

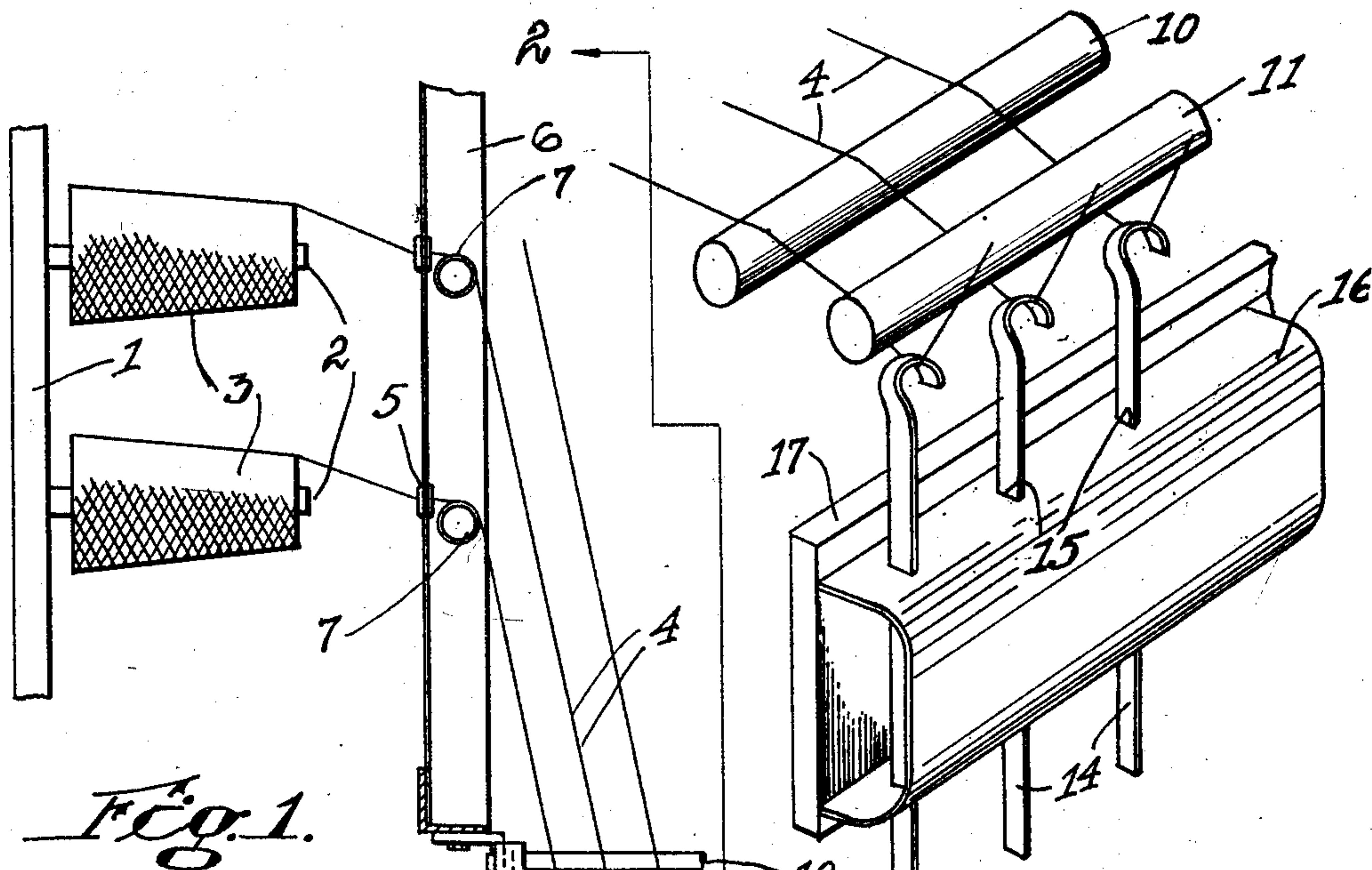
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A. L. REMINGTON

**1,777,503**

# STOP MOTION FOR WARP COMPRESSING MACHINES

Filed Dec. 14, 1927



*Fig. 1.*

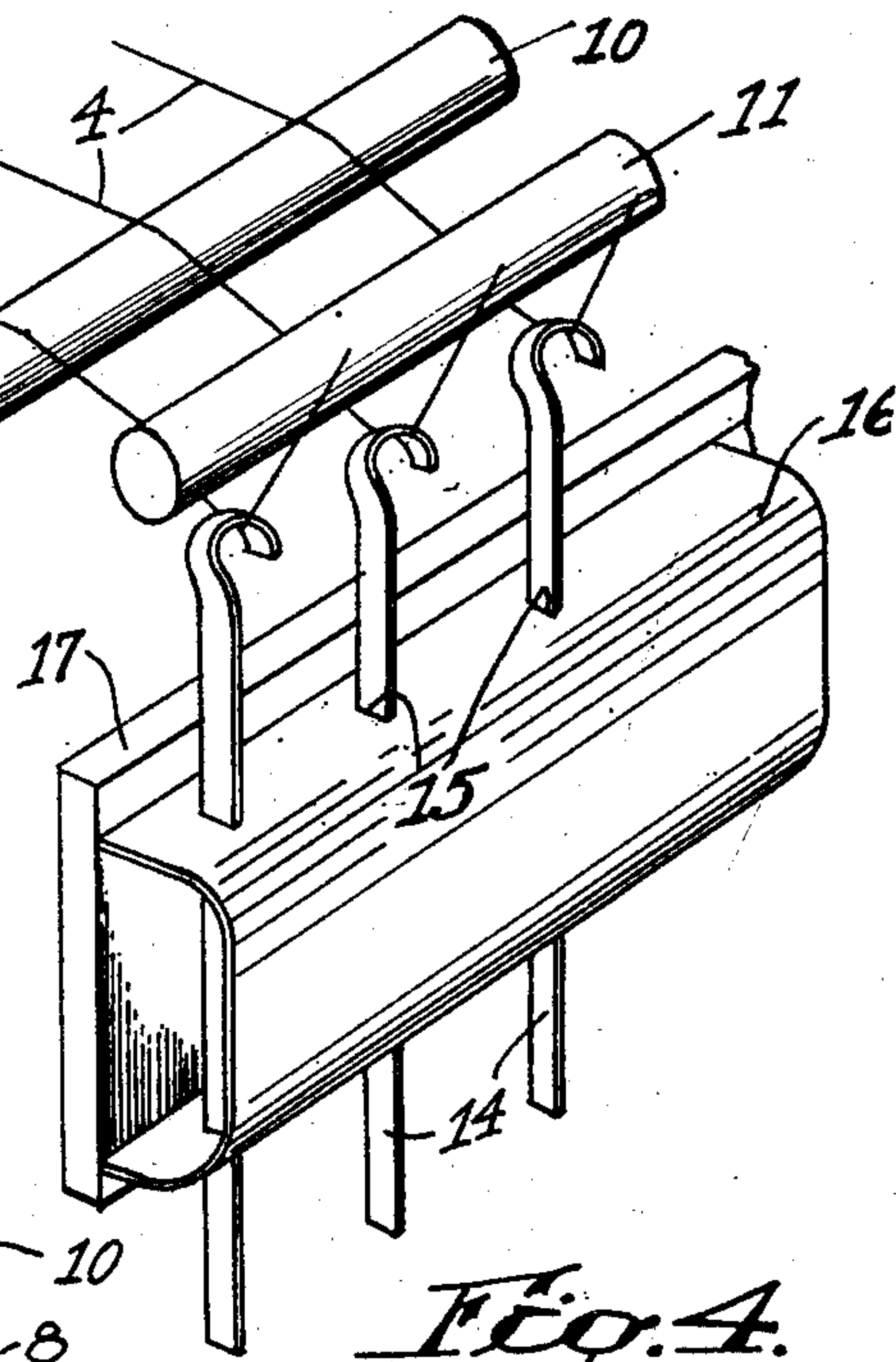


Fig. 4.

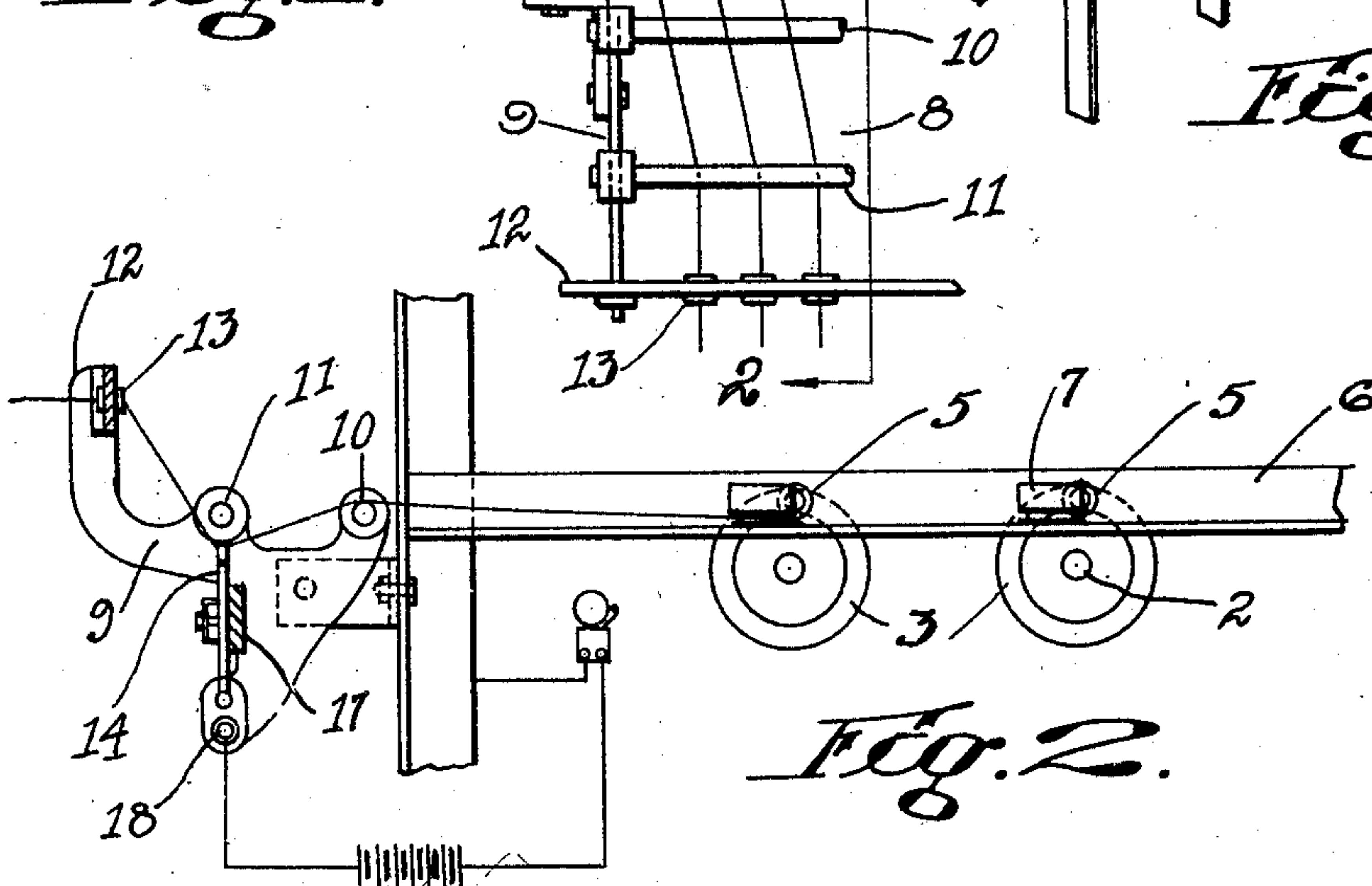


Fig. 2.

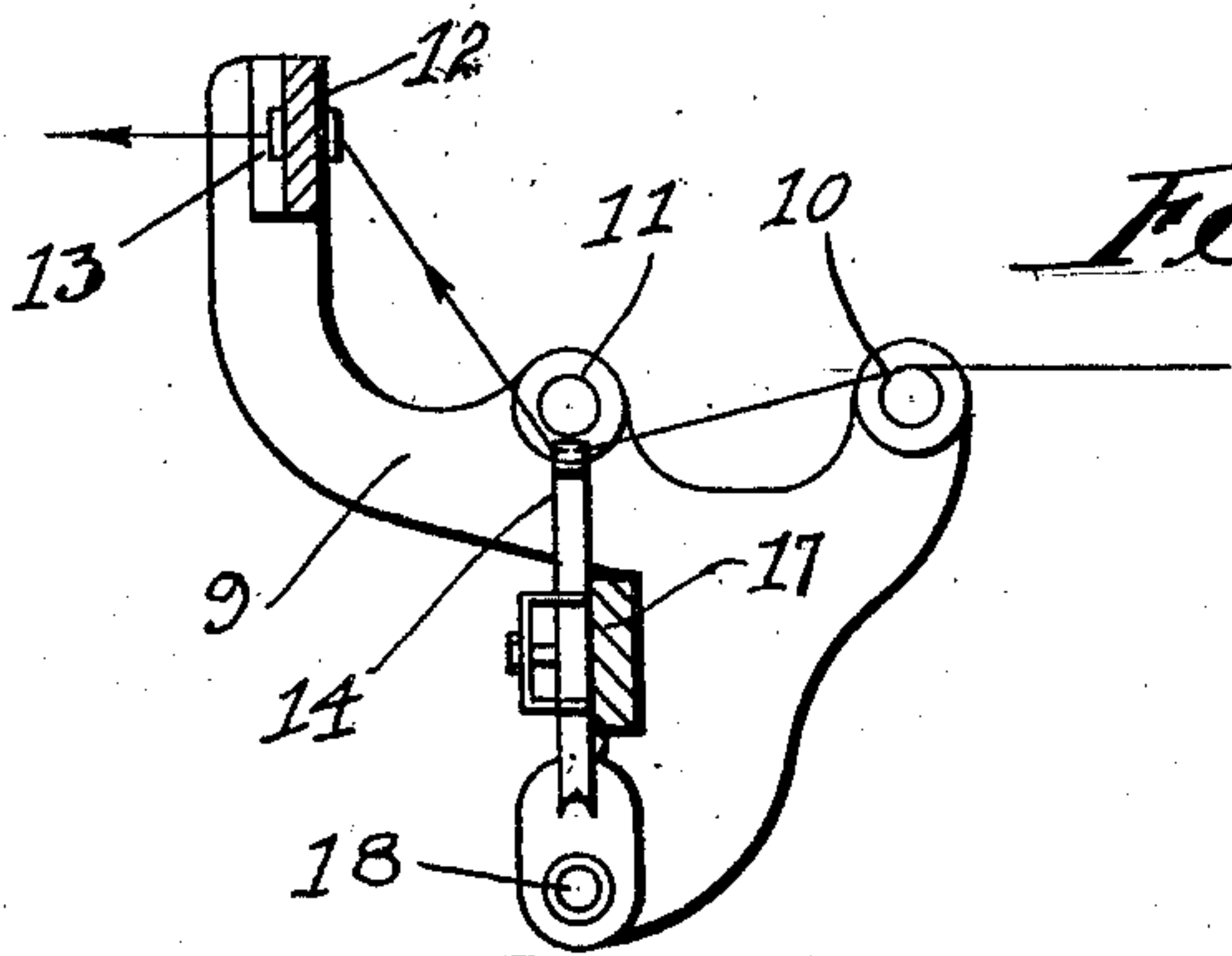


Fig. 3.

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# UNITED STATES PATENT OFFICE

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## STOP MOTION FOR WARP-COMPRESSING MACHINES

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My invention relates to stop motions for the creels of warpers or beamers, or similar machines, adapted to wind a plurality of ends of yarn on a cylindrical drum. In stop motions heretofore constructed, each end of yarn passes under a hook and holds the hook up; when an individual end breaks, the hook which it supports falls and thereby completes an electric circuit and stops the winding machinery.

The present invention contemplates an improvement in stop motions of this type, in that the ends of yarn are led downwardly to the hooks and then upwardly therefrom at such an angle that, accidental completion of the electric circuit, due to chattering of the hooks which was not uncommon in prior constructions, is eliminated.

The foregoing will more fully appear from the following detailed description taken in connection with the accompanying drawings, in which—

Fig. 1 is a plan view of a portion of a creel for a warp compressing machine, showing the invention applied thereto.

Fig. 2 is a sectional view, taken on the line 2—2 of Fig. 1.

Fig. 3 is an enlarged sectional view, showing the present improvement in detail.

Fig. 4 is a perspective view, to more clearly illustrate the action of the device.

Like reference characters refer to like parts throughout the drawings.

Referring first to Fig. 1, the creel provides vertical standards, not shown, which support a plurality of horizontal bars 1. From these bars 1 project a plurality of spindles 2, upon which packages of thread 3 are mounted. The packages 3 may be of any desired type; and the individual ends of yarn, 4, 4 from each row of spindles 2, are led through porcelain eyes 5 in a guide board 6 around suitable tensioning devices 7 and then to the improved stop motion, indicated generally by the numeral 8.

Referring now more particularly to Figs. 2 and 3, the stop motion 8 for each row of spindles comprises spaced frame members 9, which support horizontal bars 10 and 11 in parallel relation at the same level and a

thread board 12 in front of and above the bars 10 and 11 which provides a plurality of porcelain eyes 13. The threads or ends of warp 4 lead from the tensioning devices 7 over the bar 10 and thence through individual stop motion hooks 14, the bar 11 acting as a limiting stop to hold the hooks 14 from rising beyond a certain point. As clearly shown in Fig. 3, the eyes 13 are located considerably above the plane of the bar 11 and the tops of the hooks 14, so that the threads 4 rise sharply from the hooks 14 to the eyelets 13; consequently, the tension on the threads 4 results in a considerable component force directed upwardly to hold the hooks 14 against the bar 11. This upward component force is so great that the hooks 14 cannot drop below the bar 11, despite variations in thread tension so that chattering or vibration of the hooks is eliminated.

The hooks 14, which are best shown in Fig. 4, are located in slots 15, in a guide member 16 below the bar 11 which is mounted on the same cross member 17 that supports the frames 9; the lower portions of the hooks 14 extend below the bottom of the guide member 16, and when an individual thread breaks, its particular hook 14 drops and contacts with an insulated bar 18, to complete an electric circuit to actuate the stopping mechanism on the warper, or other machinery, as indicated diagrammatically in Fig. 2.

From the foregoing, it is apparent that by my invention, I have provided an improved stop mechanism that functions properly at all times, due to the fact that the ordinary tension on the threads 4 is sufficient to hold the hooks 14 closely against the bar 11. Consequently slight variations of the thread tension will not result in chattering or vibration of the hooks 14 such as would ultimately cause one or more hooks 14 to accidentally engage the contact bar 18 and stop the warper unnecessarily, while the thread was still running.

I claim,

In apparatus of the class described, the combination with a horizontal rod over which a plurality of threads are led, a bar

extending parallel to and above said rod providing a row of thread guides, and a plurality of vertically movable hooks through which said threads pass between said rod  
5 and said thread guides, of a second horizontal rod located in the same plane as said first named rod and spaced therefrom with its under surface extending above the tops of said hooks, said second rod serving to limit  
10 upward movement of said hooks under the pull of said threads, whereby said threads lead upwardly from said hooks to said thread guides at a steep angle with the tops of said hooks maintained in substantial engagement  
15 with the under surface of said second rod.

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