June 9, 1925. 1,540,788

E. McCLURE

BORDER FRAME FOR OPEN METAL WORK PANELS AND THE LIKE

Filed Oct. 24, 1924

Fig. 1.

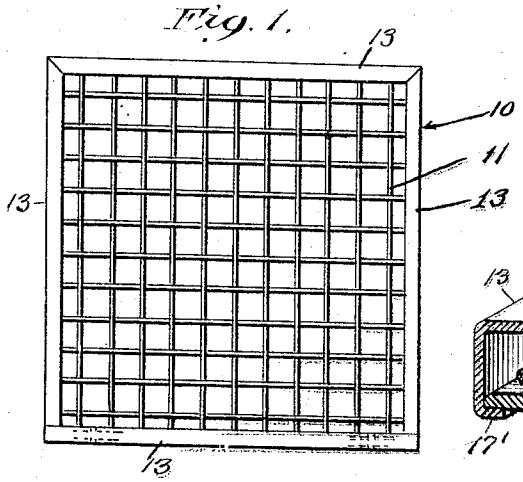


Fig. 2.

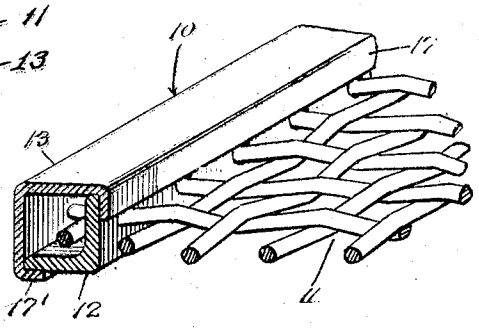


Fig. 3.

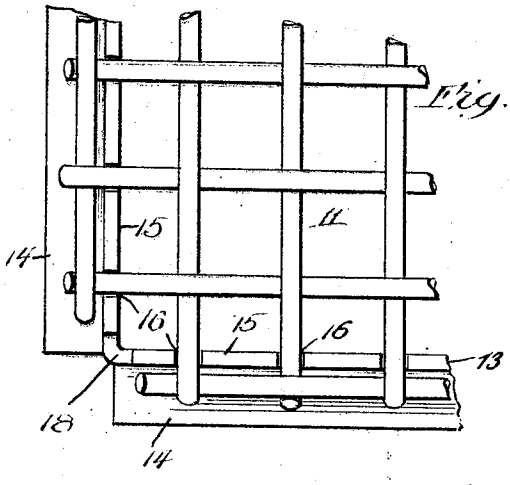


Fig. 4.

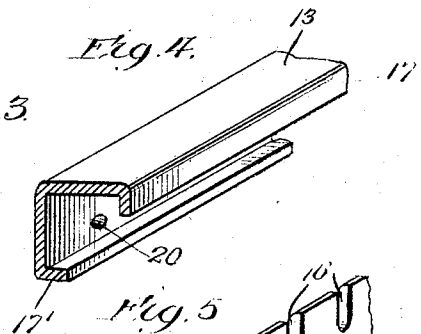


Fig. 5.

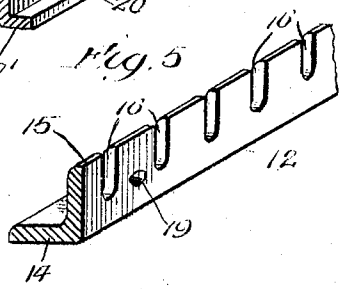
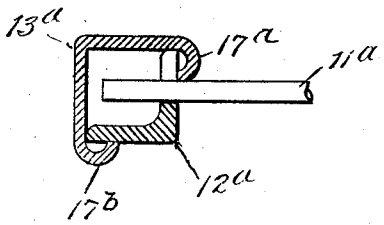


Fig. 6.



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UNITED STATES PATENT OFFICE.

EDWARD McCLURE, OF CHICAGO, ILLINOIS.

BORDER FRAME FOR OPEN-METAL-WORK PANELS AND THE LIKE.

Application filed October 24, 1924. Serial No. 745,569.

To all whom it may concern:

Be it known that I, EDWARD McCLURE, a citizen of the United States, and a resident of Chicago, Cook County, and State of Illinois, have invented certain new and useful Improvements in Border Frames for Open-Metal-Work Panels and the like, of which the following is declared to be a full, clear, and exact description.

This invention relates to border frames for open metal-work panels and the like, and its principal object is to provide a simple and highly efficient frame for the marginal edge portions of open metal-work, such for instance, as wire mesh-work, rod-work, grills, gratings, guards and the like. Another one of the objects is to provide a frame which may be easily and quickly applied to the metal open-work and positively secured thereto. Another object is to provide a border frame which may be secured to the metal-work without the necessity of bending or crimping the ends of the wires, rods or other elements that comprise the open metal-work after the frame members have been assembled with the open metal-work. With these and other objects and advantages in view, this invention consists in the several novel features hereinafter fully set forth and particularly defined in the claims.

The invention is clearly illustrated in the drawing accompanying this specification in which: Fig. 1 is a face view of a wire mesh panel containing a border frame constructed in accordance with the present invention; Fig. 2 is a perspective view of a fragment of the panel; Fig. 3 is a face view of a fragment of the panel with certain locking bars removed; Fig. 4 is a perspective view of a fragment of one of the locking bars which forms one part of the frame; Fig. 5 is a perspective of a fragment of a notched bar which forms another part of the frame and Fig. 6 is a detail, cross section showing a slightly modified form of the invention.

Referring to said drawing and first to Figs. 1 to 5 inclusive which show a simple embodiment of the preferred form of the invention, the reference character 10 designates the border frame as a whole and 11 an open metal-work, here shown in the form of a wire mesh fabric, which is secured to the border frame as will be hereinafter set forth. The size, shape and proportion of the panel are immaterial and in place of the square mesh fabric, diamond mesh fabric may be used or plain rod-worn may be substituted therefor as will be readily understood.

The border frame 10 comprises a frame member 12 which receives the open metal-work, and locking bars 13 that cooperate with the frame member 12 to secure the open metal-work in place thereon. The frame member may comprise angle iron bars secured together at the corner if desired. In accordance with one form of the invention the frame member 12 may comprise an angle bar bent up to form the frame, which frame may be of rectangular or other form and if desired the flange or web 14 of the frame member 12 may be cut at the corners (see Fig. 3) to facilitate the bending of the bar at those places. The other flange or web 15 of the frame member 12 is formed with notches 16 which are adapted to receive the end portions of the wires, rods or other elements that comprise the open-metal-work.

The locking bars 13 are somewhat in the form of channel bars and are formed with flanges 17, 17^1, along their two edges, which flanges are adapted to embrace the notched edge portion and the other edge portion of the two flanges or webs of the bar that comprises the four sides of the frame member 12. The parts are so proportioned that the locking bars 13 may be slipped endwise along the four sides of the frame member 12 and at the corners of said frame member, notches 18 are formed in the edges of the notched webs 15 to permit the flanges 17 of the locking bars to pass, whereby the locking bars may be slid upon the frame members.

The locking bars may be secured upon the frame member 12 in various ways and in Fig. 1, I have shown the top locking bar and the upper ends of the upright locking bars as formed with mitred ends, the lower ends of the side locking bars being formed with square ends and the lower locking bar extending between the extreme outer sides of the panel with its end portions extending across the ends of the upright locking bars. By securing the lower locking bar to the frame all of the locking bars are thereby positively secured in place.

Bolt holes or screw holes 19, 20 may be

formed in the frame member 12 and locking bars 13, through which bolts or screws are inserted for securing the panel in place where used and when the panel is thus secured in place there is no possibilty for the locking bars to become displaced. During storage and shipment of the panel a piece of wire may be inserted through any two opposite holes of the lowermost frame member and bar and when the ends of the wire are fastened together it makes it impossible for the parts of the frame to become disconnected.

In assembling a panel constructed in accordance with the above description, the fabricated material is placed over the frame member 12 with the end portions of the fabricated material in the notches thereof. The locking bars are then slipped over the four sides of the frame member and if the form shown in Fig. 1 is used, the locking bar having the two mitred ends is first slipped upon the top bar of the frame member after which the two side locking bars are slipped upon the side bars of the frame member and finally the lowermost locking bar is slipped upon the bottom bar of the frame member.

It will be observed that the flanges 17 of the locking bars embrace the notched flanges of the frame member bars and cover those portions of the notches of the frame member bars which extend beyond the wire or rods of the mesh-work. The flanges 17 of the locking bars may be wide enough to bear against the mesh-work if desired but this is not necessary as the entire panel of mesh-work is positively secured to the notched bars by the locking bars.

In the form illustrated in Fig. 6 the parts are constructed substantially the same as in the preferred form except that the flanges 17^a, 17^b of the locking bar 13^a are rounded to give the appearance of a bead like edge. This is merely for the purpose of ornamentation, said flanges serving as in the preferred form to secure the wire mesh-work 11^a in the notches of the frame member 12^a.

From the above it is apparent that the parts may be readily assembled by unskilled persons, and that when once secured together, they form a substantial and rigid open metal-work panel. Furthermore, that there is a considerable saving of time and labor in the construction of the panel made in accordance with the present disclosure, which is of considerable importance in this art.

More or less variation of the exact details of construction is possible without departing from the spirit of this invention; I desire, therefore, not to limit myself to the exact form of the construction shown and described, but intend, in the following claims, to point out all of the invention disclosed herein.

I claim as new, and desire to secure by Letters Patent:

1. A border frame for metal-work and the like, comprising a flanged frame member, one of the flanges being adapted to receive the metal-work supported by the border frame, and channel like locking bars having flanged portions adapted to embrace two opposite edges of the flanges of the frame member.

2. A border frame for open metal-work and the like, comprising a frame member formed of a notched part, the notches of which are adapted to receive the end portions of the open metal-work, and locking bars interlocked with said frame member and having marginal flanges adapted to overlap the notched portions of the frame member.

3. A border frame for open metal-work and the like, comprising a frame member formed of a bent up notched bar, the notches of which are adapted to receive the end portions of the open metal-work, and channel like locking bars having marginal flange portions adapted to overlap opposite edge portions of the bent up notched bar.

4. A border frame for open metal-work and the like, comprising a frame member formed of notched angle iron bar portions, the notches of which are adapted to receive the end portions of the open metal-work, and channel like locking bars interlocked with the angle iron bar frame portions and having flanges that overlap the notches thereof.

5. A border frame for wire mesh-work comprising a frame member formed of notched angle iron bar portions, the notches of which are adapted to receive the end portions of said wire mesh-work, and channel shaped locking bars interlocked with the angle iron bar frame portions and having marginal flanges overlapping said angle iron frame portions and the notches thereof.

6. In a border frame for wire mesh-work, a notched bar in which the end portions of the wire mesh-work is held, and a channel like locking bar interlocked with said notched bar and having one flange that overlaps the notches of the bar.

7. A border frame for open metal-work comprising a notched angle iron bar, the notches thereof being adapted to receive the end portions of the open metal-work, top and side locking bars interlocked with the top and sides of the frame, said bars having mitred ends, and a lower locking bar interlocked with the bottom of the frame, and extending across the ends of the side locking bars, all of said locking bars having marginal flanges adapted to overlap the notches of the angle iron bars.

8. In a border frame for wire mesh-work, a notched bar in which the end portions of the wire mesh-work is held, and a channel

like locking bar interlocked with said notched bar and having bead like flanges that overlap the opposite edge portions of the notched bar, one bead like edge portion overlapping the notches of the bar.

9. A border frame for open metal-work and the like, comprising a frame member bar having notches along one edge, which are adapted to receive the end portions of the open metal-work, and a locking bar secured to said frame member bar with one edge thereof closing the notches over the end portions of the open metal-work fabric, which are held therein.

10. A border frame for open metal-work and the like, comprising a frame member bar having notches along one edge, which are adapted to receive the end portions of wire mesh work, and a flanged locking bar secured to said frame member bar with its flange overlapping the notched edge of said frame member bar and closing the notches over the wires contained therein.

EDWARD McCLURE.