Sept. 3, 1929. B. S. NICCUM 1,727,214

NETWORK

Filed Dec. 12, 1927

Fig. 1.

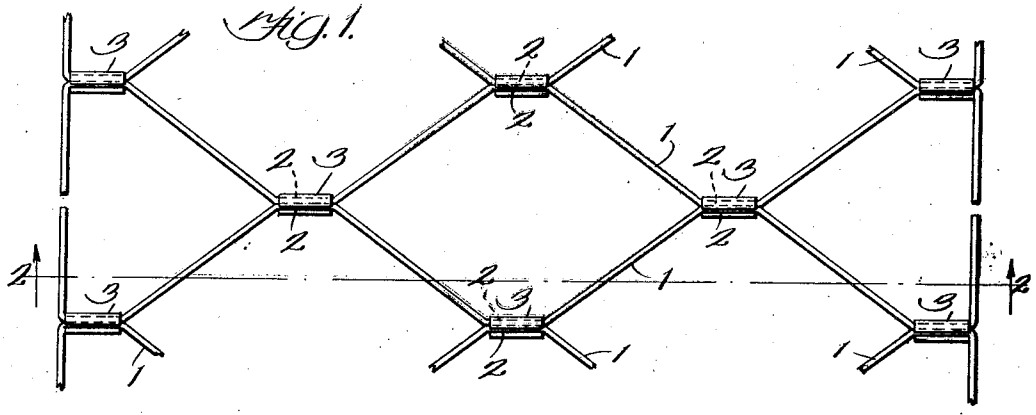


Fig. 2.

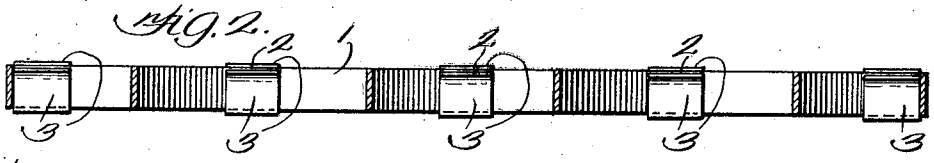


Fig. 3.

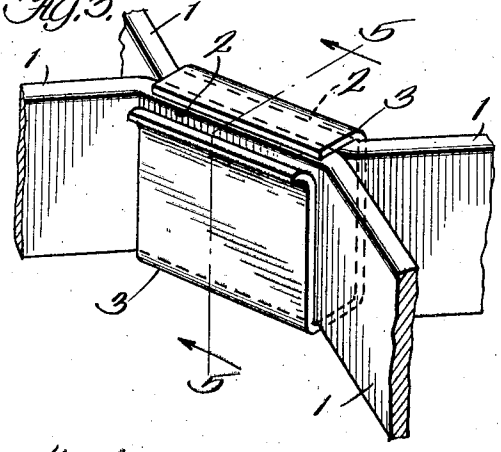


Fig. 6.

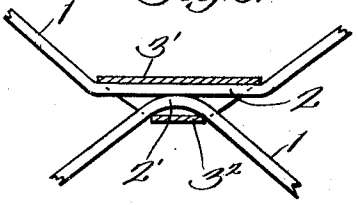


Fig. 7.

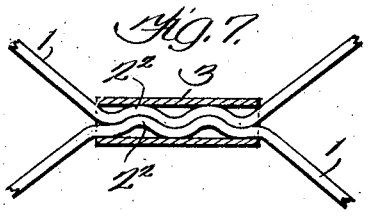


Fig. 4.

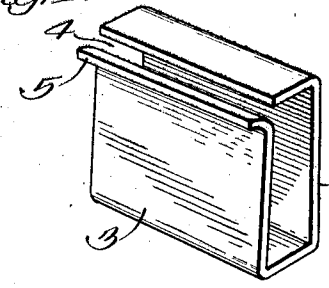


Fig. 5.

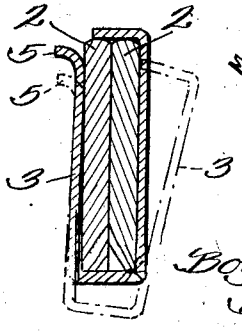
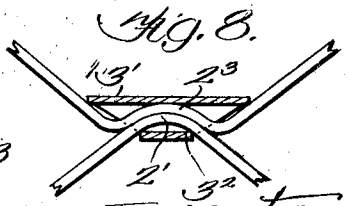


Fig. 8.



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Patented Sept. 3, 1929.

1,727,214

UNITED STATES PATENT OFFICE.

BOYD S. NICCUM, OF LIBERTY, INDIANA.

NETWORK.

Application filed December 12, 1927. Serial No. 239,583.

My invention relates to network which is formed of undulating strips, preferably metallic, having the apices of their bights placed together to form the meshes of the network and employing clips embracing adjacent apices to maintain the strips in their network formation.

Hitherto, supplemental means were required to prevent the strips from sliding longitudinally of each other and coming into such intermeshing relation as to collapse the fabric, such supplemental means being, for example, rigid framework which encompassed the network. I am enabled to dispense with this supplemental means for maintaining the shape of the fabric by providing the clips and the bights of the strips receiving them with interengaging formations whereby such strips and clips are prevented from having relative movement longitudinally of the strips, the clips then serving to hold the adjacent strips in substantially fixed relation for the purpose stated and without the necessity of supplementing this function of the clips by means of an encompassing frame or other device. In the preferred embodiment of the invention, some of the apices of the bights of the strips are generally flattened and the clips which embrace such flattened apices are formed with broad sides within the bights having such flattened apices whereby slippage between the clips and the fabric forming strips is prevented. The network may be formed in sections constructed in accordance with the invention, the adjacent sections being coupled by clips of my invention.

The fabric of my invention is particularly useful when employed as a reinforcement for concrete work, though the invention is not to be limited to any use to which it may be put.

The clip of my invention is preferably formed of strip metal bent into a nearly closed figure which is open at one corner to leave a gap through which objects may be passed into the clip. In the preferred embodiment of the invention, the closed figure is oblong and the broad side of the clip which ends at the gap terminates in an outwardly flaring lip whereby objects, such as metal strips, may be directed into the clip.

The invention will be more fully explained in connection with the accompanying drawing in which Fig. 1 is a plan view of a portion of a network fabric as it is preferably made; Fig. 2 is a side view of the fabric shown in Fig. 1; Fig. 3 is a perspective view of a clip with the contiguous portions of adjacent strips therein; Fig. 4 is a perspective view of a clip; Fig. 5 is a sectional view on line 5—5 of Fig. 3; and Figs. 6, 7 and 8 are views of modifications.

The embodiment of the invention shown in Figs. 1 to 5 inclusive will be first particularly described. Each section of network is formed of a plurality of undulating metallic strips 1 which are positioned to have oppositely facing apices 2 thereof in close proximity to form the meshes of the network. These apices are generally flattened and received within the clips 3 that have broad sides within the bights of the undulations and closely approaching the sides of such bights whereby slippage between the strips and the clips and consequent slippage between the strips themselves is prevented.

All of the contiguous apices of the various strips of the fabric are preferably flattened and held in the manner described, but it is obvious that slippage between adjacent strips of the fabric may be readily prevented by a materially reduced number of clips.

Each clip is desirably formed of broad strip metal bent into oblong shape into a nearly closed oblong figure, the clip being opened at one corner, 4, to permit entry of the strips. The broad side of the clip which ends at the gap 4 terminates in an outwardly flaring lip 5 whereby the strips and clip are readily guided into the interior of the clip. The material of which the clips are formed is desirably spring metal, the strips of the fabric being forced into the interior of the clips and the adjacent strips being held in close proximity due to the resilience of the clips and, particularly, the clip sides bearing the lips 5. The clips not only serve to hold the apices of adjacent undulating strips together, but also serve to hold the ends of adjacent net work sections together, it being unnecessary to employ any circumscribing frames in order that the fabric may be maintained in its true formation. The fabric may be employed as a reinforcement for concrete, though it is obvious that it may have other utility.

The embodiments of the invention illustrated in Figs. 6, 7 and 8 have characteristics in common with the structure shown in Figs. 1 to 5 inclusive, like parts being given similar characters of reference. As shown in

Fig. 6, the apex 2 of the two apices received in each clip may be flattened, as described, and the apex 2′ may be narrow and rounded, the clip received in the bight having the flattened apex having a broad side 3′ which engages the sides of such bight to prevent slippage between the metal strip and clip, the adjacent apex being held by the narrow side 3^2 of the clip in a manner to prevent slippage of the two apices and the strips carrying them. In Fig. 7, both of the apices within the clip are generally flattened into intermeshing corrugations 2^2. The structure of Fig. 8 is generally similar to the structure shown in Fig. 6 with the exception that the curved apex 2′ is nested within the middle of the undulating apex 2^3. It will be observed that the sides of the clips which carry the lips 5 are bent inwardly to bring the lip ends of these sides closer toward the opposite sides of the clips than the base ends of these sides whereby the lip ends of these clip sides are pressed upon the strips, assuming that the strips are of an aggregate thickness sufficient to press these clip sides outwardly at their lip ends.

Changes may be made without departing from the invention.

Having thus described my invention, I claim:

A network made of similarly formed undulating strips placed side by side and each having a plurality of bights, each strip having the apices of the bights therein placed against the apices of the bights in each strip adjacent thereto; and clips embracing the adjacent bights in said strips, each clip being received within both bights embraced thereby and engaging the sides of each of such bights at places spaced apart from the apices of the bights, whereby relative slippage between the strips is prevented.

In witness whereof, I hereunto subscribe my name.

BOYD S. NICCUM.