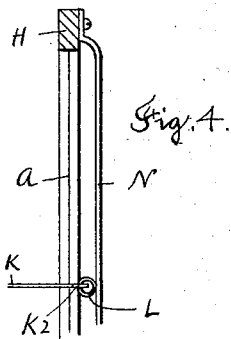
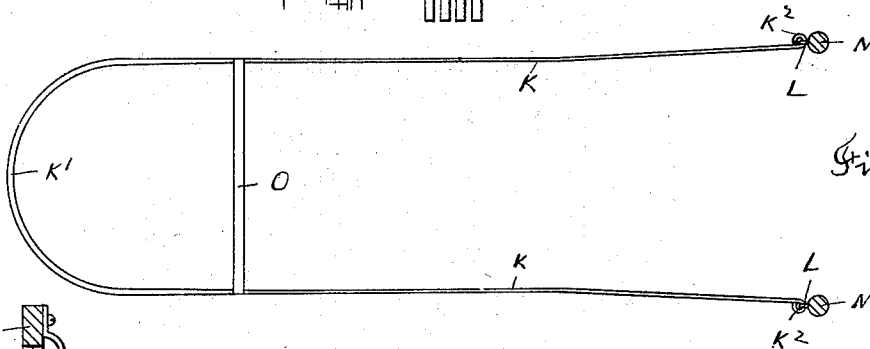
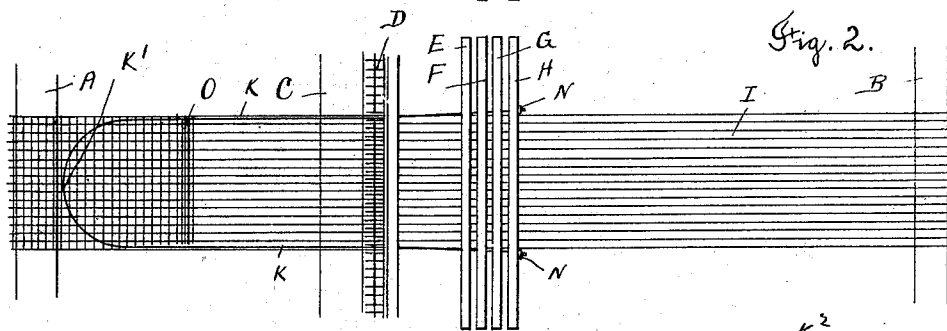
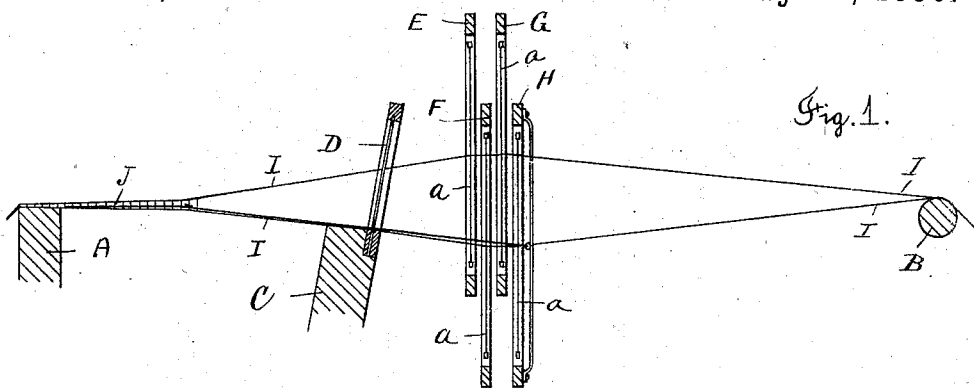


(No Model.)

W. B. FITTZ.
LOOM TEMPLE.

No. 560,701.

Patented May 26, 1896.



Witnesses
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By his Attorney

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LOOM-TEMPLE.

SPECIFICATION forming part of Letters Patent No. 560,701, dated May 26, 1896.

Application filed April 9, 1894. Serial No. 506,968. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM B. FITTZ, a citizen of the United States, and a resident of West Boylston, in the county of Worcester and State of Massachusetts, have invented a new and useful Improvement in Loom-Temples, of which the following is a specification, accompanied by drawings forming a part of the same and illustrating the construction and method of use of my improved loom-temple.

Referring to the drawings, Figure 1 is a diagrammatic view representing the warp-threads forming the shed and a sectional view of parts of the loom, illustrating the application and use of my improved loom-temple. Fig. 2 represents a plan view of the warp-threads, together with portions of the loom, and showing the top view of my improved loom-temple. Fig. 3 is a detached view of my improved loom-temple shown on a larger scale than Figs. 1 and 2, and Fig. 4 represents in sectional view a portion of one of the harness-frames and representing the attachment of the loom-temple to the harness-frame.

Similar letters refer to similar parts in the different figures.

The object of my present invention is to provide means for maintaining the width and regularity of a tubular fabric when woven upon an ordinary loom; and it consists in the employment of a loom-temple composed of a U-shaped wire or rod having its central or bent section inclosed within the tubular fabric and with its ends carried by one of the harness-frames, so as to be raised and lowered with the warp-threads carried in the frame in the formation of the shed, the sides of the wire or rod inclosed within the fabric being supported and maintained parallel to each other by means of a transverse brace rod or bar.

The loom to which my improved loom-temple is adapted may be of any known form of construction which is adapted for weaving a tubular fabric, and in the accompanying drawings A denotes the breast-beam of such a loom; B, the whip-roll over which the warp-threads are conducted from the warp-beam in

the usual manner; C, the lay, carrying a reed D, and E, F, G, and H the harness-frames, carrying heddles *a*.

I denotes the warp-threads, and J the woven tubular fabric which passes over the breast-beam A to a take-up roll. I have represented four harness-frames, as that number are necessary to the weaving of a plain tubular fabric, two being required to form the upper and two the lower side of the tube; but a larger number than four can be used.

K, Fig. 3, represents the loom-temple forming the subject of my invention, which is formed of a wire or small rod bent at its central section K' and having at its ends small eyes or hooks K², which engage eyes or hooks L, attached to the central portion of the rods N. The rods N are attached at their ends to the rear side of the back harness-frame H and as far apart as the space occupied by the warp-threads I. The bent section K' of the loom-temple is inserted between the warp-threads which form the upper side of the tube and those warp-threads which form the lower side of the tube, and a brace rod or bar O is attached at its ends to the sides of the loom-temple a short distance from the fell of the fabric, or the point reached by the reed in beating up the weft-thread. The sides of the loom-temple extend from the rods N N between the heddles of the forward harness-frames E, F, and G, and they are raised and lowered by the reciprocating motion of the harness-frame H together with the warp-threads which are carried by the frame H, and as the weaving proceeds the tubular fabric J will be formed around the bent section K' of the loom-temple, as represented in Figs. 1 and 2, the parallel sides of the loom-temple at the fell of the fabric maintaining a uniform width and regularity and preventing the edges of the fabric from being drawn in by any undue tension upon the weft-thread. As the fabric is woven it is drawn by the take-up mechanism off the loom-temple and over the breast-beam A in the usual manner. The bent section K' of the loom-temple is preferably flattened, as represented in Fig. 3, so as to decrease its thickness and render it slightly flexible as the ends of the loom-tem-

ple are raised and lowered by the movement of the harness-frame.

The employment of a continuous U-shaped wire or rod is a convenient method of construction; but it will be obvious that my improved loom-temple might consist of a pair of wires or rods having a rising-and-falling motion with the warp-threads, as described, and maintained parallel with each other at the fell of the fabric by transverse brace rods or bars; but I deem it preferable to bend the wire as described, as the curved central section K' assists in holding the sides of the loom-temple parallel with each other and forms a rounded or curved end, which is not liable to be caught by the meshes of the fabric when it is released by the take-up roll.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. The combination with the harness-frames and lay of a loom, of a loom-temple comprising a pair of parallel wires with one end of said temple extending past the lay at its extreme forward movement and adapted to enter within the woven fabric, and means for reciprocating the opposite end of said temple in correspondence with one of said harness-frames, substantially as described.

2. The combination with the harness-frames and lay of a loom, of a pair of parallel wires, each of said wires being connected at one end to one of said harness-frames and having its opposite end extending in advance of the lay at its extreme forward movement and a trans-

verse brace-rod attached to said wires, substantially as described.

3. The combination with the harness-frames and lay of a loom, of a U-shaped wire, or rod, having its central or curved section adapted to enter within a tubular fabric, and means connected with the ends of said U-shaped wire or rod, for imparting a reciprocating motion thereto in correspondence with one of said harness-frames, substantially as described.

4. The combination with one of the harness-frames and lay of a loom, of the rods N, N, attached to said harness-frame, a U-shaped rod K carried at its ends by said rods N, N, and having its bent section K' in advance of the forward movement of the lay so as to be inclosed in the fabric as it is woven, and a transverse brace-rod O connecting the sides of said U-shaped wire, substantially as described.

5. The combination with the harness-frames and lay of a loom, of a U-shaped rod K attached at its ends to one of the harness-frames of the loom, and having its bent section flattened, or reduced in thickness as at K', and a transverse brace-rod attached at its ends to the sides of said U-shaped wire, substantially as described.

Dated this 31st day of March, 1894.

WILLIAM B. FITTZ.

Witnesses:

HENRY F. HARRIS,
LOUIS CUTTING.