

Oct. 16, 1923.

1,471,029

J. P. HOOPER

PADDING

Filed March 22, 1922

2 Sheets-Sheet 1

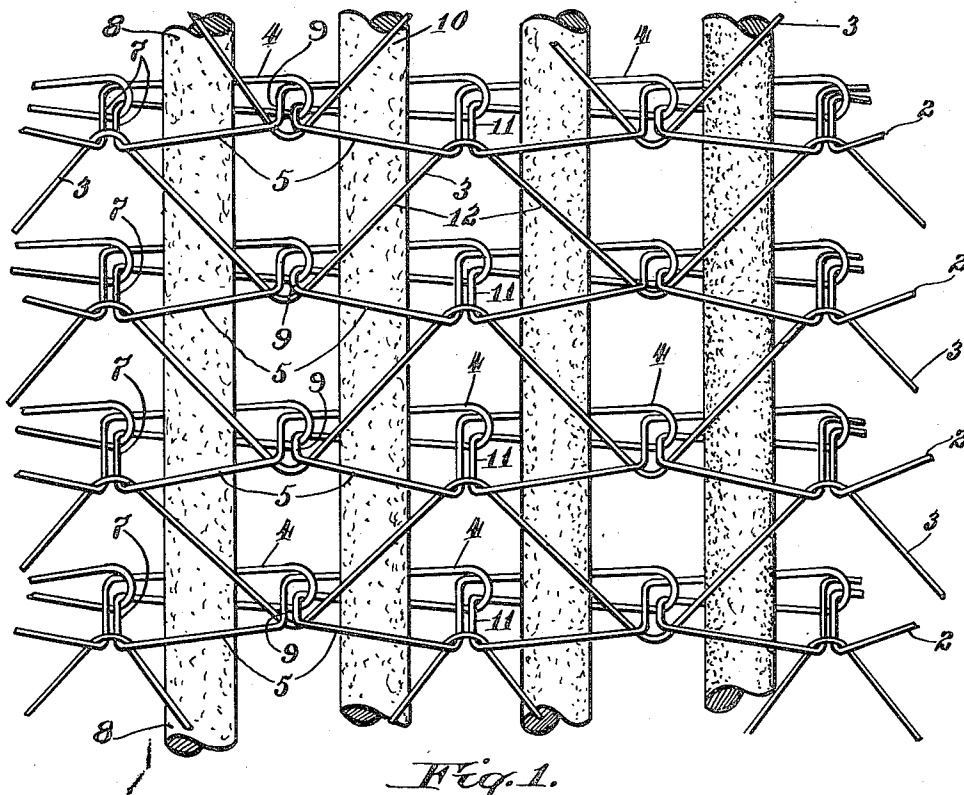


Fig. 1.

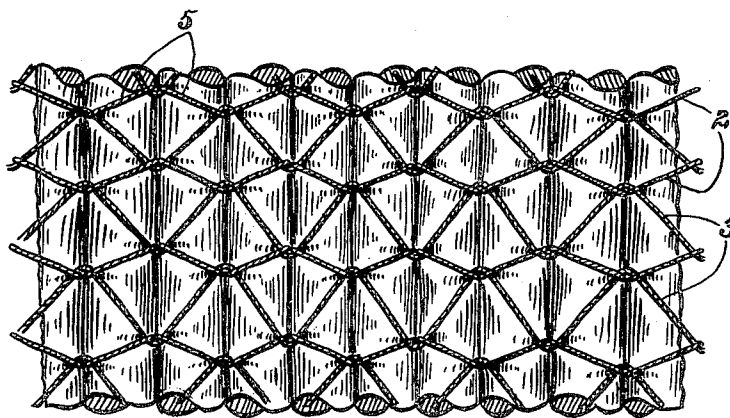


Fig. 2.

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2 Sheets-Sheet 2

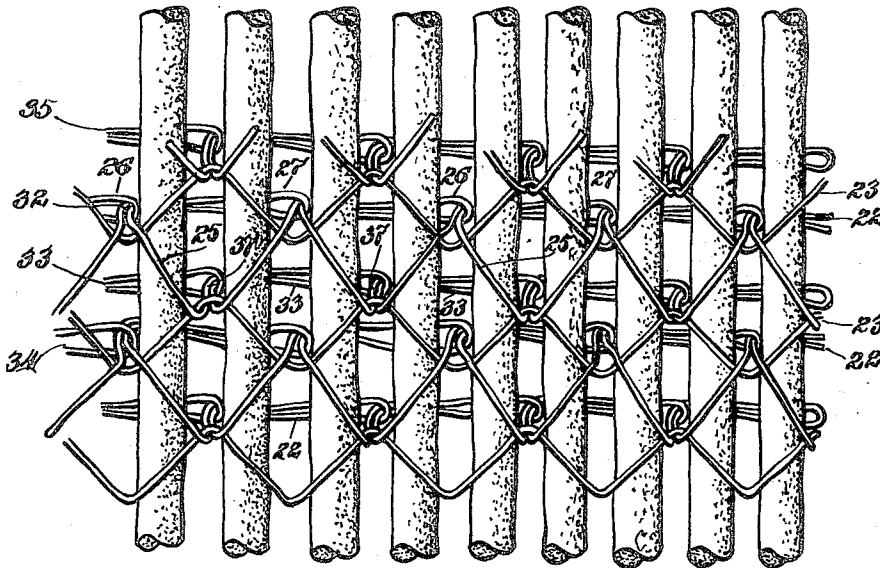


Fig. 3.

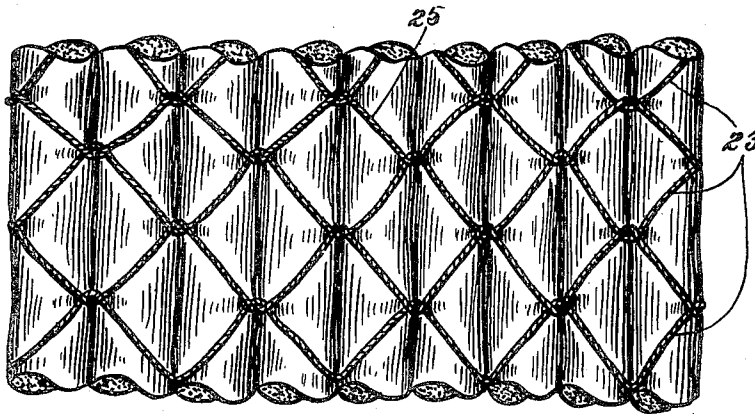


Fig. 4.

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## UNITED STATES PATENT OFFICE.

JAMES P. HOOPER, OF RUXTON, MARYLAND.

## PADDING.

Application filed March 22, 1922. Serial No. 545,647.

*To all whom it may concern:*

Be it known that I, JAMES P. HOOPER, a citizen of the United States of America, residing in Ruxton, Baltimore County, State of Maryland, have invented certain new and useful Improvements in Padding, of which the following is a specification.

The manufacture of cotton padding consisting of a soft weft or filling resembling a roving and a thread like or cord like warp looped about the weft forming a knit mesh, is old and well known, such padding being a commercial product easily obtainable on the market, which has been widely used as a padding under stair carpets, in wearing apparel and for other purposes as in bed clothes, but it lacks durability to a considerable degree on account of the loose and sleazy character of the fabric which leads to early deterioration and disintegration.

The object of the invention is to produce a diagonally reinforced cotton padding which can be conveniently manufactured and which possesses greater durability than the padding previously offered.

In the accompanying drawing I have illustrated two forms of padding embodying my invention. In the drawings:

Figure 1 is a diagrammatic view;

Figure 2 is a plan of the preferred form of fabric;

Figure 3 being a diagrammatic view; and

Figure 4 a plan of another form in which the invention may be embodied.

In the drawing Figures 1 and 2, the fabric is composed of strands of roving or material similar to roving laid side by side in parallel relation and close together, and held by a thread or cord mesh. The roving referred to herein as the weft is held in position by mesh in the form of main or foundation warps 2 and inlay warps 3, the warps are knitted together about the weft or filling forming a knitted mesh which holds the weft or roving close together in the relation described.

Referring particularly to the form shown in Figures 1 and 2, as seen in said figures, the main or foundation warp 2 is formed into a series of loops 4—4, each loop of each warp being passed under one strand of weft or filling. The warp most conveniently leads from the left in Figure 1, each loop

being as foresaid passed through the next loop ahead on the same warp and drawn under the next filling to the right. The next subsequent loop is passed through it beyond said filling and that is drawn under the next filling; the main or unlooped portion of the warp thread 5 being passed over the filling to the next loop, in forming which it is passed through the bow or end of the last loop as foresaid, so that each strand of filling is fully encircled by each main or foundation warp; on one side by loop 4 and on the other side by the main or unlooped portion of the thread 5.

In the form of fabric shown in Figures 1 and 2 the diagonal feature or diagonal reinforcement is furnished by means of the inlay warp 3 which is entirely on what will be termed the upper side of the padding, i. e., the upper side in Figures 1 and 2. The inlay warp as therein shown connects the alternate loops of the adjacent main or foundation warps being passed first about the shank 7 of end loop 4 in one foundation warp and then carried diagonally across the adjacent filling 8 and passed about the shank 9 of the next alternate loop of the adjacent foundation warp from which point the inlay warp 3 is carried back diagonally across the next filling 10 to and about the shank 11 of the second loop 4 from the one, the shank 7 of which was first encircled by the inlay warp being described. The stitch thus outlined is preferably uniform throughout the mesh, the shanks of the alternate loops of each main or foundation warp being thus encircled and secured by an inlay warp to the shanks of the alternate intermediate loops of the next main or foundation warp on each side so that each inlay warp is formed in a series of opposite angles or diagonals 12—13, the angles or diagonals 12—13 of each inlay warp being parallel and similar to those of the next corresponding warp.

The appearance of the fabric in the form just described is illustrated in Figure 2.

In the fabric as it actually appears the loops 4—4—4 are in one, i. e., the bottom side as it appears in the shanks 7 of the loops, pass through the fabric and the mesh as it appears on the other or top side, consists of the inlays 3 and the single or

straight portions 5 of the main or foundation warp between the loops. These form a four-sided diamond mesh.

Regarding Figures 3 and 4, the arrangement is different in that each main or foundation warp 22 forms two lines of loops as 32—33, the straight line or thread 25 between each pair of successive loops 26—27 in each line being carried over to the next line on one side and formed into a series of loops 33, each passed through the next as in the previously described padding fabric so that each main warp thread may form two or more lines of loops.

In the present instance as in the fabric previously described the shank 37 of each loop is encircled or half encircled by an inlay warp 23 which ties the loops of successive lines 32—35, 33—34 together but these lines of loops are tied together alternately so that the two lines of loops 32—33 formed from a single main warp, are pulled in opposite directions transversely to their length, i. e., up and down in Figure 3, producing a mesh which holds the weft or filling of roving or similar soft material extremely close, preventing working and eliminating sleaziness and which mesh is drawn tightly both in the direction of the warp, transversely to the warp, and in the diagonal directions.

Having thus described specifically and in detail a machine embodying the various features of my invention in the preferred form, I would have it understood that the specific terms herein are used descriptively rather than in a limiting sense, the scope of the invention being defined in the claims.

What I claim and desire to secure by Letters Patent is:

1. A padding consisting of parallel lines of soft strands and a transversely extending thread mesh holding said soft strands in position, the same consisting of parallel lines of loops extending transversely to the soft strands, the bow of each loop encircling the shank of an adjacent loop in the same thread, the thread between the adjacent loops being passed on one side of each soft strand and the loops being on the opposite side and a thread connecting parallel lines of loops, the latter thread being passed about the shanks of loops of each line and extending back and forth from one line of loops to the other, said thread being on the opposite side of the fabric from the loops.

2. A padding consisting of parallel lines of soft strands and a transversely extending thread mesh holding said soft strands in position, the same consisting of parallel lines of loops extending transversely to the soft strands, the bow of each loop encircling the shank of the next, the thread between the adjacent loops being passed on one side of each soft strand and the corresponding loop

being on the opposite side and a thread connecting parallel lines of loops, the latter thread being passed about the shanks of loops of each line and extending back and forth diagonally across the soft strands from one line of loops to the other.

3. A padding fabric consisting of parallel lines of weft in the form of soft strands like roving an looped thread-like main warps formed in successive loops, the bow of each loop being passed around the shank of the next, each loop being passed about one side of the corresponding weft and the thread between that loop and the next, being passed about the other side of the weft so that each warp encircles each weft, an inlay warp connecting the adjacent lines of the main warp and extending back and forth from one line of loops to the other line, engaging the shanks of respective spaced loops in the two lines.

4. A padding fabric consisting of parallel lines of weft in the form of soft strands like roving and looped thread-like main warps formed in successive loops, the bow of each loop being passed around the shank of the next, each loop being passed about one side of the corresponding weft and the thread between that loop and the next, being about the other side of the weft so that each warp encircles each weft, an inlay warp connecting the adjacent lines of the main warp and extending back and forth diagonally from one line of loops to another line, encircling the shanks of respective spaced loops in the two lines.

5. A padding fabric consisting of parallel lines of weft in the form of soft strands like roving and a looped thread-like warp including a main warp of successive loops the bow of each loop being passed around the shank of the next, each loop being passed about one side of the corresponding weft and the thread between that loop and the next, being passed about the other side of the weft so that each warp encircles each weft and an inlay warp connecting the parallel lines of the main warp, the same being passed about the shanks of the loops and extending diagonally back and forth from one line of loops to another adjacent line, engaging the shanks of respective spaced loops in the two lines.

6. A padding consisting of parallel lines of soft strands and a transversely extending thread mesh holding said soft strands in position, the same consisting of parallel lines of loops extending transversely to the soft strands, the bow of each loop encircling the shank of the next, the thread between the adjacent loops being passed on one side of each soft strand and the corresponding loop being on the opposite side and a separate thread connecting adjacent parallel lines of loops formed from different threads, the lat-

ter thread being passed about the shanks of loops of each line and extending back and forth from one line of loops to the other, drawing the two lines of loops formed from each single thread apart, the loops appearing on one side of the fabric in the form of lines and said single thread which connects the lines of loops, and the thread between the loops appearing on the other side of the

fabric in the form of a diamond mesh, the shanks of the loops extending through the fabric from one side to the other. 10

Signed by me at Baltimore, Maryland, this 16th day of March, 1922.

JAMES P. HOOPER.

Witnesses:

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HOWARD H. TUNIS.