No. 825,585. PATENTED JULY 10, 1906.

H. D. COLMAN.

DEVICE FOR CORRECTING DRAWING-IN ERRORS.

APPLICATION FILED OCT. 12, 1904.

Fig. 1.

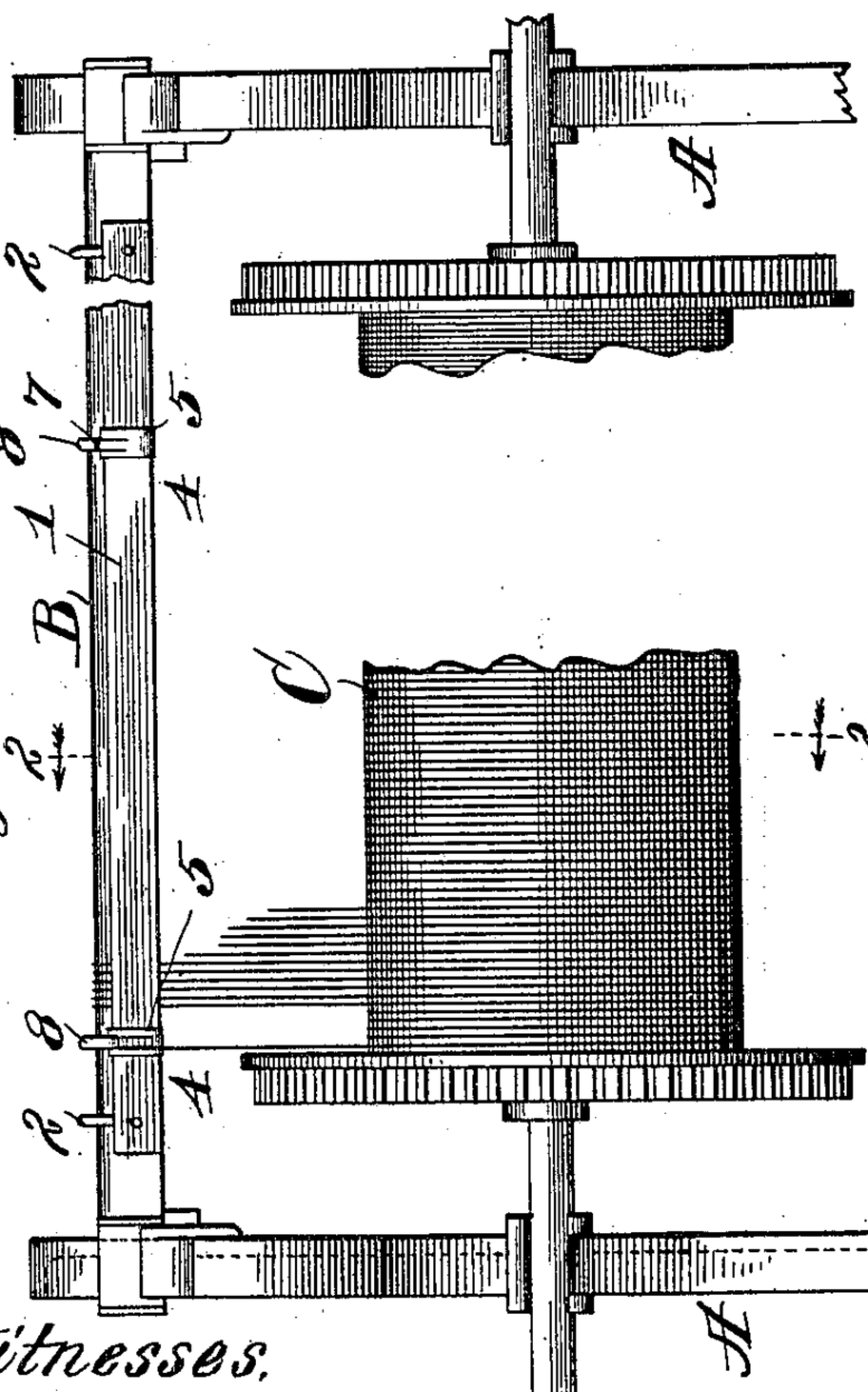


Fig. 2.

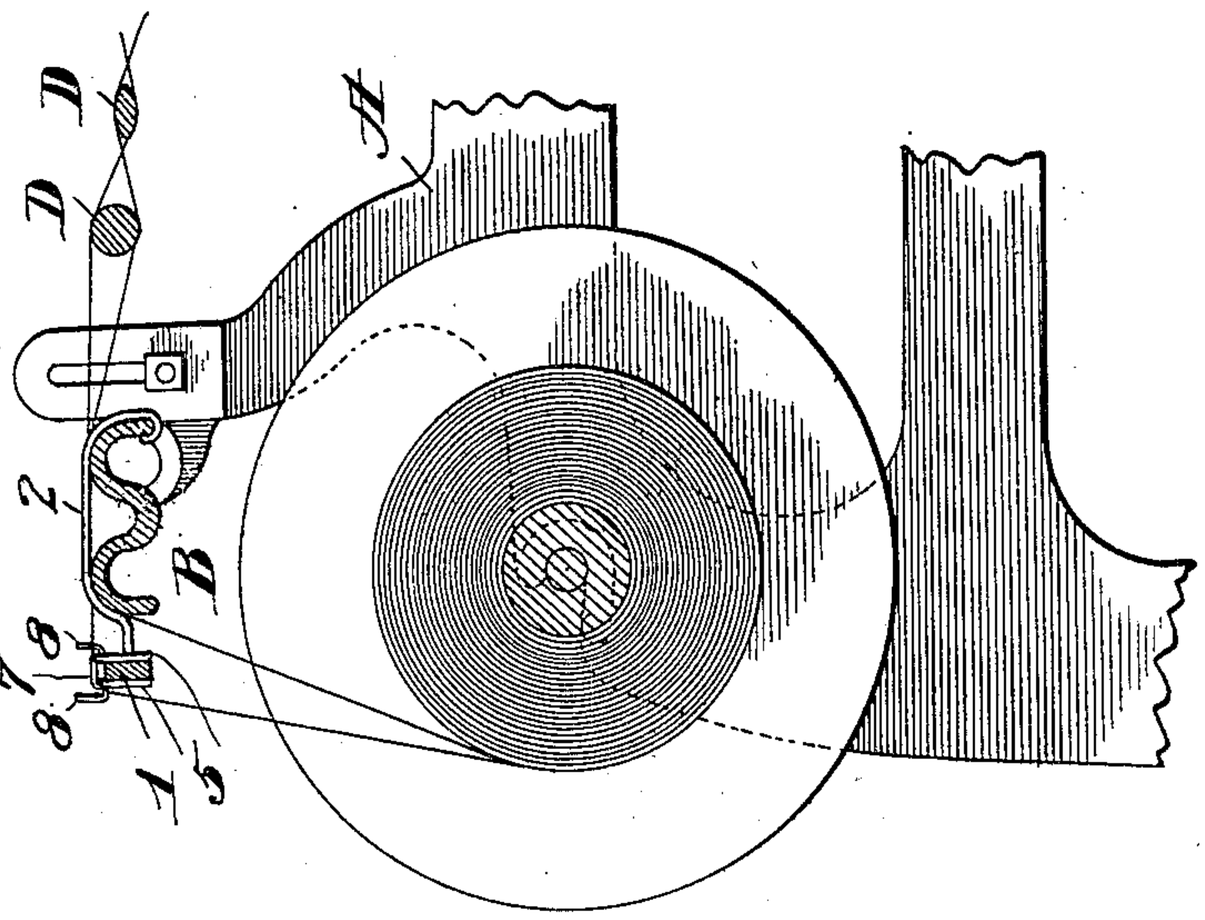


Fig. 3.

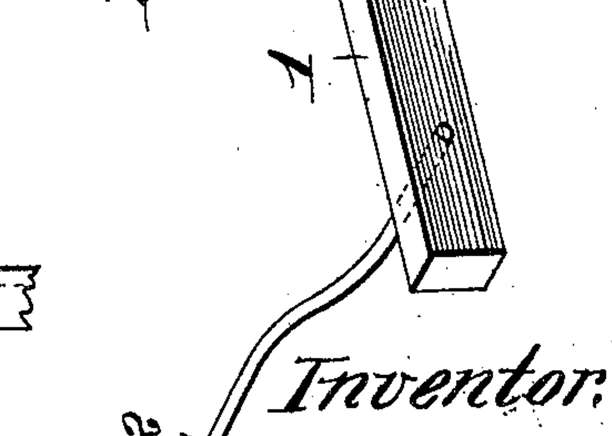


Fig. 4.

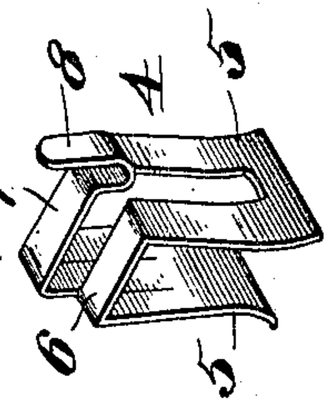
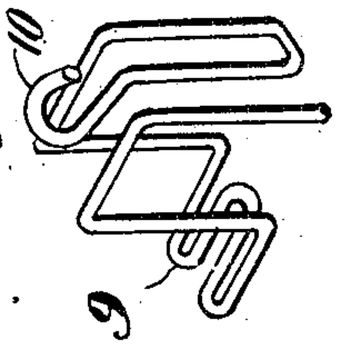


Fig. 5.



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UNITED STATES PATENT OFFICE.

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DEVICE FOR CORRECTING DRAWING-IN ERRORS.

No. 825,585. Specification of Letters Patent. Patented July 10, 1906.

Application filed October 12, 1904. Serial No. 228,241.

To all whom it may concern:

Be it known that I, HOWARD D. COLMAN, a citizen of the United States, residing at Rockford, in the county of Winnebago and State of Illinois, have invented a new and useful Device for Correcting Errors in Drawing in Warps, of which the following is a specification.

This invention relates to the art of weaving, and refers particularly to a device for correcting drawing-in errors in a loom-warp.

As is well known, loose "ends" appear in and disappear from the loom-warp as said warp is unwound from the warp-beam. In order to insure that the weaving shall be perfect, it is necessary to make these ends complete by tying on threads from the loom-warp or in the case of extra threads to withdraw such threads from the loom-warp, transferring them into the selvage of the loom-warp.

The object of this invention is the production of a device for directing a thread from a point on the warp-beam to a place in the loom-warp where a thread is missing, also for directing an extra thread appearing upon the warp-beam to the selvage of the loom-warp.

In the accompanying drawings, Figure 1 is a view of a portion of a loom in rear elevation, showing the application of my device to said loom. Fig. 2 is a vertical section through such loom on dotted line 2 2 of Fig. 1. Fig. 3 is a perspective view of one end of the guide-bar of my invention. Fig. 4 is a perspective view of one of the metallic guide-clips adapted to be placed upon said guide-bar. Fig. 5 illustrates the guide-clip as formed from wire.

In the embodiment herein shown of this invention I provide a weaving-loom having a supporting-frame A, upon which is mounted in any suitable manner a whip-roll B, extending the full width of the frame A. A warp-beam C is rotatably mounted upon the supporting-frame A. The body of warp-threads extends from the warp-beam C over the whip-roll B, said threads passing over and under the lease-rods D to the harnesses. (Not shown.)

A guide-bar 1, adapted to extend parallel with and located slightly rearward from the whip-roll B, is held in position with relation to said whip-roll by means of two hooked supporting-rods 2, one end of each of said rods being secured rigidly within a suitable opening in the guide-bar 1, the other (forward) end of the rod being bent downwardly and rearwardly to form an attaching-hook 3. The supporting-rods 2 are adapted to rest upon the whip-roll B, the hooks 3 of said supporting-rods engaging the forward and lower edge of said whip-roll. By means of this hook connection the guide-bar 1 may readily be removed from the loom.

Spring guide-clips 4, formed from wire, sheet metal, or other suitable material, are adapted to be placed upon the guide-bar 1, being held in position upon said bar by reason of the elasticity of said clips. Each of the spring-clips 4 comprises two opposing grasping-fingers 5, with connecting top bar 6. A tongue 7 is cut out from the middle portion of each of said clips 4, which tongue is raised above the top bar 6 of the clip and at its free end extends downwardly, outwardly, and thence upwardly to form the guide-hook 8. The spring-clips 4 may be placed in pairs upon the guide-bar 1 at any point in its length with the guide-hooks 8, one on each side of the bar 2. The pressure of the spring-fingers 5 of the clips 4 upon the sides of the bar 1 holds each clip securely upon said bar and prevents longitudinal movement of the clips upon the bar.

The modified form of clip shown in Fig. 5 is similar to the sheet-metal clip shown in Fig. 4. In the wire clip, however, a guide-loop 9 is provided upon one side of the clip, the purpose of which loop is to direct the thread from the warp-beam to the guide-hook 10.

When an extra thread appears in the loom-warp said thread is guided to the edge of said warp among the selvage, threads by placing two guide-clips 4 upon the guide-bar 1, one of said clips, with its guide-hook 8, extending rearwardly from the loom at a point coincident with said extra thread, the other clip, with its guide-hook 8, extending toward the loom at a point in a line with the selvage-threads. The extra thread is then passed from the warp-beam over the guide-bar 1 and upon the guide-hooks 8 of the two clips 4 just mentioned and its end secured among the selvage-threads of the loom-warp. In the same manner a thread may be taken from among the selvage-threads of the warp

upon the warp-beam and be joined to the end of an exhausted or disappearing thread in the loom-warp, guide-clips 4 being placed upon the guide-bar 1 in proper positions to direct the thread from its place upon the warp-beam to the desired place upon the loom-warp, as shown in Fig. 1. While in the drawings I have shown only one thread upon the guide-bar 1, it is apparent that by placing additional clips upon said guide-bar any number of threads may be transferred from points in the warp-beam to different points in the loom-warp.

It is clear that various changes and modifications may be made in this invention without departing from the spirit and scope thereof, wherefore I desire to have it understood that I do not intend to limit myself to the precise form of mechanism illustrated, but, on the contrary, desire to claim said invention broadly and in all its various forms and applications.

I claim as my invention—

1. In a device for correcting drawing-in errors, the combination with a loom, of movable thread-guides for directing a thread from its position on the warp-beam to a relatively different position in the loom-warp.

2. In a device for correcting drawing-in errors, in combination, a guide-bar and movable thread-guides.

3. In a device for correcting drawing-in errors, in combination, a guide-bar and thread-guides adapted to have a frictional engagement with said guide-bar.

4. In a device for correcting drawing-in errors, in combination, a guide-bar and thread-guides, each thread-guide having a spring-clamping finger for said bar and a guide-hook for the thread.

5. In a device for correcting drawing-in errors, in combination, a guide-bar, and thread-guides formed from spring material and adapted to engage said bar, each thread-guide having a guide-hook for the thread.

6. In a device for correcting drawing-in errors, in combination, a guide-bar, and thread-guides formed from sheet material having clamping-fingers adapted to frictionally engage said bar, each thread-guide having a guide-hook for the thread.

7. In a device for correcting drawing-in errors, the combination with a loom of a guide-bar supported upon the loom, rearward of the whip-roll and thread-guides movably supported on said guide-bar.

8. In a device for correcting drawing-in errors, in combination, a guide-bar, supporting-arms for said guide-bar adapted to rest upon the whip-roll of a loom and engage the lower edge of said roll, and thread-guides movably supported on said guide-bar.

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Witnesses:
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