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H. L. RICE

3,183,627

TRANSVERSE WATERSTOP CONNECTION

Filed Oct. 30, 1962

FIG. 1

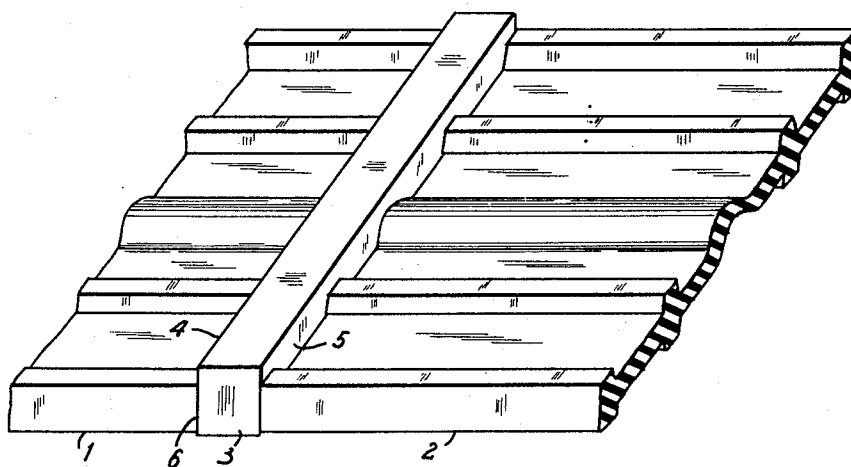
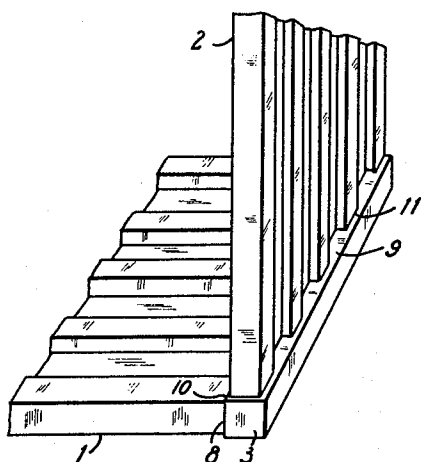


FIG. 2



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3,183,627

TRANSVERSE WATERSTOP CONNECTION

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1 Claim. (Cl. 59-346)

This is a continuation-in-part of Serial No. 847,282,
filed October 19, 1959, now abandoned.

The present invention relates to waterproofing bar-
riers used in building brick, concrete or masonry walls.
More particularly this invention relates to such barriers
which are extruded or formed from plastic materials and
which are known as waterstops.

In building construction it is common practice to im-
bed a ribbon or panel of a plastic and waterproof ma-
terial between structural elements which are in juxtapo-
sition. This plastic material serves as a waterstop to pre-
vent water seepage between the said elements. The rib-
bon or panel has ribbed surfaces, the ribs being formed
along the lengths of the top and bottom surfaces. These
ribs are for the purpose of providing means to cause the
ribbon to be gripped securely between the structural ele-
ments or between the bricks or in the concrete. Another
function of the waterstop is to serve as a resilient cushion
between structural walls to absorb the effects of strains
caused by vibration or temperature change.

It is common practice in the building art to bend such
waterstops around corners since it is very difficult and
sometimes impossible to splice several pieces perpendicu-
larly to each other because of the irregular contour due
to the ribbed surfaces, unless a groove is first milled
across the surface of the panel, perpendicular to the ribs,
to enable the edge of a mating ribbon or panel to be
cemented in the groove. Likewise, it is difficult, and
frequently impossible, to splice pieces of differing cross-
sectional contours without leaving paths which are open
to water seepage. In addition it is desirable to be able
to produce, in situ, a waterstop which is watertight lon-
gitudinally and transversely.

It is the object of this invention to provide a conjoined
waterstop, and a method of producing the same, which
is simple to produce in the field, in situ, during the course
of wall construction, and which is completely watertight
longitudinally and transversely, whether spliced linearly
or at an angle or perpendicularly, and independent of
the cross-sectional contours of the waterstops.

According to the present invention, a plastic polygonal
rod, preferably of rectangular cross-section, and of a
length equal to or greater than the cross width of the
waterstop ribbon or panel, and of a height greater than
the maximum cross-sectional height of said waterstop
ribbon, is cemented or heatsealed to and between the
transverse cut edges of the waterstop ribbons which are
to be spliced. The rectangular strip besides conjoining
the ends of the waterstop ribbons also acts a barrier to
interrupt flow of water along the ribs of the spliced sec-
tions of the waterstop.

The accompanying drawing shows, for purposes of il-

lustration, two of the many possible embodiments in
which the invention may take form, it being understood
that the drawing is illustrative of the invention rather
than limiting the same. In the drawing:

FIGURE 1 is a perspective view showing the rectangular
rod between two cross edges of waterstop panels, linearly.

FIGURE 2 is a perspective view showing the rectangu-
lar rod between two cross edges of waterstop panels,
perpendicularly.

In the drawing, the waterstop strips, ribbons or panels
are designated by the numerals 1 and 2. The rectangular
rod is designated by the numeral 3.

In FIGURE 1 the rectangular rod 3 is shown in such
a position that its parallel opposite surfaces 4 and 5 are
brought into contact with the edges 6 and 7 of the panels
1 and 2, and caused to adhere thereto by means of heat
sealing or cementing.

In FIGURE 2 the rectangular rod 3 is shown in such
a position that its perpendicular surfaces 8 and 9 are in
contact with the edges 10 and 11 of the panels 1 and 2,
cemented or heat sealed thereto.

The rectangular strip 3 provides a transverse seal to
several and different parts of a waterstop or waterstops
of varying designs and contours.

The transverse rod shown is preferably produced in
the form of a continuous, rectangular or polygonal shaped,
extruded plastic rod of a composition which preferably
has a lower melting point and a plasticity than that of the
composition of the waterstop panels to be joined. This is
desirable in order to enable the rod to be joined or
welded to the waterstop panels by heat sealing.

The composition of the transverse rod should prefer-
ably be such that its physical and chemical properties re-
semble that of the waterstop panels to be joined, except
in regard to melting point and plasticity as hereinbefore
described.

The method and product embodied in the present in-
vention has several advantages. The invention obviates
the need of undercuts or grooves in the waterstop panels,
of the kind usually required to obtain a close matched
fit for the several parts of the waterstop in order to pre-
vent the incursion of outside water into the parts of the
waterstop joined.

The employment of a rectangular rod of a composition
similar to that of the waterstop panels but having a lower
plasticity and melting point provides a transverse water-
stop seal of good tensile strength when employed in
foundation walls.

The extruded rectangular rod, when joined to different
component parts of the waterstop along its entire width,
encompasses the entire cross-sectional area of the water-
stop panels. This feature obviates the need of matching
of the contours of the parts to be spliced or joined. This
enables parts of varying contours to be used and con-
tributes a greater degree of anchorage into concrete.
Furthermore, the waterstop components can be joined
at varying angles to each other without any wastage of
material or weakness of seal. Particularly, it provides
a transverse seal which makes the waterstop effective
against both longitudinal and transverse water seepage.

It is obvious that the invention may be embodied in

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many forms and constructions and thus is not limited to those shown in the drawings. For example, the shape of the transverse sealing rod may be polygonal and not rectangular.

What is claimed is:

An extruded strip of plastic waterproof composition for bridging a joint between construction members, said strip having protruding ribs longitudinally on the front and back surfaces thereof, a cross rib laterally across said longitudinal ribs, said cross rib being of a plastic material having a lower melting point and plasticity than that of the composition of said longitudinal strip, and said cross rib being of a greater height than the height of said longitudinal ribs.

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