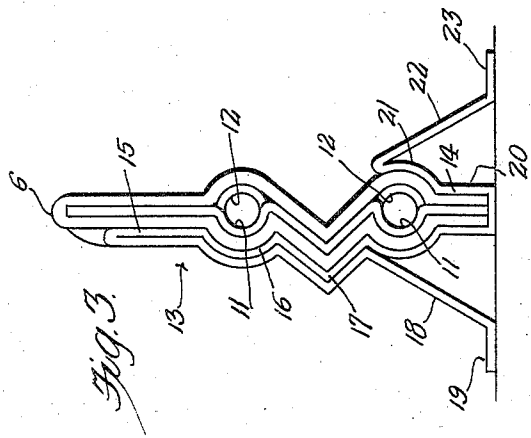
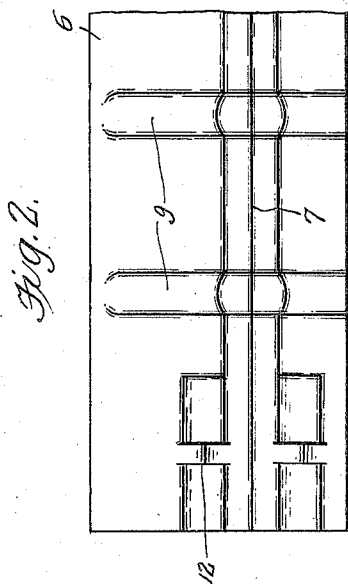
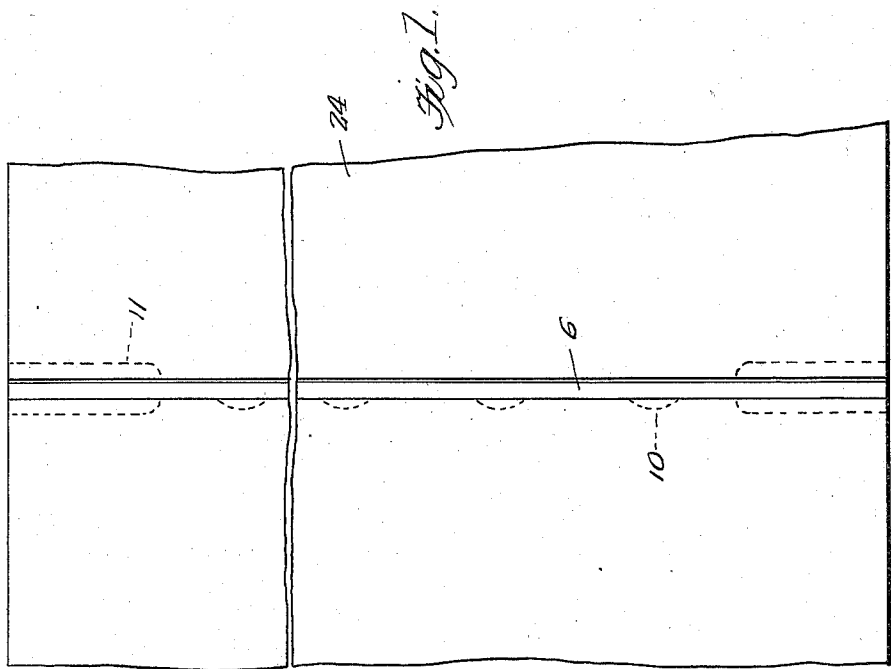


July 12, 1938.

C. A. JOHNSON
PERMANENT JOINT STRIP
Filed Nov. 25, 1936

2,123,468

2 Sheets-Sheet 1



Inventor
Charles A. Johnson.

By *Clarence A. O'Brien.*
Hyman Berman.
Attorneys

July 12, 1938.

C. A. JOHNSON
PERMANENT JOINT STRIP
Filed Nov. 25, 1936

2,123,468

2 Sheets-Sheet 2

Fig. 4.

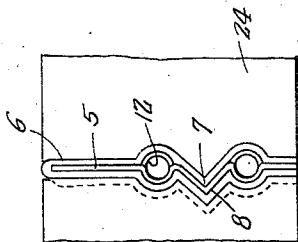
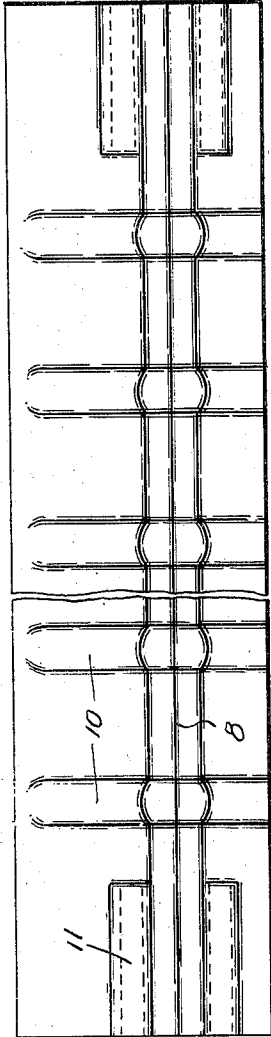


Fig. 5.

Fig. 7.

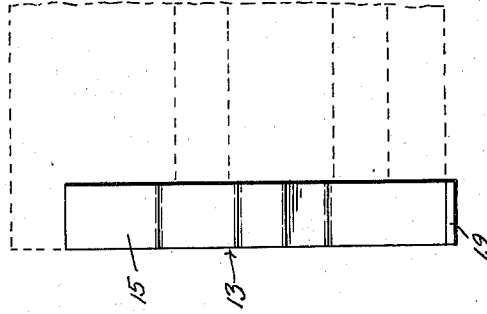
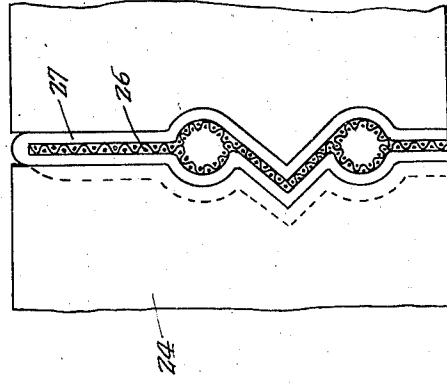


Fig. 6.



Inventor

Charles A. Johnson.

By

Clarence A. O'Brien
Hyman Berman

Attorneys

UNITED STATES PATENT OFFICE

2,123,468

PERMANENT JOINT STRIP

Charles A. Johnson, Duluth, Minn.

Application November 25, 1936, Serial No. 112,797

4 Claims. (Cl. 94—18)

This invention relates to contraction joints for roads, pavements, floors, and the like of concrete and other suitable material and has as its object the provision of an improved parting or joint strip for such structures.

A further object of the invention is to provide improved means for supporting and holding the strips in place.

A further object of the invention is to provide improved means for joining the strips together in end abutting relation and/or to side form members when such form members are resorted to as is often the case in building a concrete roadway.

A further object of the invention is to provide an improved clip for use with such a strip for supporting the latter in position when a clip is found desirable for such purpose.

The invention together with its objects and advantages will be best understood from a study of the following description taken in connection with the accompanying drawings wherein:—

Figure 1 is a top plan view of a portion of a concrete pavement illustrating the application of the invention.

Figure 2 is a fragmentary elevational view of one end portion of the improved strip and viewing the same from one side thereof.

Figure 3 is an end elevational view of the strip and a supporting clip associated therewith.

Figure 4 is an elevational view of the strip and viewing the same from the side opposite to that shown in Figure 2.

Figure 5 is an end elevational view of the strip illustrating the same as applied to a pavement.

Figure 6 is an end elevational view of a slightly modified form of strip and also showing the same as applied to a pavement.

Figure 7 is a side elevational view of a supporting clip.

Referring to the drawings by reference numerals it will be seen that the improved joint strip consists generally of a body member of metal or other suitable material and an outer covering or facing for the strip formed of some suitable composition reinforced by wire or as otherwise found desirable.

In the form of the invention shown in Figures 1 to 4, inclusive, the improved joint strip comprises an elongated body strip 5 of metal and a facing or cover 6 that is in the form of a relatively wide sheet of composition, preferably a bituminous material reinforced by wire or as otherwise found desirable and folded at its longitudinal center over the body strip 5 to cover the

opposite faces of the strip for the full length of the body strip as clearly shown in the drawings.

After the cover piece 6 has been applied to the strip 5, the strip 5 and its cover 6 are subjected to pressure for providing a longitudinally extending groove 7 pressed out therefrom and extending along one side of the strip and a longitudinally extending rib 8 extending longitudinally on the strip at the opposite side thereof, the groove 7 and rib 8 being substantially V-shaped in cross section as is clearly shown in Figures 3 and 5.

Further, at intervals throughout its length the joint strip has pressed out therefrom, a series of vertical relatively spaced grooves 9 at one side of the strip, and ribs 10 at the relatively opposite side of the strip, the grooves 9 and ribs 10 extending from the lower edge of the strip upwardly to a point slightly inwardly from the upper edge of the strip.

The grooves 7 and 9 and the ribs 8 and 10 provide bonding grooves and ribs respectively to insure a thorough bonding of the concrete with the strip.

At either or both ends thereof the binding strip has pressed out therefrom upper and lower longitudinal grooves 11 and bridge pieces 12 extending across the open sides of the grooves 11 intermediate the respective opposite ends of the grooves, the grooves 11 and bridge pieces 12 being provided for receiving dowel pins or the like through the medium of which a plurality of strips may be secured in end abutting relation either longitudinally or transversely of the roadway or floor or the like, or a bonding strip may be secured at either or both of its respective opposite ends through the medium of dowel pins or the like with the opposite side members of a form, such as a wood form where such is employed in road construction.

For supporting the bonding strips perpendicularly during the laying of the concrete there are provided for use with the strips adjacent the ends of the strips clips 13.

Each strip 13 as clearly shown in Figure 3 is formed from a single length of strap metal or the like shaped and dimensioned to provide a substantially U-shaped body 14 having a relatively long leg 15 which is formed as at 16 to accommodate the pressed out portions of the strip forming the grooves 11 and the bridge pieces 12, and also formed as at 17 to accommodate the rib 7 of the joint strip. Intermediate its ends the leg 16 is reversely bent upon itself and below the formation 17 the reversely bent end of said leg is bent at an angle to the leg as at 18 to

terminate in a base flange 19. The said U-shaped part 14 of the clip is also provided with a relatively shorter leg 20 which is suitably formed as at 21 to accommodate the formations of the lower edge of the strip forming the groove 11 and bridge piece 12, and above the formation 21 said shorter leg 20 is reversed upon itself to extend downwardly at an angle as at 22 and to terminate in a base flange 23. (See Figure 3.)

When it is desired to use a clip 13 the same is clipped onto the desired end of the joint strip, the base flanges 19 and 23 serving to hold the clip and the joint strip perpendicularly and consequently the strip in position for the pouring of the concrete at opposite sides of the strip.

Clips 13 may or may not be used if found desirable.

As is well known the strips are placed at the joint between the abutting edges of two adjacent blocks of concrete or the like 24 and as clearly suggested in Figure 1.

Figure 6 illustrates a slightly modified form of joint strip. In this form of the invention the joint strip comprises a body strip 25 composed entirely of wire, wire mesh material or the like pressed into a form corresponding to the herein described form or shape of the strip 5 and enveloped in an outer covering 27 of suitable composition preferably a bituminous material reinforced by wire or the like.

Obviously the strip 26 is used in identically the same manner as the hereindescribed joint strip 5.

It will be appreciated that in actual use the concrete of the pavement blocks 24 at opposite sides of the joint strips will be keyed to the strips by reason of interlocking vertical and horizontal grooves and ribs, the grooves 7 and 9 on one side of the strip embedding into the concrete at that side of the strip and the grooves 8 and 10 at the opposite side of the strip receiving portions of the concrete on the last-mentioned side of the strip as is thought to be apparent.

It is thought that the construction, utility and advantages of a strip of the present invention will

be appreciated without a more detailed description.

Having thus described the invention what is claimed is:—

1. A joint strip adapted to be embedded in concrete, said strip having vertical and horizontal right angularly disposed grooves and ribs pressed therefrom to receive and engage plastic concrete, the grooves being on one side of the strip and the ribs on a relatively opposite side of the strip, said ribs and grooves respectively intersecting each other.

2. A joint strip adapted to be embedded in concrete, said strip having a longitudinal horizontal right angularly disposed groove and a rib pressed therefrom and a series of relatively spaced vertical grooves and ribs pressed therefrom at right angles to said horizontal groove and rib and arranged in intersecting relation.

3. In combination, a joint strip adapted to be embedded in concrete, said strip having a longitudinal horizontal rib pressed therefrom, and a supporting clip for the strip comprising a substantially U-shaped member straddling the strip and presenting a relatively short and a relatively long leg, said long leg being formed of a double thickness of material and conformably fitting against one vertical side of the strip, and each of said legs having reversely bent end portions terminating in flat base flanges.

4. A joint strip comprising an elongated sheet of wire reinforced bituminous composition material folded upon itself along its longitudinal middle to provide a pair of closely spaced substantially parallel members, and a metallic strip disposed between the folds of the composition sheet, said strip having vertical and horizontal right angularly disposed grooves and ribs pressed therefrom to receive and engage plastic concrete, the grooves being on one side of the strip and the ribs on a relatively opposite side of the strip, said ribs and grooves respectively intersecting each other.

CHARLES A. JOHNSON.