

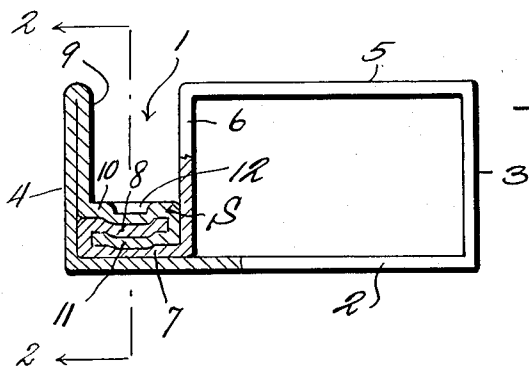
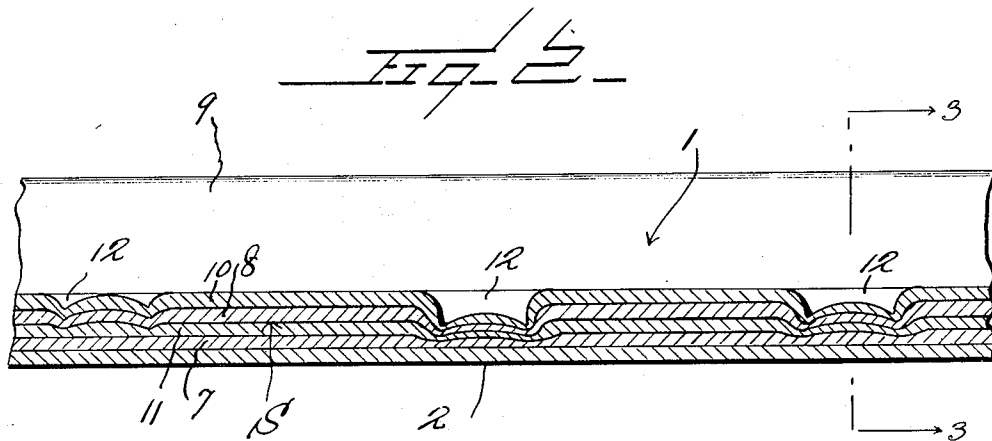
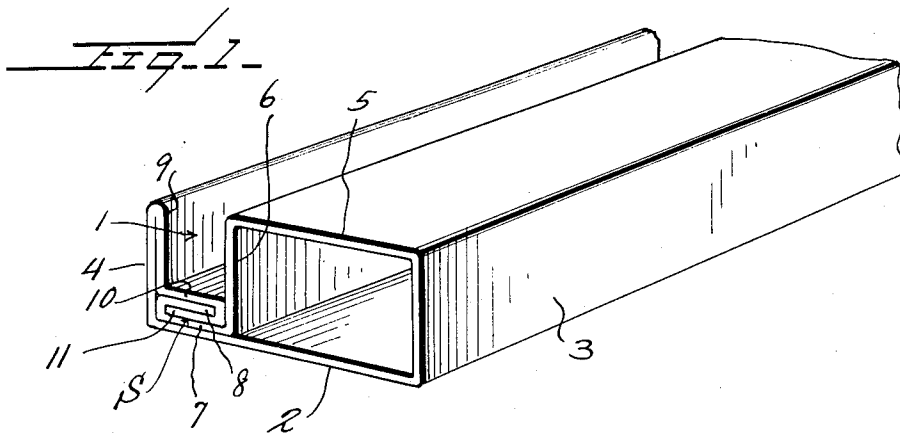
Oct. 10, 1933.

P. G. JOHNSON

1,929,692

SCREEN STILE

Filed April 19, 1932



Inventor

P. G. Johnson

By *Watson E. Coleman*
Attorney

UNITED STATES PATENT OFFICE

1,929,692

SCREEN STILE

Paul George Johnson, Wesleyville, Pa.

Application April 19, 1932. Serial No. 606,244

13 Claims. (Cl. 156—14)

This invention relates to a screen stile and has relation more particularly to a device of this kind constituting a metal tubular member formed from a single sheet of material, and it is an object of the invention to provide in a structure of this kind a concealed lock seam and wherein said seam is of a type to eliminate the use of solder, welding or brazing.

It is also an object of the invention to provide a stile of this kind formed with a groove in which screen cloth or the like is adapted to be engaged and wherein the connecting seam for the stile is comprised in a wall of such groove.

An additional object of the invention is to provide a device of this kind of a tubular character including an interlocking seam together with indentures pressed at different points within said seam to assure a more effective locking of the seam.

The invention consists in the details of construction and in the combination and arrangement of the several parts of my improved screen stile whereby certain important advantages are attained and the device rendered simpler, less expensive and otherwise more convenient and advantageous for use, as will be hereinafter more fully set forth.

The novel features of my invention will hereinafter be definitely claimed.

In order that my invention may be the better understood, I will now proceed to describe the same with reference to the accompanying drawing, wherein:—

Figure 1 is a fragmentary view in perspective of a screen stile constructed in accordance with an embodiment of my invention;

Figure 2 is a fragmentary sectional view taken longitudinally through the groove or channel of the stile as herein embodied, said section being taken substantially on the line 2—2 of Figure 3;

Figure 3 is a transverse sectional view taken substantially on the line 3—3 of Figure 2.

My improved stile as herein embodied is particularly adapted for use in the production of window screens, door screens and the like and as disclosed in the accompanying drawing the stile is formed from one sheet of metal of desired thickness and embodies a finished structure tubular in character and which is maintained in desired assembly by a seam 8 which is comprised in the base structure of the groove or channel 1 which is adapted to receive a holding or retaining member for the marginal portion of a screen fabric.

The sheet of material from which this stile is produced is formed to provide a base strip 2 hav-

ing its longitudinal marginal portions defined by the flanges 3 and 4 disposed in the same general direction and preferably substantially at right angles to the base strip 2.

The outer margin of the flange 3 is continued by an inwardly disposed strip 5 of a width less than the width of the base strip 2 and substantially in parallelism therewith. The inner margin of this strip 5 is continued by a flange 6 disposed in a general direction parallel to the second flange 4 of the strip 2. The inner margin of the flange 6 is continued by an extension strip 7 disposed in a direction toward the flange 4 and in close contact with the adjacent marginal portion of the strip 2. The extension strip 7 is continued by a reverted extension strip 8.

The flange 4 is continued by a reverted flange 9 in close contact therewith but terminating above or in spaced relation to the bottom strip 2. The lower marginal portion of the flange 9 is defined by an extension strip 10 continued by a reverted extension strip 11 which is received between the extension strips 7 and 8 hereinbefore referred to. The extension strips 7, 8, 10 and 11 in their interlocking relation are in direct contact thus providing a seam which locks in four directions thereby assuring a rigid structure of the stile and also provides a seam which is concealed within the groove or channel 1 and arranged in a manner to assure such seam being watertight.

As is believed to be clearly illustrated by the accompanying drawing, the flange 4 together with its reverted flange 9 are spaced from the flange 6 whereby the desired groove or channel 1 is provided, and it is to be particularly noted that the seam afforded by the interlocking extension strips is tightly engaged or wedged within the bottom portion of the groove or channel.

It is furthermore to be noted that the formation of the seam is such to eliminate the necessity of using solder or to weld or braze the seam. In the assembly of the interlocking extension strips 7, 8, 10 and 11 the same at predetermined points therealong are subjected to desired pressure whereby are produced indentures 12 of varying depths which assure a more effective locking together of the extension strips of the seam with the elimination of any liability of twisting or relative shifting of the extension strips.

From the foregoing description it is thought to be obvious that a screen stile constructed in accordance with my invention is particularly well adapted for use by reason of the convenience and facility with which it may be assembled and op-

erated, and it will also be obvious that my invention is susceptible of some change and modification without departing from the principles and spirit thereof and for this reason I do not wish to be understood as limiting myself to the precise arrangement and formation of the several parts herein shown in carrying out my invention in practice except as hereinafter claimed.

I claim:—

- 10 1. A stile of the class described comprising a sheet of metal formed to provide a hollow structure with a groove extending therealong, marginal portions of said sheet interlocking within the groove to provide a seam.
- 15 2. A stile of the class described comprising a sheet of metal formed to provide a hollow structure with a groove extending therealong, marginal portions of said sheet interlocking within the groove to provide a seam, said seam being comprised in the base of the groove.
- 20 3. A stile of the class described comprising a sheet of metal formed to provide a hollow structure with a groove extending therealong, marginal portions of said sheet interlocking within the groove to provide a seam, said seam being concealed within the groove.
- 25 4. A stile of the class described comprising a sheet of metal formed to provide a hollow structure with a groove extending therealong, marginal portions of said sheet interlocking within the groove to provide a seam, said seam locking in four directions.
- 30 5. A stile of the class described comprising a sheet of metal formed to provide a hollow structure with a groove extending therealong, marginal portions of said sheet interlocking within the groove to provide a seam, said seam at points therealong having indentures pressed therein to further lock together the portions of the seam.
- 35 6. A stile of the class described comprising a sheet of metal formed to provide a hollow structure with a groove extending therealong, marginal portions of said sheet interlocking within the groove to provide a seam, said seam at points therealong having indentures pressed therein to further lock together the portions of the seam, said indentures being of different depths.
- 40 7. A stile of the class described comprising a sheet of metal formed to provide a hollow struc-
- 45
- 50

ture, marginal portions of said sheet having parts interlocking to provide a seam locking in four directions, said interlocking portions at different points therealong having indentures pressed therein to hold said interlocking portions against twisting or slipping, said indentures being of different depths. 80

8. A sheet metal rail having a folded portion, depressions formed in the surface of said portion, said depressions restraining relative shifting of adjacent contacting surfaces of said portion. 85

9. A sheet metal rail formed of strip stock and having a folded portion concealing the sheared edges of said strip stock, depressions formed in said folded portion for restraining relative shifting of adjacent contacting surfaces of said portion. 90

10. A sheet metal rail having folded interengaging portions, means formed in the surface of said portions for restraining relative shifting of adjacent contacting surfaces of said portions. 95

11. A hollow sheet metal frame rail formed from strip stock and having a folded portion concealing the edges of said stock, means formed in the face of said folded portion, said means restraining relative shifting of the contacting surfaces of said portion. 100

12. A sheet metal rail for screen frames formed from strip stock, said rail having interengaging return bends concealing the sheared edges of said stock which produces a plurality of contacting layers of metal, depressions formed in the outer layer of said bends, said depressions being transmitted to adjacent contacting surfaces whereby to restrain relative shifting of said layers. 105

13. A hollow sheet metal rail for screen frames formed from strip stock, said rail having interengaging return bends concealing the sheared edges of said strip and producing a portion containing several contacting layers of metal, a depression formed in one of the other layers, said depression being transmitted to adjacent contacting layers whereby to restrain relative shifting of said layers and progressively decreasing in magnitude to the opposite outer layer to eliminate unsightly bulges in said opposite outer layer at the location of said depressions. 110

PAUL G. JOHNSON.

125

55

130

60

135

65

140

70

145

75

150