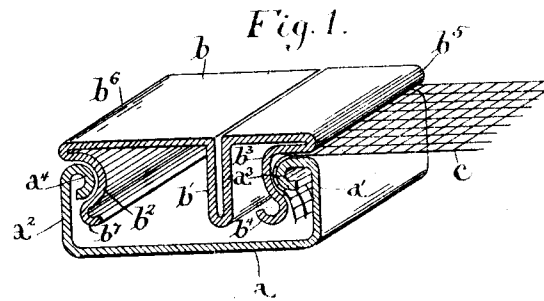
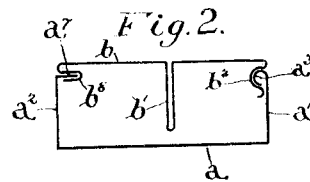
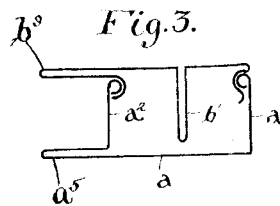


FRAME FOR METAL SCREENS
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1,201,338.

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UNITED STATES PATENT OFFICE.

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FRAME FOR METAL SCREENS.

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Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, JOHN E. ORR, of Portland, in the county of Cumberland and State of Maine, have invented certain new and useful Improvements in Frames for Metal Screens, of which the following is a specification.

My invention relates to the construction of metal screen frames such as are commonly used for fly screens and the like.

The objects of the invention are to form a hollow two part metal frame which will combine cheapness of manufacture, efficiency in use, attractiveness of appearance, ease of assembling and separating and other qualities which are desirable in metal screens of this class.

The invention in its preferred form consists essentially of a channel member and a closing member for clamping the wire netting to the channel member, the closing member formed of a flat strip having a longitudinal loop or fold to give it lateral resiliency, the edges of the strip and the edges of the channel member being formed so that they will interlock when pressed and being held in interlocking position by the lateral expansibility of the closing member. This closing member preferably has its lateral portions turned under to form the finishing edges of the frame and which also serve for forcing the two members apart when the wire is to be removed.

My invention may best be understood by reference to the accompanying drawing in which—

Figure 1 is a perspective view of a section of my screen bar when the two parts are assembled, with the wire in place. Fig. 2 is a cross section of a modification and Fig. 3 is a section of a further modification where the edge of the screen requires to be grooved to embrace a tongue on the window casing.

In the drawing similar letters of reference indicate similar parts.

Referring to Fig. 1 the frame bar is shown as including a U-shaped channel member rolled or otherwise formed up of strips of steel and having the web portion a and lateral flanges a' and a'' . A closing member is provided for clamping the wire netting c to one side of the channel member. As here shown, the closing member is composed of a flat strip b having therein a downwardly extending longitudinal fold or

loop b' . This loop b' preferably has parallel sides separated by a relatively narrow space and it extends well down toward the bottom of the channel member so as to give as much lateral resiliency as possible to the closing member b as it is this resiliency which is relied upon to hold the parts in locking relation. The adjacent edges of the closing member and the channel member are so formed that they will interlock when pressed together without expanding the channel member whether they are pressed together directly or the adjacent edges on one side are first pivotally interlocked and then the opposite edges are snapped together and held by the lateral resiliency of the closing member. To fit the channel member, the lateral portions of the closing member are first turned under to form finishing rims or edges b^3 and b^4 and they are then turned downwardly and formed with corrugations b^2 and b^3 which embrace the beads a^3 and a^4 , formed on the flanges a' and a'' . The lower portion of the corrugation b^3 is formed into a bead b^4 which allows the edge to slide over the bead a^3 when the parts are being pressed together and the lower portion of the corrugation b^2 is formed into a bead b^5 for a like purpose. As here shown the wire netting is clamped between the bead a^3 and the corrugation b^3 .

The parts are assembled by drawing the edge of the wire netting over the bead a^3 and then pressing the channel member and the closing member together, drawing the netting into place and holding it firmly. The channel member and the closing member are firmly interlocked and are held together by the lateral expansibility of the closing member.

Instead of pressing the two parts of the bar directly together, the corrugation b^2 may be first placed over the bead a^4 to form a pivotal connection and then the opposite edge may be snapped into place as shown in Fig. 1.

In Fig. 2 I have shown an alternative construction which contemplates assembling the parts in the manner last described namely, with a pivotal motion from one edge. Referring to Fig. 2 the flange a^3 of the channel member is turned in at right angles to form a flange a^4 and on the closing member is formed a corresponding recess b^6 which fits over the flange a^4 . When the closing member is applied, the recess b^6 is

fitted over the flange a' , thus pivoting the parts together and the opposite edges are then snapped together as in the other form described.

5 In Fig. 3 I show a form of bar which is uped on the side of the frame when grooves are needed to embrace strips on the window casing, the channel member and closing member being joined together on the same principle as already described. Referring
10 to Fig. 3 the edge or rim b^2 is extending outwardly to form one side of a groove and a loop or fold a' is formed on the corresponding portion of the channel member forming
15 an extension of the web. These two folds form a groove or channel in the bar when the same is used on the side of a frame sliding on guides. A frame bar formed in this manner may be rectangular in section it is
20 substantially smooth on the outside, it may be formed into a frame in any well known manner and the two parts when pressed together are firmly locked so that they will not be separated by any ordinary treatment.

25 When it is desired to separate the parts for putting in new wire netting or for any other purpose either the rim b^2 or b' is forced up separating the two members and releasing the wire netting.

30 The parts are so shaped that they may be formed in strips by the rolling process, being cut off in lengths as desired.

It will be seen that this screen may be taken apart and rewired without in any
35 way injuring any of the parts.

No special tools are needed to put the screen together, the channel member and the closing member simply being pressed together with the application of only a moderate amount of pressure applied by hand.
40 There is thus no danger of defacing the surface as is the case where locking strips and like members have to be hammered into place. It will be seen further that the lateral resiliency which is developed in the
45 closing member by this construction enables it to be pressed into place and locked without spreading the side flanges of the channel member which is usually of the same
50 gage material. Any spreading of the channel member results in a serious defect in the screen caused by its liability to spread unequally. It is also liable to vary the dimensions of the made up frame.

55 On some large screens it may be possible to do away with the loop b' by making the lateral corrugations of the closing member long enough to take the contraction caused by springing the two members together. It

is evident that the adjacent edges of the closing member and the channel member may be formed in many different ways to interlock when pressed together.

I claim:

1. A frame bar for metal screen frames including a channel member having its edges
65 turned to form beads and a closing member consisting of a strip having its edges turned inwardly and downwardly and formed to embrace said beads and clamp the wire netting around one of said beads, the said strip
70 having formed therein a downwardly extending longitudinal fold or loop to give it lateral resiliency.

2. A frame bar for metal screen frames including a channel member having its edges
75 turned inwardly to form beads and a closing member consisting of a strip having its edges turned inwardly and downwardly and formed to embrace said beads and to clamp
80 the wire netting, the said strip having formed therein a downwardly extending longitudinal fold or loop to give lateral resiliency to the closing member.

3. A frame bar for metal screen frames including a channel member having side
85 flanges and a closing member consisting of a strip having formed therein a downwardly extending longitudinal fold or loop to give lateral resiliency, the edges of the strip and
90 the edges of the flanges being formed to interlock and clamp the wire netting when pressed together.

4. A frame bar for metal screen frames including a channel member having side
95 flanges and a closing member consisting of a strip having a downwardly extending fold or loop to give lateral resiliency and having its lateral portions turned under to form exposed
100 rims and thence being turned downwardly to interlock with the edges of said channel member and clamp the wire netting in place.

5. A frame bar for metal screens including a channel member having a web portion
105 and flange portions and a closing member consisting of a strip turned under at its sides to form finishing rims, the edges of said strip being formed to interlock with the said
110 flanges to clamp the wire netting when the parts are pressed together, the web portion of the channel member and one of the finishing rims being extended laterally to form a longitudinal groove in the frame bar.

In testimony whereof I have affixed my
signature.

JOHN E. ORR.