

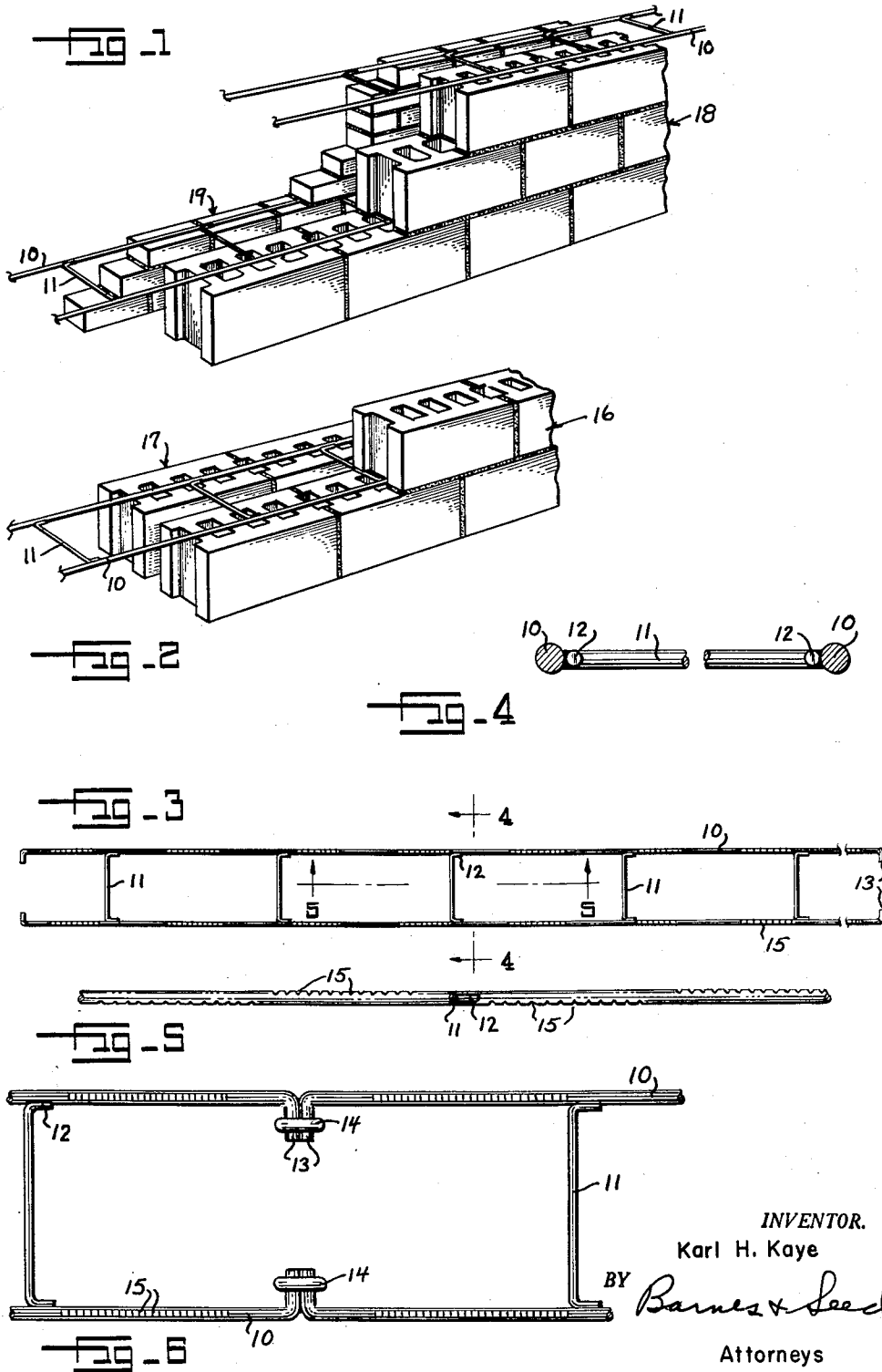
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MASONRY JOINT MESH-STRIP

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MASONRY JOINT MESH-STRIP

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1 Claim. (Cl. 72—103)

The present invention relates to joint reinforcing for masonry construction, and more particularly to joint mesh-strips for tying masonry units together and helping to restrain the stresses which tend to break down the joints, especially in cases of settlement and earthquakes. In the past this type of strip has commonly consisted of a pair of longitudinal rods interconnected by a diagonal wire woven therebetween, and to make a continuous reinforcement, it has been necessary to overlap and at the same time laterally offset the strips to bring the end portions of the longitudinal rods of one strip slightly to one side of the respective longitudinals of the lapped strip.

My invention aims to provide an improved joint mesh-strip of simple and economical construction which will assure a superior interfit with the mortar.

The invention has as a further object the providing of such a joint mesh-strip which can be readily tied to an adjoining such strip without need of overlapping or laterally offsetting the strips with respect to one another.

These and other more particular objects and advantages in view will appear and be understood in the course of the following description and claim, the invention consisting in the novel construction and in the adaptation and combination of parts hereinafter described and claimed.

In the accompanying drawing:

Figures 1 and 2 are perspective views illustrating my improved joint mesh-strip in use, the mortar gripping notches not being shown because of the smallness of the scale.

Fig. 3 is a plan view of a length of the mesh-strip.

Figs. 4 and 5 are fragmentary vertical sectional views to an enlarged scale taken as indicated by lines 4—4 and 5—5, respectively, of Fig. 3.

Fig. 6 is an enlarged fragmentary plan view showing the means of connecting two lengths of the mesh-strip together.

Referring to the drawings it is seen that my joint mesh-strip has a ladder-like appearance with the longitudinals being designated 10 and the regularly spaced crosspieces each having the numeral 11 applied thereto. Normally the longitudinals are composed of $\frac{3}{16}$ inch round steel rods and the crosspieces are formed from #9 steel wire. To make rigid connections with the rods 10, the crosspieces 11 are bent at their ends to form right-angle terminal legs 12, thereby giving each crosspiece a general U-shape in plan view. These legs 12 are welded to the opposed inner faces of the longitudinal rods 10 so that the crosspieces are confined by the latter. Thus the mesh-strip may be considered as a one-plane unit.

At their ends, the longitudinal rods 10 are bent inwardly at right-angles to form relatively short terminal arms 13 each extending less than one-half the width of the mesh-strip so that there will be a gap between the respective arms at each end of the strip. The function of these arms 13 is illustrated in Fig. 6 wherein a pair of the mesh-strips are shown in longitudinally aligned relation with the arms 13 of one strip abutting the arms of

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the next. When in such a position, oblong rings 14 can be readily inserted over the ends of the abutting pairs of arms to thereby tie them together without overlapping the strips.

As best shown in Fig. 5, the upper and lower faces of the rods 10 are formed with mortar gripping grooves or notches 15 each extending crosswise of the related rod. These notches are impressed into the rods by a stamping operation, giving to each notch a V-shape when viewed from the side. Were the notches on one face opposed to the notches on the other face, the rods would be so weakened from indiscernible thread cracks occurring along a common plane of cleavage that even a very slight bending moment imposed upon the rod would cause the rod to snap. This situation does not obtain, however, if both the upper and the lower face of the rod has its "skin" intact opposite each of the notches impressed into the other face. To this end the notches are formed in spaced groups along the length of the rods and the groups on the upper face of each rod 10 are staggered relative to the groups on the lower face thereof. By this pattern excellent keying of the joint mortar directly to the rods 10 is obtained, and yet the future strength of the rods is not impaired.

With regard to the keying of the joint mortar it will be noted that the top and bottom groups of the notches 15 extend down and up, respectively, as far as the levels of the top and bottom of the cross-pieces 11. By this arrangement the joint mortar is keyed for the full depth of the rods 10 against relative movement in the direction lengthwise of the mesh-strip as well as laterally thereof.

My joint mesh-strip is desirably fabricated in 2½", 4", 6", 8", and 10" outside widths for 4", 6", 8", 10" and 12" walls, respectively, so that there will be an approximate 2" tolerance (1½" for 4" wall) between the strip and the related masonry blocks. In such cases the mesh-strips are merely centered over a course of blocks and tied together by the rings 14 to give a continuous reinforcement preparatory to laying the next course in the conventional manner. It is normally advised that the mesh-strips be used in every third joint continuously around the structure and in each horizontal joint under openings for at least three courses.

As a further example of the use of my joint mesh-strip, I have illustrated a cavity wall construction in Fig. 2 having inner and outer masonry block walls 16, 17. In such a case the mesh-strips can be centered over the cavity and embedded in the corresponding joints of both walls. Thus, the walls 16, 17 are both not only reinforced, but at the same time are tied together.

In Fig. 1 I have shown my mesh-strip applied to a masonry block backup 18 for a brick facing 19. Similarly to the Fig. 2 example, one longitudinal rod 10 is placed between block courses while the other rod of the strip is positioned between brick courses at the same level. In this manner the brick facing anchored with respect to the backup wall by the same means reinforcing the latter. While considered unnecessary to here illustrate the same it will be understood that the invention finds wide usage in single wall construction.

The structure here illustrated and described is now considered to best exemplify the invention but it will be understood that departures can be made within the scope of the invention, wherefore I intend that no limitations be implied and that the hereto annexed claim be given the broadest interpretation to which the employed language fairly admits.

What claim, is:

In a masonry joint mesh-strip, a pair of laterally spaced parallel longitudinal metal rods, and a plurality of regularly spaced coplanar metal wire cross-pieces

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each of smaller cross-section than said rods, and each having its terminal end portions bent into parallel relation with respect to the rods and welded to the opposed inner faces thereof in substantially centered relation relative to the top and bottom of said rods, each of said rods having groups of laterally extending notches in its top and bottom faces with the groups in the top face being staggered lengthwise of the rod with respect to the groups in the bottom face, said notches each having a depth equal to about half of the difference between the top to bottom thickness of said rods and cross-pieces whereby said top and bottom groups extend down and up, respectively, to substantially the top and bottom levels of said cross-pieces and together with the cross-pieces key, for the thickness

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of said rods, the mortar of a masonry joint in which the mesh-strip is embedded, against relative movement longitudinally of the mesh-strip.

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