for a rigid and at the same time light weight construction; to provide a construction such that the panel-sheet may be easily and conveniently secured in its frame and removed therefrom with equal facility; to provide a construction such that the ordinary inaccuracies due to lack of perfection in manufacturing methods or in the material used will not affect the convenience in assembling the panel or impair the efficiency of the assembling; to provide a construction of simple design and of great economy in manufacture and in general to provide an improved panel or mirror frame of the character referred to.

In the drawings which illustrate my invention as applied to a mirror such as may be used on a bedroom dresser,

Fig. 1 is a front elevation of the complete mirror,

Fig. 2 is a fragmentary rear elevation of the same, and

Fig. 3 is a section taken on the line 3—3 of Fig. 2.

Referring to the drawings, it will be observed that the face sheet of the panel, in the present instance a sheet of plate glass 10 having its rear surface silvered to form a mirror, is surrounded by a sheet metal border frame 11 which completely encloses the mirror sheet 10. Said border frame 11 is shown as constructed of rectangular tubing having an inner wall 12, an outer wall 13, back wall 14 and front wall 15. At the front edge of the inner wall 12 and serving in effect as a continuation of the front wall 15 of the frame, I provide a flange 16 which

commences as a tangent to the wall 15 and curves inwardly so that its inner edge 17 overlies and engages the face of the mirror 10, serving as a support therefor.

Although the flange 16 may be formed separately and subsequently secured to the corner of the rectangular border frame tube by any of the approved existing methods such as brazing, welding or the like, I prefer to employ an integral construction as shown in the drawing where the flange 16 is formed of double thickness, the outer ply 18 being a continuation of the wall 15 while the inner ply 19 is formed as a continuation of the inner wall 12. The inner edge 17 of said flange constitutes the fold or connection between the two plies 18 and 19.

Recent developments in the art of steel tube manufacturing by my associates have made it possible to produce commercially a flanged tube such as is illustrated in the drawings and which I have just described.

In order to protect the silvered rear surface of the mirror sheet 10, I prefer to cover the rear surface thereof with a sheet 20 of card board or other somewhat flexible cushioning material in addition to which I prefer to cover or enclose the cushioning sheet 20 with a rear sheet 21 of thin sheet metal, said last named sheet 21 being preferably flanged around its edge as shown. The three sheets 10, 20 and 21 are secured and held within the frame by means which engage the back surface of the rear sheet 21 and force all three sheets toward the flange 16, thereby retaining them securely in position.

The retaining means preferably comprises a series of clips 22 which extend through apertures made in the inner wall 12 of the border tube behind the back sheet 21. The outer end 23 of said slip 22 is made of suitable size to permit of its being inserted into said aperture, while the inner end 24 of the clip is curved forwardly slightly as shown and overlies the margin of the back sheet 21. The edge 25 of the aperture in wall 12, through which the clip 22 extends, constitutes in effect a fulcrum or pivotal bearing for said clip enabling the latter to be rocked on said edge 25 in a plane substantially at right angles to the plane of the panel sheet 10. Preferably said rocking of the clip 22 to cause its end 24 to move for-

wardly and hold the sheets in position is effected by a cap screw 26 extending through an aperture in the back wall 14 of the aperture tube and fitting a tapped hole in the end 23 of the clip. It will be manifest that, the head 27 of the cap screw 26 being accessible from behind the frame, it is a simple matter to rotate said screw 26, so as to draw the end 23 of the clip rearwardly toward the back wall 14 of the tube thereby causing the inner end 24 of said clip to move toward the edge 17 of the flange 16.

The described details of construction and operation being illustrative of one phase only of my invention, it will be understood that the scope of same should be determined by reference to the appended claims, said claims being construed as broadly as possible consistent with the state of the art.

I claim as my invention:

1. In combination, a face sheet, a hollow metal border element therefor provided with an inwardly extending flange overlying the margin of the face sheet and with an inner wall surrounding the face sheet and a clip extending through said wall back of the face sheet and on both sides of said wall and adapted to be rocked in a plane transverse to the plane of the sheet to cause one end of said clip to be pressed toward said sheet to force the latter toward said flange.

2. In combination, a panel sheet, a tubular metal border element therefor provided with an inner wall and with an inner projecting flange overlying the margin of the panel sheet the said panel sheet fitting within said wall, a clip extending through said wall back of the sheet a portion of said clip being located within said tube and a portion being located at the back of the panel sheet, and means tending to rock said clip to cause the last named portion of said clip to be pressed toward said sheet to hold the latter in engagement with said flange.

3. In combination, a face sheet, a hollow metal border element therefor provided with an inwardly extending flange overlying the margin of the face sheet and with an inner wall surrounding the face sheet and a clip extending through said wall back of the face sheet and on both sides of said wall and adapted to be rocked in a plane transverse to the plane of the sheet to cause one end of said clip to be pressed toward said sheet to force the latter toward said flange, said wall being apertured to permit insertion therethrough of a portion of said clip, the edge of said aperture constituting a pivotal bearing for said clip.

4. In combination, a panel sheet, a tubular metal border element therefor provided with an inner wall and with an inner projecting flange overlying the margin of the panel sheet, the said panel sheet fitting with-

in said wall, a clip extending through said wall back of the sheet, a portion of said clip being located within said tube and a portion being located at the back of the panel sheet, and means tending to rock said clip to cause the last named portion of said clip to be pressed toward said sheet to hold the latter in engagement with said flange, the inner wall of said tube being apertured to permit insertion therethrough of the portion of the clip extending into said tube, the edge of said aperture constituting a fulcrum or pivot for said clip.

5. In combination, a panel sheet, a tubular metal border element therefor provided with an inner wall and with an inner projecting flange overlying the margin of the panel sheet, the said panel sheet fitting within said wall, a clip extending through said wall back of the sheet, a portion of said clip being located within said tube and a portion being located at the back of the panel sheet, and means tending to rock said clip to cause the last named portion of said clip to be pressed toward said sheet to hold the latter in engagement with said flange, the inner wall of said tube being apertured to permit insertion therethrough of the portion of the clip extending into said tube, the edge of said aperture constituting a fulcrum or pivot for said clip, said rocking means cooperating with the portion of the clip located within the tube and being adjustable from the outside of said tube.

6. In combination, a face sheet, a hollow metal border element therefor provided with an inwardly extending flange overlying the margin of the face sheet and with an inner wall surrounding the face sheet and a clip extending through said wall back of the face sheet and on both sides of said wall and adapted to be rocked in a plane transverse to the plane of the sheet to cause one end of said clip to be pressed toward said sheet to force the latter toward said flange and a screw accessible from the back of said border element for adjustably rocking said clip.

7. In combination, a panel sheet, a tubular metal border element enclosing said sheet including outer and inner substantially parallel walls, a flange at the front edge of said inner wall overlying the margin of said panel sheet and constituting an ornamental trim around the exposed area of the face of said panel sheet, said inner wall being apertured behind said panel sheet, a metal clip having its inner end overlying the back of said panel sheet and having its outer end extending through said aperture in said wall and into said tube and a screw insertible through a wall of said tube and cooperating with the outer end of said clip for drawing the latter outwardly, the edge of said aperture serving as a pivot

thereby causing the inner end of said pivot to move forwardly toward said panel sheet to press the latter toward said flange.

8. In combination, a face sheet, a hollow metal border element therefor, provided with an inwardly extending flange overlying the margin of the face sheet and with an inner wall surrounding the face sheet, said wall being apertured behind the face sheet and a clip overlying the back of the face sheet and having a portion extending into said aperture for preventing backward movement of the face sheet away from said flange.

9. In combination, a face sheet, a hollow metal border element therefor, provided with an inwardly extending flange overlying the margin of the face sheet and with an inner wall surrounding the face sheet, said wall being apertured behind the face

sheet and a clip overlying the back of the face sheet and having a portion extending into said aperture for preventing backward movement of the face sheet away from said flange, said clip being movable to permit insertion or removal of said face sheet in its frame.

10. In combination, a face sheet, a hollow metal border element therefor, provided with an inwardly extending flange overlying the margin of the face sheet and with an inner wall surrounding the face sheet, said wall being apertured behind the face sheet and a clip overlying the back of the face sheet and having a portion extending into said aperture for preventing backward movement of the face sheet away from said flange and screw means for forcing said clip toward said flange.

FRANK KUSTERLE.