Feb. 15, 1938. J. McDONOUGH 2,108,685

STRUCTURAL UNIT

Filed April 10, 1935

FIG. 3.

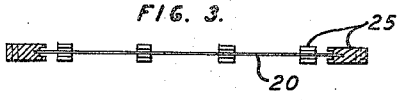


FIG. 1.

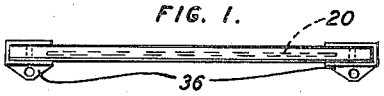


FIG. 4.

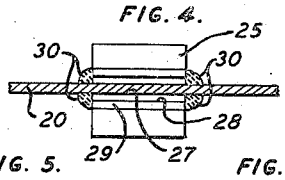


FIG. 2.

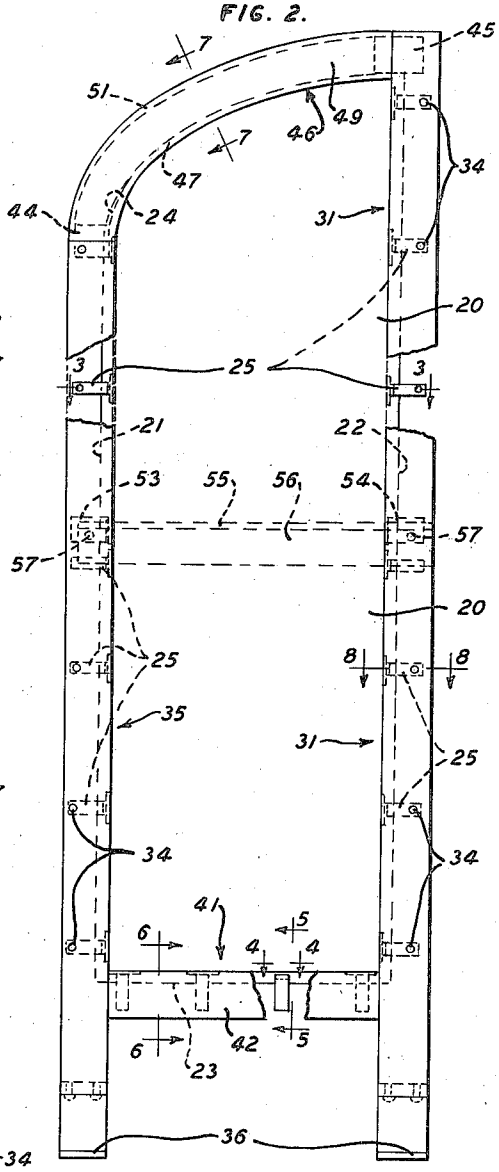


FIG. 5.

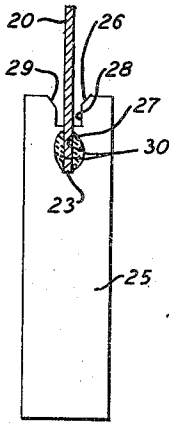


FIG. 6.

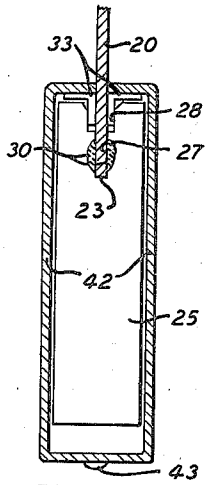


FIG. 7.

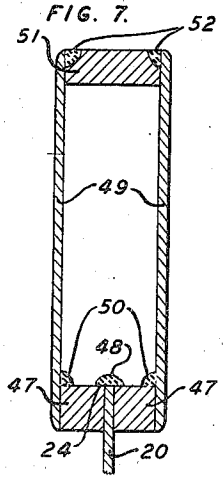


FIG. 9.

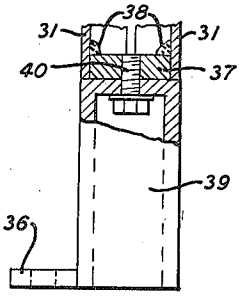
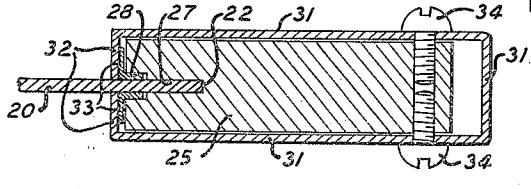


FIG. 8.



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STRUCTURAL UNIT

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Application April 10, 1935, Serial No. 15,509

11 Claims. (Cl. 189—34)

This invention relates to a structural unit and more particularly to a wall unit for use in constructing stall partitions such as are sometimes used for open telephone stalls and the like, and which may also be used in building storage racks, book cases and the like.

In many places public telephones, particularly of the coin box kind, are installed in open stalls comprising ordinarily two side walls or partitions and a corner shelf or cross shelf to support a telephone instrument and also for the user's convenience. There may or may not be a rear wall in such a structure, and the rear edges of the side walls may be secured to a rear wall unit, or merely abutted thereagainst, or may be secured to or abutted against a building wall, pillar or other structural element.

An object of the present invention is to provide a strong, neat and simply constructed side wall or partition unit for telephone stalls and analogous structures which shall be completely preformed and assembled ready for installation.

One embodiment of the invention contemplates a wall unit comprising a sheet metal principal member of substantially the general contour of the wall unit and edge units assembled therewith to stiffen the whole and to provide a simple ornamental appearance for the whole, together with concealed locking and uniting members within the edge units and secured thereto and to the principal member preferably by welding, and also affording means whereby to fasten the wall unit in place when being installed and to secure a shelf or the like thereto.

Other objects and features of the invention will appear from the following detailed description of one embodiment thereof taken in connection with the accompanying drawing in which like reference numerals are attached to identical parts in the several figures and in which

Fig. 1 is a plan view of a wall unit constructed in accordance with the invention;

Fig. 2 is a side elevation thereof;

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

Fig. 4 is an enlarged section on the line 4—4 of Fig. 2;

Fig. 5 is a similar view on the line 5—5 of Fig. 2;

Fig. 6 is a similar view on the line 6—6 of Fig. 2;

Fig. 7 is a similar view on the line 7—7 of Fig. 2;

Fig. 8 is a similar view on the line 8—8 of Fig. 2, and

Fig. 9 is an enlarged broken view in end elevation of one of the feet of the unit.

In the embodiment of the invention herein disclosed, 20 is a generally rectangular principal member of sheet metal having straight parallel vertical front and rear edges 21 and 22, a straight bottom edge 23 and a convexly curved top edge 24. Locking blocks or attachment blocks 25 are mounted on the front, rear and bottom edges of the member 20 at suitable intervals. These are substantially parallelopipedal blocks of metal each having a stepped notch 26 comprising a narrow slot 27 at the bottom and a wider slot 28 at the top whose outer edges may be beveled for convenience as at 29 in Fig. 5 or may be left square as in Fig. 8. The slot 27 is of a width to fit snugly over the edge of the sheet 20 and the two parts are secured together as for example by arc or blow pipe welding as indicated at 30.

The rear edge unit 31 is a sheet metal member having a generally rectangularly tubular cross section with flat parallel side walls and a flat outer end wall and an inner end wall consisting of flanges 32 turned in at right angles to the side walls and integral therewith and spaced apart at their opposed ends just sufficiently to form a slot which permits the sheet 20 to pass between the edges of the flanges 32. Angle members 33 are welded at intervals along the inner faces of the flanges 32 to correspond to the locations of the blocks 25 in the assembled structure. The inner dimension from the flanges 32 to the end wall of the rear edge unit 31 is greater than the length of the blocks 25 by an amount a trifle greater than the width of the inturned flanges of the angles 33, so that the edge unit may be slid into place over the edge of the sheet 20 and over the blocks 25 thereon, longitudinally along the edge 22 and then forced to the right (Fig. 2) until the inturned flanges of the angles 33 seat friction tight in the slots 28. The side walls 31 are provided with perforations to pass, and some of the blocks 25 with tapped holes to receive screws 34 which finally lock the edge unit in place on the sheet 20. While the edge unit is disclosed as of rectangular cross section it may be of any desired slotted tubular form, the blocks 25 being then formed with a corresponding contour.

A front edge unit 35 is constructed and assembled with the sheet 20 in the same manner and so need not be particularly described. Both front and rear edge units may be provided at their bottom ends with outturned integral lugs 36, suitably perforated for attachment as by lag screws to a floor. Or as shown in Fig. 9, a preferable construction has a solid block 37 set into the bottom end of each edge unit 31 and 35 and secured therein as by welding as shown at 38. A hollow foot 39 is secured in place thereto as by screws 40 passing up through the roof of the foot into threaded bores in the block 37. The perforated lugs 36 are in this case found on the feet 39.

The bottom edge unit 41 comprises two symmetrically complementary sheet metal troughs or channels 42, each having angle pieces 33 secured to the inner surfaces of their upper flanges. These two complementary sections are slipped downwardly along the faces of the sheet 20 until the pendent flanges of the angles enter and seat

in the slots 28. The abutting edges of the horizontal bottom flanges of the sections 42 are then welded as at 43.

Special blocks 44 and 45 are spot welded or otherwise secured to the front and rear top corners of the member 20 and also into the top ends of the front and rear edge units respectively extending somewhat above the top of the front edge unit and out to the left (Fig. 2) of the top of the rear edge unit. A top edge unit 46 is assembled on the blocks 44 and 45 and on the top edge 24 of the sheet 20. This unit 46 comprises a pair of filler strips 47, 47 substantially square in cross section and curved longitudinally to conform to the curvature of the edge 24. These strips 47 are welded to the plate at the edge 24 and to each other as shown at 48 in Fig. 7. The unit 46 further comprises a pair 49, 49 of sheet metal side strips also cut to conform to the curvature of the edge 24 and applied against the strips 47 with the lower edges of the strips coinciding as shown in Fig. 7, and welded as shown at 50. Finally the unit 46 comprises also an outer strip 51 curved to follow the upper edges of the side strips 49, positioned between and welded to them as shown at 52.

A pair of special blocks 53, 54 may be located respectively within the front and rear edge units 35 and 31 and be held in place by being spot welded to the edge units. A shelf 55 having a pendent flange 56 may be supported if desired within a stall comprising two spaced parallel completed wall units by attachment thereto by means of screws or bolts 57 entering appropriate bores in the blocks 53 and 54.

The embodiment of the invention herein disclosed is illustrative merely and may be modified and departed from in many ways without departing from the scope and spirit of the invention as pointed out in and limited solely by the appended claims.

What is claimed is:

1. A structural unit comprising a sheet metal main member, a generally tubular and longitudinally slotted unitary sheet metal edge member enclosing an edge of the main member, and means to secure the edge member to the main member comprising a block having a shape to substantially fill the cross-section of the edge member positioned within the edge member and attached to the main member.

2. A structural unit comprising a sheet metal main member, a generally tubular and longitudinally slotted unitary sheet metal edge member enclosing an edge of the main member, and means to secure the edge member to the main member comprising a block positioned within the edge member and attached to the main member, by being slotted to fit over the edge of the member and being welded thereto.

3. A structural unit comprising a sheet metal main member, a generally tubular and longitudinally slotted unitary sheet metal edge member enclosing an edge of the main member, and means to secure the edge member to the main member comprising a block positioned within the edge member and attached to the main member, by being slotted to fit over the edge of the member and being welded thereto, and the block being also attached to the edge unit by threaded means.

4. A structural unit comprising a sheet metal member, a generally tubular and longitudinally slotted sheet metal edge unit enclosing an edge of the member and provided at each of the two inner sides of the edges of the slot with an inwardly extending parallel flange applied against a face of the member, and means to secure the unit to the member comprising a block positioned within the unit and having a slot to receive the edges of the member and of the two flanges.

5. A structural unit comprising a sheet metal member, a generally tubular and longitudinally slotted sheet metal edge unit enclosing an edge of the member and provided at each of the two inner sides of the edges of the slot with an inwardly extending parallel flange applied against a face of the member, and means to secure the unit to the member comprising a block positioned within the unit and having a slot to receive the edges of the member and of the two flanges, the block being attached to the member by welding and to the unit by threaded means.

6. A structural unit comprising a sheet metal member, a generally tubular and longitudinally slotted sheet metal edge unit comprising two complementary welded sections enclosing an edge of the member and provided at each of the two inner sides of the edges of the slot with an inwardly extending parallel flange applied against a face of the member, and means to secure the unit to the member comprising a block positioned within the unit and having a slot to receive the edges of the member and of the two flanges.

7. A structural unit comprising a sheet metal member, a generally tubular and longitudinally slotted sheet metal edge unit enclosing an edge of the member, and means to secure the edge unit to the member comprising a block positioned within the edge unit and attached to the member and to the edge unit, the edge unit comprising an outer strip and a pair of complementary side walls welded thereto and a pair of complementary inner strips welded to the side walls and defining the slot therebetween.

8. A structure comprising two structural units each constructed in accordance with claim 1 together with a transverse member to space the units apart and secure them together.

9. A structural unit comprising a sheet shaped member, a generally tubular and longitudinally slotted sheet metal edge unit enclosing an edge of the member, and means to secure the edge unit to the member comprising a block having a shape to substantially fill the cross-section of the edge member positioned within the edge unit and attached to the member.

10. A structural unit comprising a sheet metal main member, a generally tubular and longitudinally slotted unitary sheet metal edge member enclosing an edge of the main member, and means to secure the edge member to the main member comprising a block having a shape to substantially fill the cross-section of the edge member and having sides substantially parallel with and engaging the inner sides of the edge member and attached to the main member and to the edge member.

11. A structural unit comprising a sheet shaped member, a generally tubular and longitudinally slotted sheet metal edge unit enclosing an edge of the member, and means to secure the edge unit to the member comprising a block having a shape to substantially fill the cross-section of the edge unit and having sides substantially parallel with and engaging the inner sides of the edge unit and attached to the member and to the edge unit.

JOHN McDONOUGH.