May 2, 1950 R. C. BARLOW 2,505,848

HINGE CONSTRUCTION

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Fig. 1.

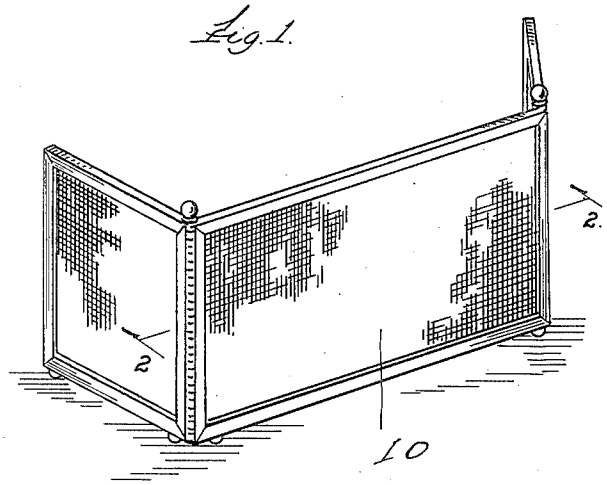


Fig. 2.

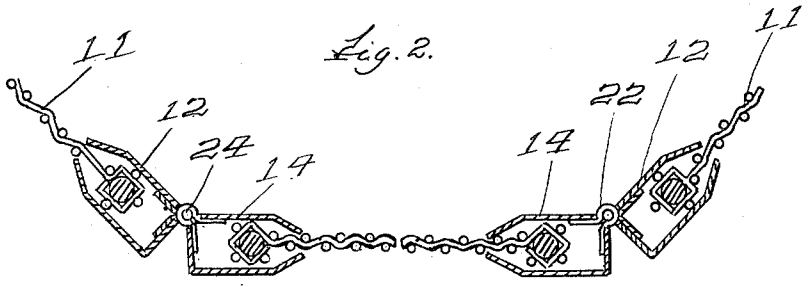
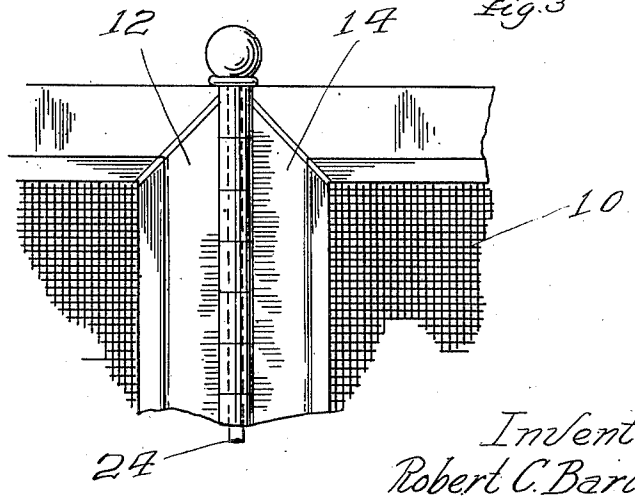


Fig. 3



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Fig. 4.

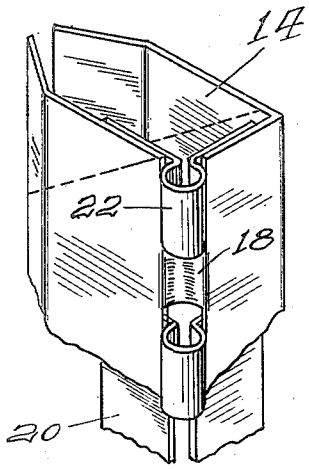


Fig. 5.

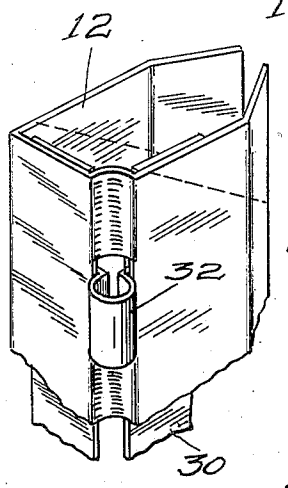


Fig. 8.

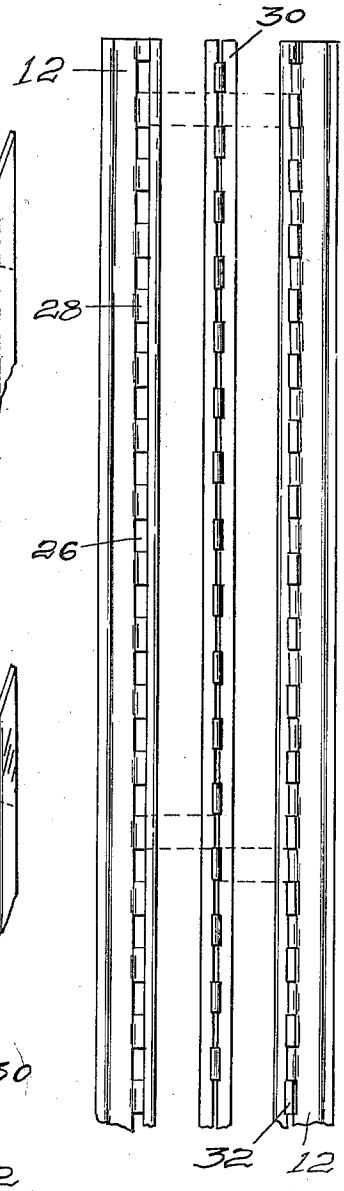


Fig. 6

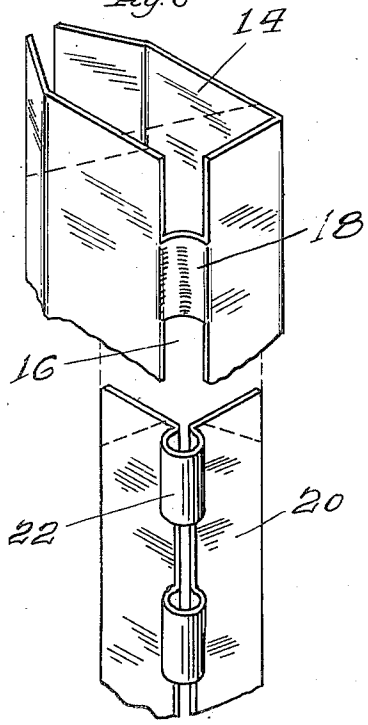
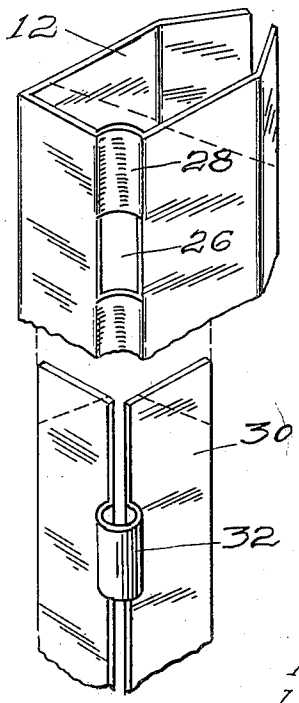


Fig. 7.



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Patented May 2, 1950

2,505,848

UNITED STATES PATENT OFFICE

2,505,848

HINGE CONSTRUCTION

Robert C. Barlow, Louisville, Ky.

Application August 2, 1946, Serial No. 688,082

1 Claim. (Cl. 160—229)

1

This invention relates to an improved hinge construction, and the present application for patent contemplates improvements over my prior patent entitled "Sheet metal hinge construction," which patent was granted on June 3, 1941, No. 2,244,042.

One of the important objects of this invention is to provide a hinge construction which is particularly adaptable for fire-place screens, but which can also be used to considerable advantage in many other embodiments of hinged apparatus.

One other important object of the invention is the provision, in a hinge, of a reinforcing element applied to one or both parts of the hinge and which when so used, will afford a more durable construction, and one which is much less likely to get out of order, even under the most strenuous conditions of use.

A still further important object of the invention is to provide a hinge which shall present a sealed joint at all times and in all positions, so that when the same is used in connection with a fire-place screen, a much safer piece of apparatus is provided.

Another and still further important object of the invention is the provision, in a hinge construction, of reinforcing elements whereby adjacent frame elements can be readily connected into an operating structure with a minimum of difficulty and with resultant small friction between the assembled parts when the structure is operated.

A further object is to provide a hinge structure wherein the hinge elements themselves comprise separate portions, distinct from the frame work of which they ordinarily form a component part, whereby a more easily constructed device results, and one which provides a longer lasting and more attractive hinge.

Other and further important object of the invention will be apparent from the disclosures in the accompanying drawings and following specifications.

The invention, in a preferred form, is illustrated in the drawings and hereinafter more fully described.

In the drawings:

Figure 1 is a perspective view of a fireplace screen into which the improved hinge of this invention has been incorporated.

Figure 2 is a detail, in an enlarged sectional view, parts being broken away, taken on line 2—2 of Figure 1, looking in the direction indicated by the arrows.

Figure 3 is an enlarged detail of the hinge construction, the hinge pin being illustrated partially in dotted lines.

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Figure 4 is an enlarged detail of the assembly of one portion of the hinge showing the two component parts thereof.

Figure 5 is an enlarged detail view of the juxtaposed portion of the hinge element illustrated in Figure 4.

Figure 6 shows the elements of Figure 4, in separated relationship.

Figure 7 illustrates the elements of Figure 5, in separated relationship.

Figure 8 is a detail view, illustrating the grouping of the hinge parts with two actual hinge portions illustrated at the left and the assembly thereof shown at the right of the figure.

As shown in the drawings:

The reference numeral 10 indicates generally a fireplace screen which is equipped with the improved hinge construction of this invention. The screen is shown as having three panels, but obviously the number of panels may be varied, and the application of the hinge itself may be made to numerous other items, with little or no modification. The screen portions 11 are built into and retained by channel shaped elements 12 and 14, as best illustrated in Figure 2, and while these are very suitable for retaining screening for the like in desired position, these channel shaped elements may obviously be of other contour when employed in some other environment.

As best shown in Figures 4 and 6 the channel element 14 is provided with a series of notched openings cut along the entire length of one corner as illustrated at 16, and these openings are separated by concave integral spacers 18.

The channel 14 is provided with an inner reinforcing element, which actually forms the hinge portion of the construction and this comprises a unitary sheet metal element or the like 20 shaped as best shown at the bottom of Figure 6, having plate-like integral extensions 20 joined by staggered loops 22, through which loops a hinge pin 24 is adapted to pass in an obvious manner. This element 20—22 is placed inside the channel 14—18 and the loops 22 pushed out through the openings 16 to form the assembly illustrated in Figure 4.

The juxtaposed portion of the improved hinge construction of this invention is similarly disposed, comprising essentially a channel 12, having staggered openings 26, cut along one corner. These openings are separated by concave, integral staggered joining portions 28.

The other component of this portion of the

hinge comprises plate-like elements **30**, joined by integral staggered loops **32**, which loops are fitted into the openings **26** when the device is assembled as shown in Figure 5.

As best illustrated in Figure 8, the hinge can be of any desired length, and the assembly is obvious, in that the inner reinforcing element is simply slid into the outer channel a sufficient distance to insure a proper positioning of the loops **32** with respect to the openings **26**.

After one section of the hinge has been thus assembled, the other section of the hinge is similarly put together, and the hinge pin **24**, passed through the aligned loops **22** and **32** forming a completed hinge.

It will be obvious that herein is provided a reinforced hinge construction for fireplace screens which has many advantages, in that a more durable device is produced and one which has better wearing qualities, besides being absolutely tight so far as the undesirable passage of sparks therethrough is concerned. Furthermore, the loop portions through which the hinge pin passes, are separate from the channel structures which support the screening or other portions of the device to which the hinge is applied and both elements can therefore be made of a much more sturdy construction, with resultant final stronger and more efficient apparatus.

I am aware that many changes may be made and numerous details of construction varied throughout a wide range without departing from the principles of this invention and I therefore do not purpose limiting the patent granted hereon, otherwise than as necessitated by the prior art.

I claim as my invention:

A hinge including two co-acting portions, each of channel shape and a reinforcement in each of the channels, said reinforcement including loops for the reception of a hinge pin, the loops protruding through spaced-apart openings in the channel, said spaced openings being formed along one corner of the channel, integral concave dividers between the openings and outlining the same, said dividers being so concavely shaped for the juxtaposed reception of adjacent cooperating convex loops from the other channel, each of the reinforcements comprising integral strips at angles to each other to conform to the angle of the corresponding channel structure and to fit closely against the inner faces of the channel when the hinge is assembled.

ROBERT C. BARLOW.

REFERENCES CITED

The following references are of record in the file of this patent:

UNITED STATES PATENTS

Number	Name	Date
2,239,562	Kennedy	Apr. 22, 1941
2,244,042	Barlow	June 3, 1941