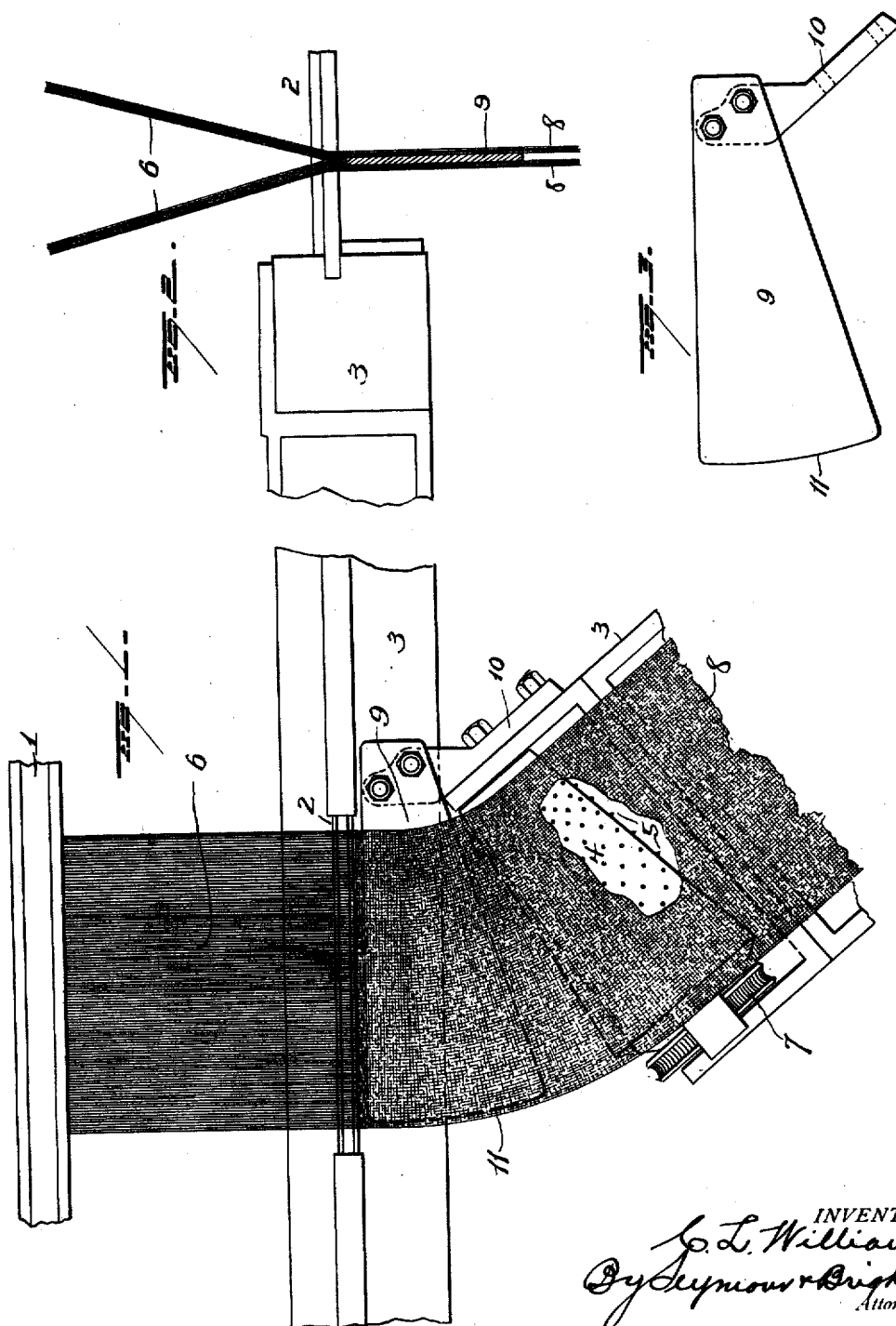


C. L. WILLIAMS.
 LOOM.
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1,319,819.

Patented Oct. 28, 1919.



INVENTOR
C. L. Williams
 By *Seymour Bright*
 Attorneys

UNITED STATES PATENT OFFICE.

CHARLES L. WILLIAMS, OF MIDDLETOWN, CONNECTICUT, ASSIGNOR TO RUSSELL
MANUFACTURING COMPANY, OF MIDDLETOWN, CONNECTICUT.

LOOM.

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Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, CHARLES L. WILLIAMS, a citizen of the United States, and a resident of Middletown, in the county of Middlesex and State of Connecticut, have invented certain new and useful Improvements in Looms; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to improvements in looms and more particularly to such as are employed in the weaving of curved fabric as, for example, the circular fabric portions of tire casings,—the object of the invention being to provide simple and efficient means whereby the proper and accurate curvature of the fabric as it comes from the weaving means, shall be insured.

With this object in view, the invention consists in certain novel features of construction and combinations of parts as hereinafter set forth and pointed out in the claims.

In the accompanying drawings; Figure 1 is a plan view illustrating the application of my improvements; Fig. 2 is a side elevation and illustrating the relation of the guide plate to the fabric, and Fig. 3 is a detail view of the guide plate and its supporting arm.

1 represents, diagrammatically, the harness of a loom, 2 the reed, and 3 portions of the framework. Mounted in the framework a comparatively short distance from and in front of the reed, is a conical, taking-off roller 4 having numerous pins or projections 5 to engage the fabric. This roller is so mounted that its axis shall be disposed at an angle of forty-five degrees, more or less, to the reed and to the direction of feed of the warp threads 6. The conical taking-off roller 4 may be provided with a worm wheel 7 to receive motion from a worm (not shown), which latter may be driven from any suitable source of power.

In the weaving of the circular fabric portion of a tire casing, the same is woven in a manner to form overlying layers 8—8 so that the finished fabric shall be capable of having a partly circular cross section and therefore having a shape corresponding ap-

proximately to the contour of a tire. In other words the fabric is woven in the form of a flat tube open at the inner edge.

For the purpose of causing the proper curvature of the fabric as it leaves the weaving means so that the finished article shall be accurately curved and so that said fabric shall be accurately presented to the taking-off roller, I interpose between said taking-off roller and the reed, a segmental guide plate 9. This plate is supported by an arm 10 secured to the framework of the loom and said plate enters between the layers of the fabric, its free edge 11 being curved in the arc of the circle which it is desired the fabric article is to assume and adapted to engage the fabric at the juncture of its two layers. This guide plate will insure the proper curvature of the fabric and its accurate presentation to the conical taking-off roller.

Slight changes might be made in the details of construction of my invention without departing from the spirit thereof or limiting its scope and hence I do not wish to restrict myself to the precise details herein set forth.

Having fully described my invention what I claim as new and desire to secure by Letters-Patent, is:—

1. The combination with the weaving means of a loom, of a taking-off roller, and a guide plate supported between said weaving means and said taking-off roller, said guide plate adapted to enter between the layers of a fabric coming from the weaving means and having a curved free edge to engage said fabric at the juncture of its layers.

2. The combination with the weaving means of a loom and a taking-off roller, of a segmental guide plate interposed between said weaving means and said taking-off roller and adapted to engage the fabric to insure the proper curvature thereof and its accurate prosecution to said taking-off roller.

3. The combination with the weaving means of a loom and a taking-off roller disposed at an angle relatively to said weaving means, of a segmental guide plate disposed between said weaving means and said taking-off roller, said guide plate adapted to enter between the layers of said

fabric and having a curved free edge to engage the fabric at the juncture of the layers thereof.

4. The combination with the framework and weaving means of a loom, of a conical taking-off roller having projections to engage the fabric, said roller mounted in the framework at an angle to said weaving means, an arm secured to the framework, and a segmental guide plate secured to said

arm and disposed between the weaving means and the taking-off roller, said guide plate having a curved outer end.

In testimony whereof, I have signed this specification in the presence of two subscribing witnesses.

CHARLES L. WILLIAMS.

Witnesses:

C. CLIFFORD LYMAN,
F. C. FAGAN.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."