

March 6, 1928.

1,661,925

E. CORMIER

BRAKE BAND LET-OFF

Filed Dec. 7, 1925

2 Sheets-Sheet 1

Fig. 1.

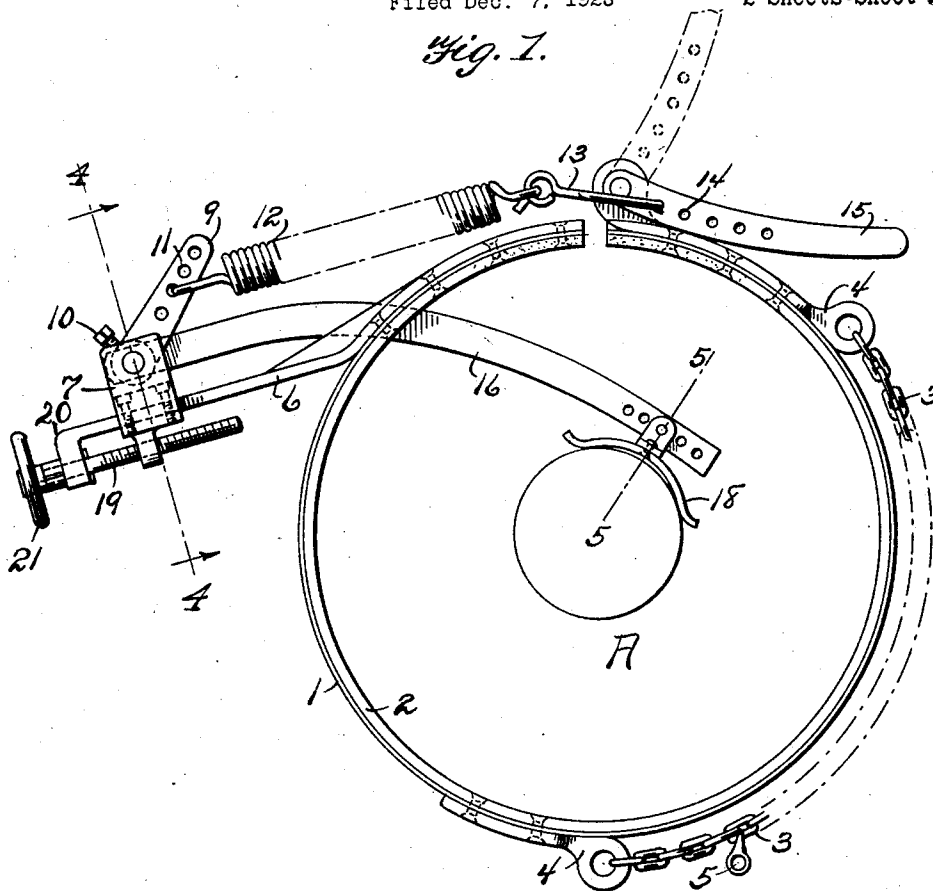
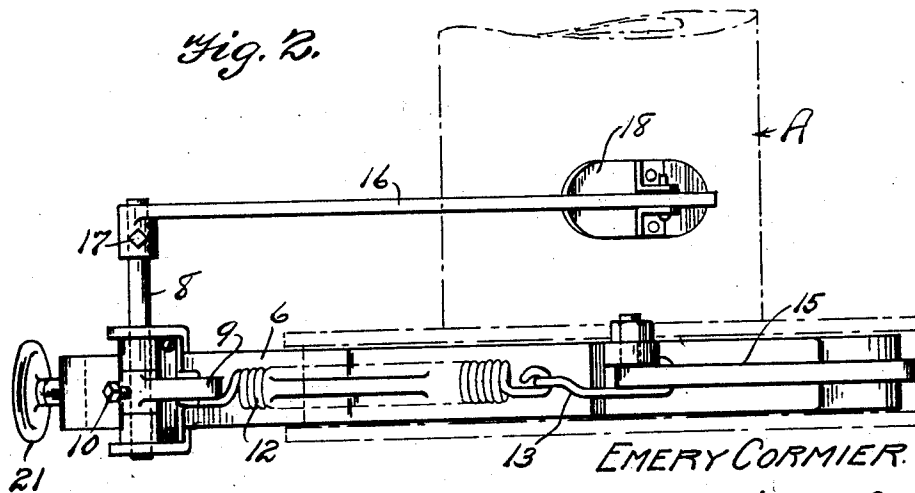


Fig. 2.



EMERY CORMIER.

INVENTOR

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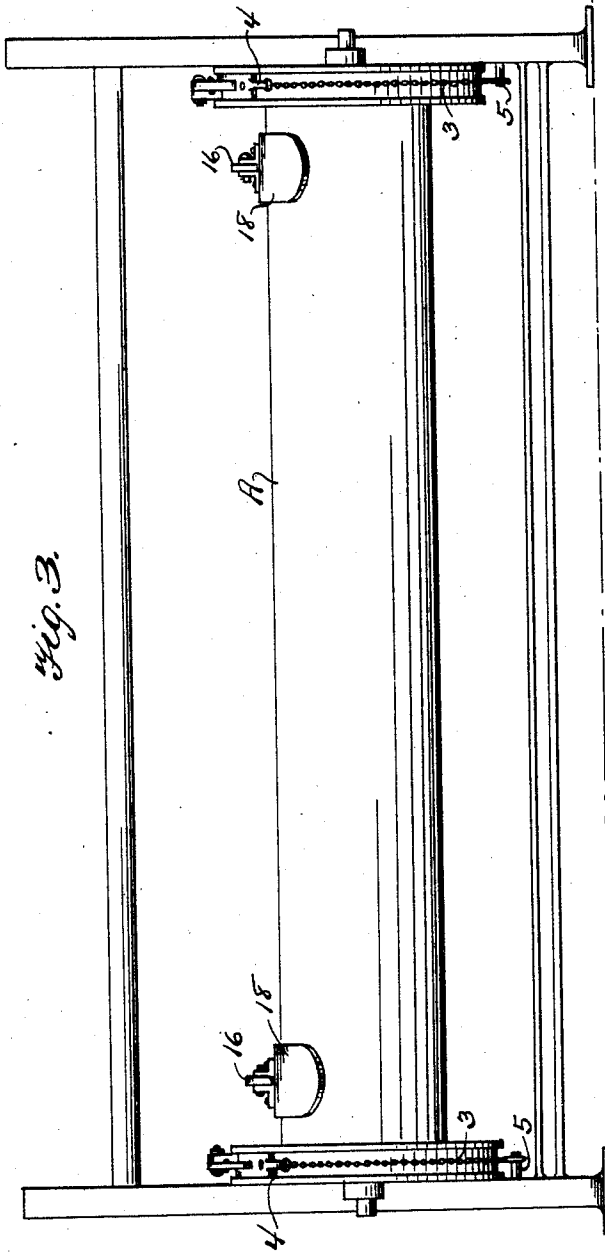
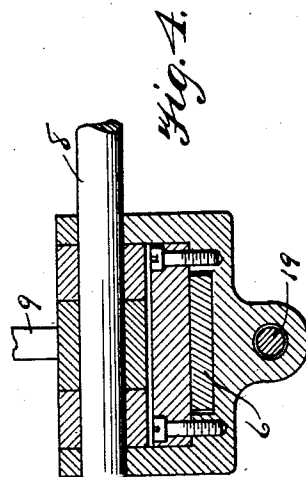
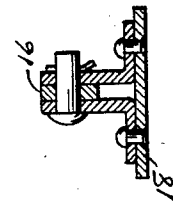


Fig. 3.



EMERY CORMIER

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Patented Mar. 6, 1928.

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UNITED STATES PATENT OFFICE.

EMERY CORMIER, OF NASHUA, NEW HAMPSHIRE, ASSIGNOR OF ONE-HALF TO FRED-
ERICK CHARLES SASSE, OF NASHUA, NEW HAMPSHIRE.

BRAKE-BAND LET-OFF.

Application filed December 7, 1925. Serial No. 73,852.

This invention relates to a let off for warp beams, the general object of the invention being to provide means whereby the rate of let-off and tension of the brake is varied in direct proportion to the decrease in size of the warp beam during the weaving operation, thus insuring an even woven cloth with uniform lengths and widths and to eliminate unsightly weights and cables on the warp beams.

Another object of the invention is to provide means whereby the weaver can easily render the invention inactive whenever he desires to turn back the warp.

This invention also consists in certain other features of construction and in the combination and arrangement of the several parts, to be hereinafter fully described, illustrated in the accompanying drawings and specifically pointed out in the appended claims.

In describing my invention in detail, reference will be had to the accompanying drawings wherein like characters denote like or corresponding parts throughout the several views, and in which:—

Figure 1 is an end view showing the invention in use on a warp beam.

Figure 2 is a plan view.

Figure 3 is a front view of a warp beam, with the attachment at each end thereof.

Figure 4 is a section on line 4—4 of Figure 1.

Figure 5 is a section on line 5—5 of Figure 1.

As shown in these views, I place a brake band 1 in the groove of each head of the warp beam A, this band being provided with a suitable lining 2 and a chain 3 is attached to the supports 4 on the band so that the brake can be fastened to a stationary part of the apparatus, as shown at 5, to prevent movement of the brake on the head. A bracket 6 is supported from the band and slidably supports a frame 7 in which is journaled a shaft 8. An arm 9 is adjustably connected with said shaft by the set screw 10 and said arm is provided with a number of perforations 11 so that one end of a coiled spring 12 can be adjustably connected with the arm. The other end of the spring is attached to a hook 13 which is adapted to engage any one of a number of holes 14 in a locking lever 15 which is pivoted to the upper support 4. A curved arm 16 is fas-

tened to the end of shaft 8 by the set screw 17 and a pressure plate 18 is adjustably connected with the outer end of the arm 16. This plate is of curved formation, with its ends curved upwardly and is arranged to engage the warps on the beam. The frame 7 is adjusted on the bracket 6 by means of a threaded shaft 19 engaging a nut part 20 on the frame, said shaft being rotatably supported by the bracket 6 and having a hand wheel 21 thereon by which it may be turned.

The brakes are placed on the beam heads by first lifting up the levers 15 to widen the brake bands so that the bands can be placed in the grooves in the heads. The springs are then adjusted by placing the parts in the proper holes to obtain the proper tension. The levers 15 are then swung downwardly so as to cause the brakes to tightly and evenly engage the heads. As before stated, the brakes are prevented from rotating with the heads by fastening the brakes to stationary parts by means of the chains. The pressure plate 18 of each assembly will then be bearing with even pressure on the warp, as the spring 12 will act to rotate the shaft 8 and thus cause the arm 16 and plate 18 to swing downwardly until said plate is bearing against the warp. The pressure with which the plate engages the warp is adjusted by adjusting the frame 7 on bracket 6 by means of the screw shaft 19.

An even pressure is thus maintained on the warp from a full sized warp until it is all run out on the beam without changing the adjustment, as the spring 12 exercises an even pull on the arm 16 from beginning to end of warp. The curvature of plate 18 and the fact that it is made of polished steel will prevent said plate from injuring the finest warp.

Should the weaver wish to turn back the warp for any reason, all he has to do is to lift up the levers 15 to release the brake bands which will permit him to do the necessary work, after which the levers are swung downwardly again.

This let off insures evenly woven cloth as it exercises an even pressure at all times on the warp and does not work by jerks and is not affected by weather conditions, as are some of the let offs now on the market.

As will be seen, as the warp beam decreases in size, the tension of the spring will decrease and thus the brake will offer

less resistance to the beam heads so that the rate of let-off and tension of the brake is varied in direct proportion to the decrease in size of the warp beam during the weaving operation.

It is thought from the foregoing description that the advantages and novel features of my invention will be readily apparent.

I desire it to be understood that I may make changes in the construction and in the combination and arrangement of the several parts, provided that such changes fall within the scope of the appended claims.

What I claim is:—

15 1. A brake and let-off for a loom comprising a brake band engaging a part of the warp beam, a bracket arm projecting tangentially from said band, a frame slidably adjustable longitudinally of said arm, means
20 for adjusting said frame toward and away from said band, a rock shaft carried by the frame, an arm projecting from the shaft, a coil spring having one end connected with the last mentioned arm and its other end
25 connected with relation to the band, a second arm carried by the rock shaft, and a pressure plate carried by the second mentioned arm for engaging the warp on the beam.

30 2. A brake and let-off for a loom comprising a brake band engaging a part of the warp beam, a bracket arm projecting tangentially from said band and offset at one

end, a frame slidably mounted on said arm and including a depending threaded lug, an adjusting screw journaled in said offset extremity of the arm and threadedly associated with said lug whereby said frame may be adjusted, a rock shaft carried by the frame, an arm projecting from said shaft, a coil spring having one end connected with the arm and its other end connected with a part of the brake band, a second arm on the rock shaft, and a pressure plate carried by the second mentioned arm for engaging the warp on the beam.

3. A brake and let-off for a loom comprising a brake band engaging a part of the warp beam, a bracket arm projecting tangentially therefrom, a frame slidably mounted on the arm, means for adjusting said frame, a rock shaft journaled in the frame, an arm projecting from said shaft and having spaced openings, a locking lever pivoted on the band in spaced confronting relation to said arm and having a plurality of spaced openings, a link adapted to be singly received by said last mentioned openings, a coil spring terminally connected with the link and the arm projecting from the shaft, a second arm on the rock shaft and curved longitudinally, and a pressure plate carried by the second mentioned arm for engaging the warp on the beam.

EMERY CORMIER.