

Aug. 26, 1941.

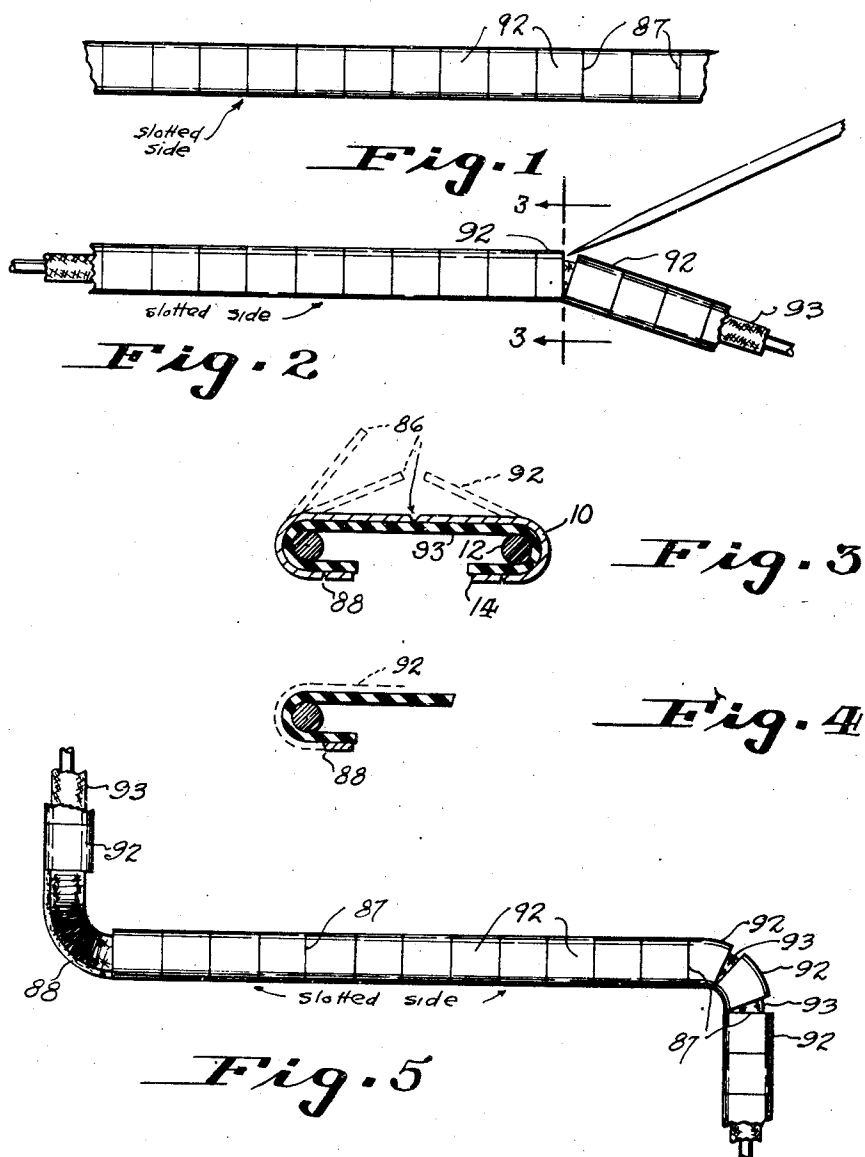
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2,254,068

CONTINUOUS OUTLET SYSTEM

Filed Aug. 23, 1940

2 Sheets-Sheet 1



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2,254,068

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2 Sheets-Sheet 2

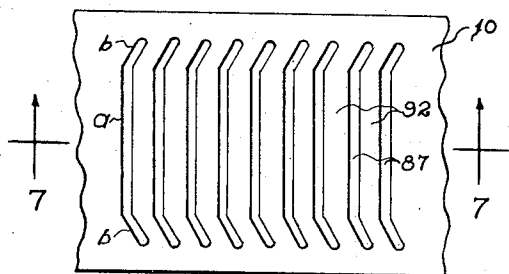


Fig. 6

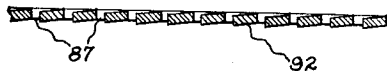


Fig. 7



Fig. 8

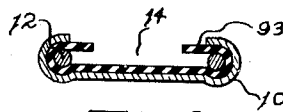


Fig. 9

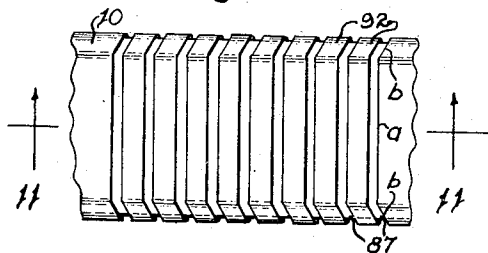


Fig. 10

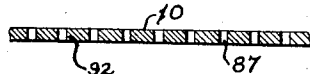


Fig. 11

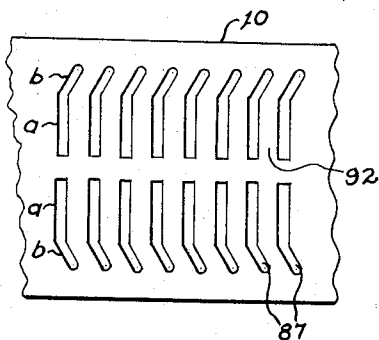


Fig. 12

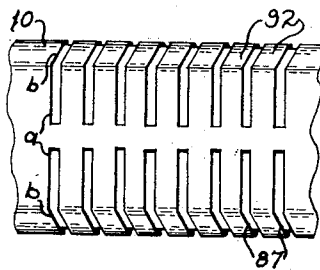


Fig. 13

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UNITED STATES PATENT OFFICE

2,254,068

CONTINUOUS OUTLET SYSTEM

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Application August 23, 1940, Serial No. 353,793

5 Claims. (Cl. 191—23)

This application relates to continuous outlet systems for electrical distribution and is a continuation-in-part of my prior application, Serial No. 183,952, filed January 8, 1938, which in turn is a continuation in part of a prior application, Serial No. 157,269, filed August 4, 1937, now Patent No. 2,170,299 of August 22, 1939.

This application specifically discloses improvements in the score line arrangement of the sheet metal casing of the duct or outlet forming part of the system.

For an understanding of such arrangement, reference should be had to the appended drawings in which—

Fig. 1 is an edge view of outlet showing one embodiment formed according to the invention;

Fig. 2 is a similar view but showing a preliminary step in the formation of an outside bend in such outlet;

Figs. 3-4 are sections on line 3—3 of Fig. 2 illustrating the formation of the bend;

Fig. 5 is an edge view showing completely formed inside and outside bends;

Fig. 6 shows a length of casing before forming thereof, representing another embodiment;

Fig. 7 is a section on line 7—7 of Fig. 6;

Fig. 8 is an edge view of outlet of such second embodiment;

Fig. 9 is an end view of Fig. 8;

Fig. 10 is a bottom view of Fig. 8;

Fig. 11 is a section on line 11—11 of Fig. 10 but showing the casing only.

Figs. 12 and 13 are views like Figs. 6 and 10, but showing a third embodiment.

The slotted duct form of continuous outlet shown includes a sheet metal casing 10, an insulation liner 92, and two bus bars 12. The casing is formed from a thin metal ribbon, or the like, folded as indicated. The liner is formed from a thin insulation ribbon folded as indicated. The liner edges preferably project beyond the edges of the casing to form protectors for the casing edges at the plug receiving slot 14. Within the bights of the lined casing are disposed the bus bars 12 and these are of soft rounded copper wire or the like; the casing and its insulation liner are formed around these bus bars.

The bus bars are shown as made of round wire. They may, however, be of other shapes than round, such as square, oblong, etc., with the insulation and casing correspondingly formed, whereby twisting of the bus bars with respect to the insulation and casing is prevented.

An outlet formed with a longitudinal score line

86 and with transverse shear lines 87, such as shown, may be manipulated for bending in the manner indicated in Figs. 2-4 to form bends of the character shown in Fig. 5. An inside bend, that is to say, a bend such as that shown at the lower right corner of Fig. 5, may be made merely by bending the outlet manually. The strips 92 between the shear lines 87 will separate by the opening up of the shear lines 87 on the wall mounting side of the outlet. The separation will, however, not be sufficient to expose the insulation liner to any objectionable extent.

The outside bend, that is to say, one with the slotted wall on the outside of the bend, as shown at the left hand corner of Fig. 5, may be made as follows: First, the outlet is given a slight inside bend at the point where the outside bend is to be made to separate adjacent strips 92 and to provide a gap on the wall mounting side of the outlet between such strips at a shear line 87. Then the point of a screw driver or other sharp pointed instrument is thrust under one of the strips 92 at such gap, as shown in Fig. 2, and moved from side to side and up and down to break such strip along the longitudinal score line 86. Then each half of the broken strip is peeled, by means of a plier or the like, from the longitudinal score line towards the slot of the outlet with the peeling terminating at the ends 88 of the shear lines 87, leaving at that part of the outlet where such strips had been peeled away only that part of the metal casing between the shear line ends 88 and the edges of the casing at the outlet slot. When two or more such strips have been peeled off, the outlet is bent back from the condition of Fig. 2 to form the outside bend at the left hand side of Fig. 5 and at such bend the insulation liner will be exposed at the inside surface of the bend and at the edges of the bend. Such exposure is not objectionable; the wall against which the outlet will be positioned at such bend will itself protect the back of the exposed surface of the liner. The part of the casing adjacent the outlet slot, remaining continuous, will protect the front of the insulation liner where exposed. Only the edges of the insulation liner, therefore, will remain unprotected; such edges, however, will be self-reinforced for protection by the fact that on the bending of the liner the edges will be thickened and compressed so that the exposed edge of the liner will be considerably thicker and thus stronger than the unexposed parts of the liner.

In the embodiment of Figs. 6 to 11, the shear lines 87 are of substantial area with wall mate-

rial thereof being removed, as contrasted from the shear lines 87 of the embodiment of Figs. 1 to 5 where the casing is cut but no metal is removed. In addition, the shear lines of the embodiment of Figs. 6 to 11 are formed to have three distinct portions labelled respectively *a*, *b*, and *b*, with the end portions *b—b* being out of line from the center portion *a*. In addition, the strips 92 between the shear lines 87 are initially formed as indicated in Fig. 7 slightly out of the plane of the back of the casing as a whole. However, when the casing is formed finally, the strips 92 will be put back into the plane of the back of the casing as a whole as indicated in Fig. 11.

It has been found that by forming the strips 92 and the shear lines 87 in the manner indicated in Figs. 6 to 11 that a greater flexibility of the outlet or strip is attained.

In the embodiment of Figs. 12-13, the center portions *a* of the slits 87 are divided, as shown, to leave an unslitted center section for the back of the strip.

Now having described the score line arrangements herein disclosed, reference should be had to the claims which follow for a determination of the invention hereof.

I claim:

1. A slotted duct containing bus bars and having a solid wall and a slotted wall connected at their edges by portions formed around the bus bars, the duct having transverse slits extending around the solid wall and the edges and partially around the slotted wall, terminating short of the slot.

2. A slotted duct containing bus bars and having a solid wall and a slotted wall connected at their edges by portions formed around the bus bars, the duct having transverse slits extending around the solid wall and the edges and par-

tially around the slotted wall, terminating short of the slot, the slits being of substantial area, with wall material being removed.

3. A slotted duct containing bus bars and having a solid wall and a slotted wall connected at their edges by portions formed around the bus bars, the duct having transverse slits extending around the solid wall and the edges and partially around the slotted wall, terminating short of the slot, each of the slits having three distinct portions, a center portion and two end portions, with the end portions being out of line from the center portion.

4. A slotted duct containing bus bars and having a solid wall and a slotted wall connected at their edges by portions formed around the bus bars, the duct having transverse slits extending around the solid wall and the edges and partially around the slotted wall, terminating short of the slot, the slits being of substantial area, with wall material being removed, each of the slits having three distinct portions, a center portion and two end portions, with the end portions being out of line from the center portion.

5. A slotted duct containing bus bars and having a solid wall and a slotted wall connected at their edges by portions formed around the bus bars, the duct having transverse slits extending around the solid wall and the edges and partially around the slotted wall, terminating short of the slot, the slits being of substantial area, with wall material being removed, each of the slits having three distinct portions, a center portion and two end portions, with the end portions being out of line from the center portion, with the center portion of each slit comprising two separated portions to leave the center of the solid wall unslitted.

WILLIAM H. FRANK.