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REENFORCEMENT CONNECTED WITH REENFORCED CONCRETE BUILDINGS, SLABS, PLAYGROUNDS, AND SUCH LIKE

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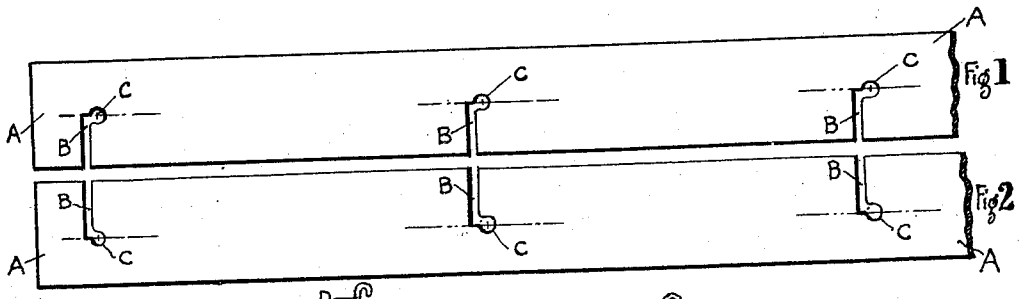

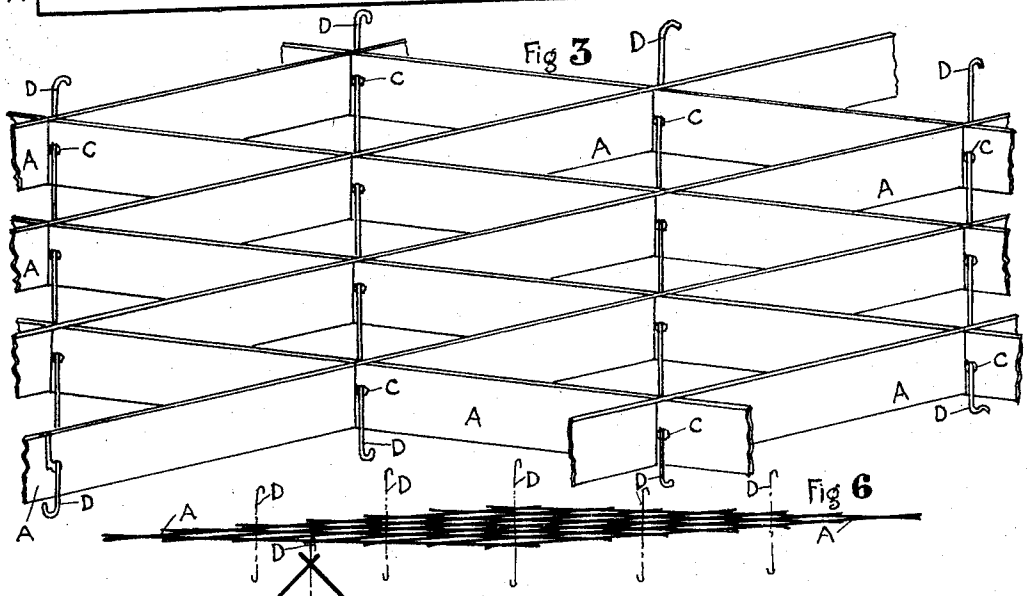

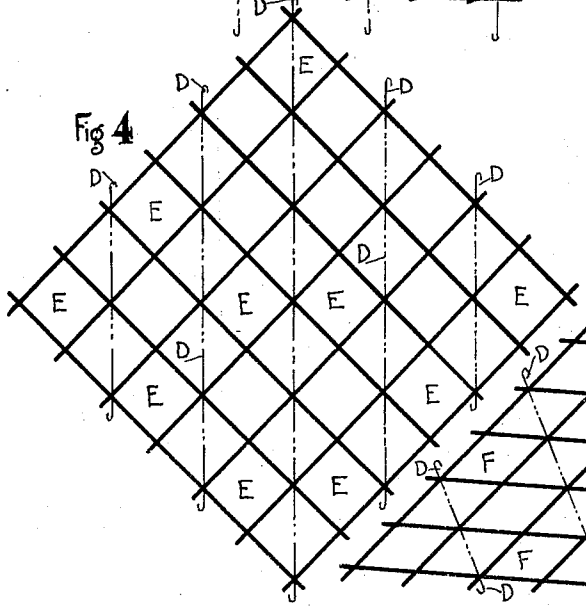

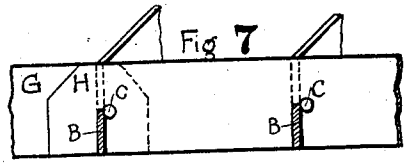

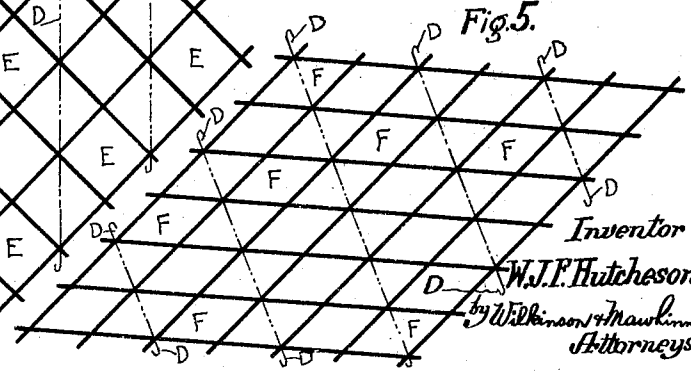

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UNITED STATES PATENT OFFICE

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REENFORCEMENT CONNECTED WITH REENFORCED CONCRETE BUILDINGS, SLABS, PLAYGROUNDS, AND SUCH LIKE

Application filed May 7, 1930, Serial No. 450,449, and in Great Britain April 7, 1930.

My invention relates to improvements in and relating to reenforcement connected with reenforced concrete buildings, slabs, playgrounds, and such like, and has for its object inter alia to so construct such reenforcement as to be capable of taking various stresses and take up little room in storage or transit, thus considerably reducing the freight for such.

According to this invention, the reenforcement, consists of deep thin bars of steel or other suitable metal, of suitable depths and thicknesses, slotted to allow the top and bottom bars to engage freely and be assembled to constitute the reenforcement, which is capable of expanding to present a series of squares or of being contracted or brought closer together to form a series of diamonds of any width, the whole being flexibly secured together by thin keys of flexible wire or such like at two angles, so that one square yard of the reenforcement when completely collapsed or closed up will occupy a very small space in storage or transport, the space for such being about six feet long by about one inch broad.

In order that my invention may be properly understood and readily carried into effect, I have hereunto appended one sheet of drawing, of which

Figures 1 and 2 are views respectively of the top and bottom bars of which the reenforcement is constructed showing the bar-slots and wire-key holes.

Figure 3 is a view showing the reenforcement assembled or made up.

Figure 4 is a view showing reenforcement open full into squares.

Figure 5 is a view showing reenforcement partially collapsed or closed into diamond sections.

Figure 6 is a view showing reenforcement collapsed or closed up for storage or transit.

Figure 7 is a view showing how one fabric is connected to another.

Referring to the drawing, A are the bars, and B the slots by which the bars A are connected to each other to form the reenforcement. C are the holes in the bars through which the keys D are passed to secure the bars A flexibly in the extended or open position in the form of squares E, as in Figure 4, or partially closed or collapsed as in the form of diamonds F, as in Figure 5. When completely collapsed or closed up for storage or transit, the ends of the keys D being of a flexible nature, are simply bent over and lie alongside the bars A and are out of the way.

The reenforcements can be made of any size and one can be readily fixed to another, as indicated in Figure 7. G being part of one reenforcement and H part of another connected together.

The reenforcement is applicable for reenforcing concrete floor and roof slabs, so that for light stresses, it may be used fully opened out into squares E, as in Figure 4, and for heavy stresses, when more metal is required per square yard, the reenforcement can be partially closed or collapsed into narrow diamonds F, as in Figure 5. From the foregoing it will be obvious that the reenforcement is capable of fulfilling any requirement in loads without any special size or weight of fabric like the welded wire meshes and expanded metal reenforcements at present in use.

The reenforcement can also be laid in concrete as a surface reenforcement to prevent surface wear and cracks in concrete roads, large garage floors, play-grounds, and the like, when heavy wear has to be withstood from heavy wheel traffic or other pounding and scouring agencies.

I claim:

1. A reenforcement for concrete construction and for use as armour for cement and asphalt surfaces or other compositions comprising two crossing sets of bars, each bar being

slotted to allow the bars to engage with each other, apertures in each bar opening into said slots, and keys passing through said apertures.

2. Reenforcement for reenforced concrete buildings, slabs, play-grounds, and the like, comprising two crossing sets of parallel deep thin bars of steel, each bar being slotted to allow the bars to engage with each other freely, thereby providing sections capable of being enlarged or reduced according to the stress, and also capable of being collapsed, and keys for connecting the bars loosely together, each key having a hooked end.

WILLIAM JAMES FRASER HUTCHESON.