

Feb. 23, 1937.

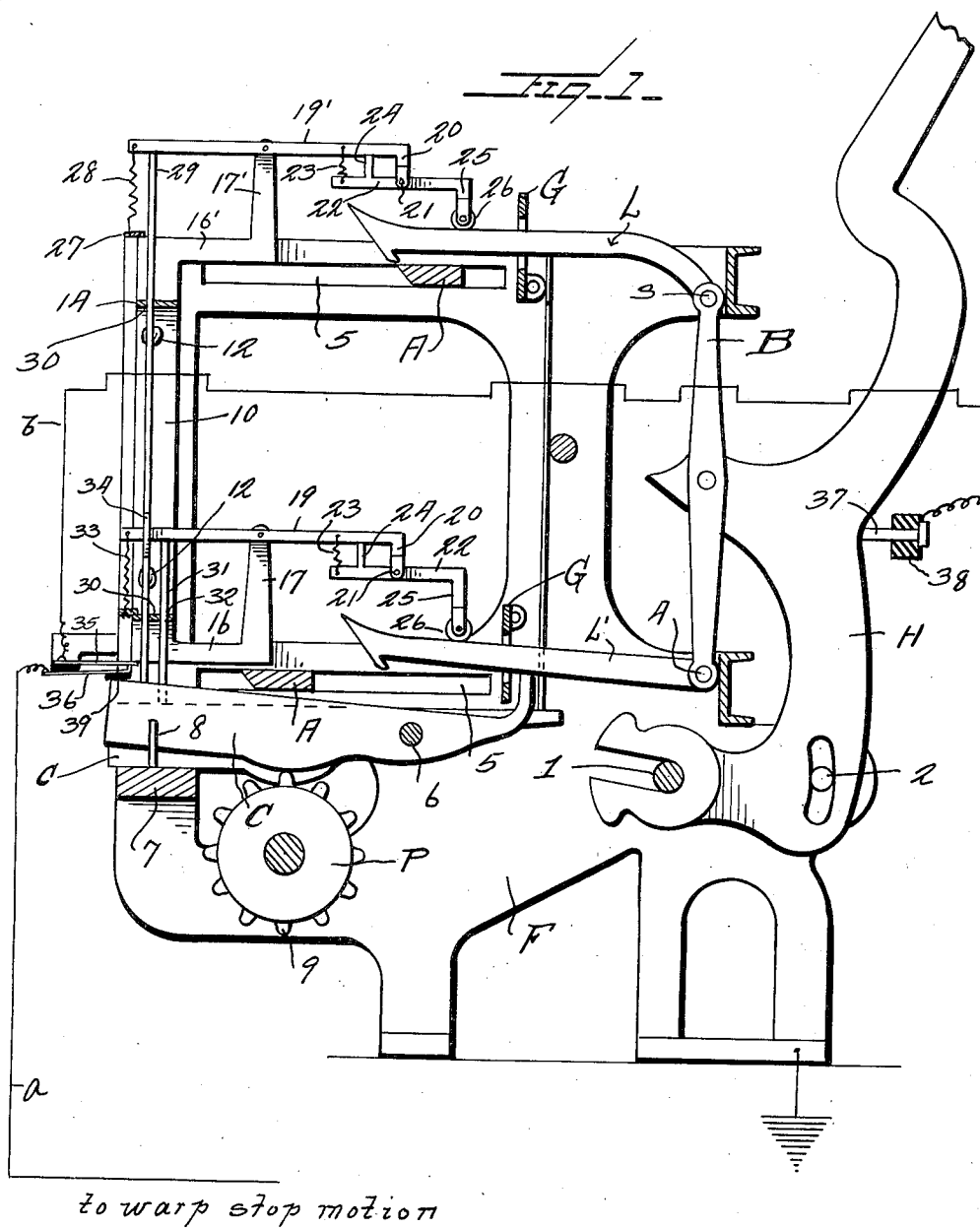
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ATTACHMENT FOR DOBBY HEADS

Filed June 18, 1936

2 Sheets-Sheet 1



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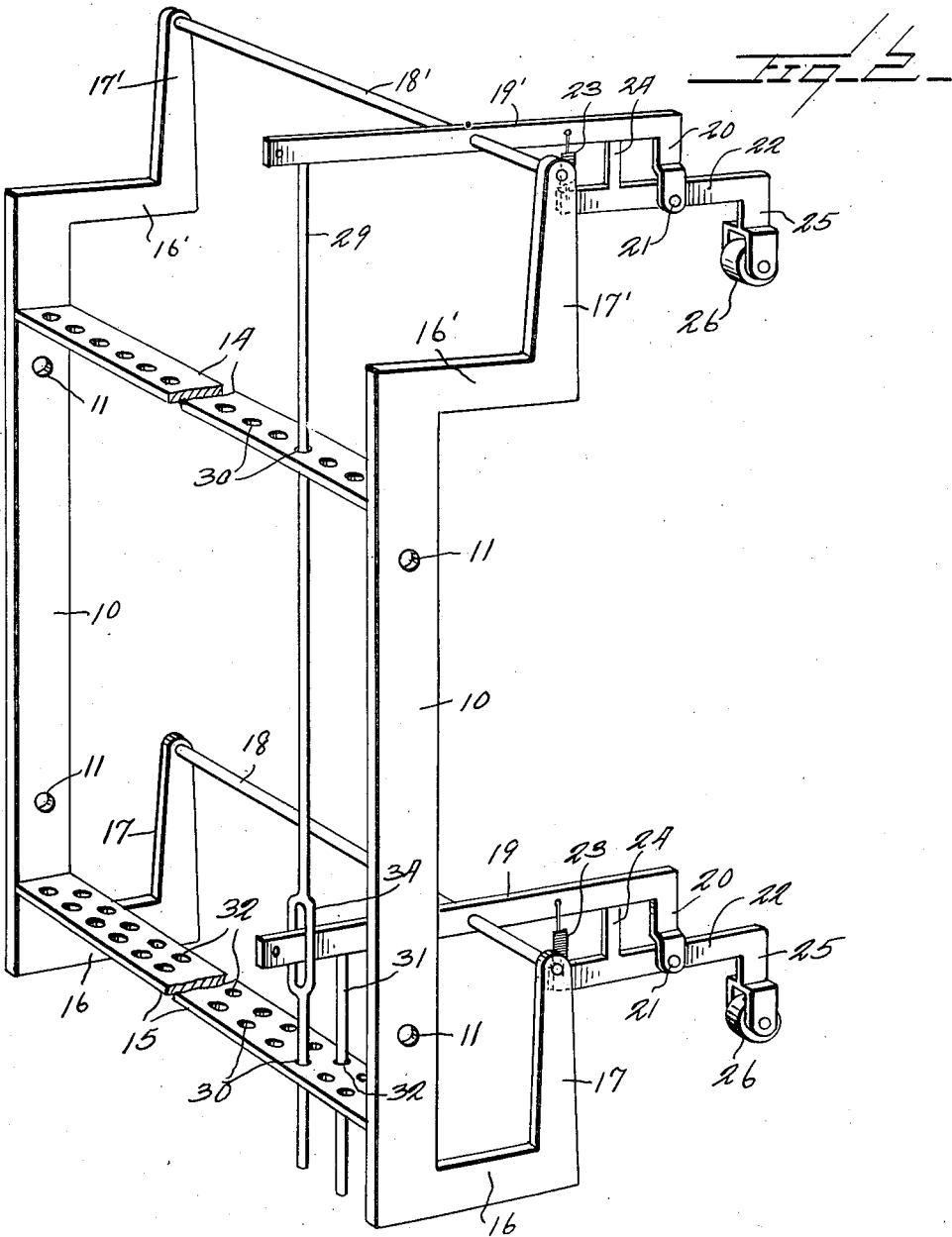
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UNITED STATES PATENT OFFICE

2,071,784

ATTACHMENT FOR DOBBY HEADS

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Application June 18, 1936, Serial No. 85,965

3 Claims. (Cl. 139—66)

This invention relates to an attachment for a dobby head, and it is primarily an object of the invention to provide an attachment of this kind which may be readily mounted in a position to permit control levers or members carried by the attachment to coact with the jack hooks or latches of the dobby to eliminate misweaves occurring when the hooks or latches, levers or other parts associated therewith stick or for any other reason fail to respond to the actuating mechanism.

It is also an object of the invention to provide an attachment of this kind which, when in applied position with respect to a dobby head, effectively eliminates mispicks, thus assuring increased production and better cloth.

The invention also has for an object to provide means in coaction with the jack lifters and jack levers for making an electric stop motion effective should a jack hook or latch, a jack back or a jack lever break as well as in the event of a mispick.

The invention consists in the details of construction and in the combination and arrangement of the several parts of my attachment for a dobby head whereby certain important advantages are attained and the device rendered simpler, less expensive and otherwise more convenient and advantageous for use, as will be hereinafter more fully set forth.

The novel features of my invention will hereinafter be definitely claimed.

In order that my invention may be the better understood, I will now proceed to describe the same with reference to the accompanying drawings, wherein:—

Figure 1 is a view partly in section and partly in elevation and of a somewhat diagrammatic character illustrating an embodiment of my invention;

Figure 2 is a view in perspective of the attachment as herein disclosed unapplied and with parts omitted.

As disclosed in the accompanying drawings, F denotes a dobby frame upon which are mounted and supported the several parts of the stop mechanism of the usual construction. H denotes a harness jack or jack lever pivotally supported upon a transverse rod 1 with its pivotal movement limited by a bar 2 in a well known manner. The lever H has pivotally supported thereon a jack back or connector B, the upper end portion of which being pivotally connected, as at 3, with an upper latch or jack hook L and with its lower end portion pivotally attached, as at 4, to a lower jack hook or latch L'.

Each end member of the dobby frame F is pro-

vided with the suitably positioned slots 5 which receive the extremities of the actuator bars or knives A. These bars or knives A are to be actuated by a mechanism not shown but of the ordinary kind, the slots 5 providing guiding means for said bars or knives in their movements.

Pivotally supported on the transverse bar 6 comprised in the frame structure are the jack lifters or indicating levers C. The outer end portions of these lifters or levers C normally rest on a stop bar 7, being separated and guided at their outer ends by vertical pegs 8 rising from the stop bar with one of the pegs extending between adjacent jack lifters or levers C. Underlying the jack lifters or levers C is a pattern cylinder P to be actuated by any appropriate mechanism and this cylinder P carries the radially arranged pegs 9 for usual coaction with the jack lifters or levers C. The jack hooks or latches L and L' are guided by the usual grates or grids G.

The foregoing parts in their construction and assembly as well as in their operation form no part of the present invention as the same are well known.

As herein disclosed, my invention is in the form of an attachment comprising elongated and vertically disposed end or side members 10 having suitably positioned openings 11 therethrough whereby said members can be bolted, as at 12 in Figure 1, or otherwise fixedly secured to each of the side members of the dobby frame F. The members 10 in relatively close proximity to their upper extremities are tied or connected by a transverse member 14 with the lower portions of said members 10 further connected by the interposed transverse member 15.

The lower ends of the members 10 are provided with the rearwardly directed arms 16 of desired length and which extend inwardly of the frame F and terminate in the upstanding posts 17. These posts 17 at their upper portions support a transverse bar 18 which provides a pivotal mounting for the central portion of a control lever 19.

The upper extremities of the members 10 are also provided with the inwardly disposed arms 16' terminating in the upstanding posts 17' which support a transversely disposed bar 18'. This bar 18' provides a pivotal mounting for the central portion of a control lever 19'.

In Figure 2, for clarity in disclosure, is illustrated only a single lever 19 and but one lever 19'. It is to be understood, however, that in practice there is to be a lever 19 positioned above each of the jack hooks or latches L' and a lever 19' positioned above each of the jack hooks or

latches L. The inner end portion of each of the control levers 19 and 19' is provided with a depending arm 20, the lower or free end portion of which being connected, as at 21, to the central portion of a supplemental control lever 22. While the supplemental lever 22 is capable of swinging movement independently of the main lever 19 or 19', the lever 22 is normally held in a fixed position with respect to its lever 19 or 19' by the retractile spring 23 of required tension interposed between and suitably secured to the lever 19 or 19' and the forward end portion of the lever 22. The normal position of the lever 22 with respect to the lever 19 or 19' under the action of the spring 23 is determined by the stop member 24 which is disclosed in the present embodiment of the invention as being carried by and extending upwardly of the lever 22 for contact from below with the lever 19 or 19'.

The outer or rear end portion of each of the supplemental levers 22 has depending therefrom a mounting 25 for a roller 26, said roller being in position for desired coaction from above with a jack hook or latch L or L'.

The upper extremities of the members 10 are also connected by a transverse bar 27. The outer end portion of each of the levers 19' and the bar 27 has interposed therebetween and secured thereto a retraction spring 28 of desired tension and which serves to contact from above with a push needle or rod 29. This needle or rod 29 passes through the suitably positioned guide openings 30 provided in the cross members 14 and 15 and the lower end of the needle or rod 29 contacts from above with one of the jack lifters or levers C associated with a harness jack lever H. The second jack lifter or lever C associated with the lever H has in contact therewith from above the short needle or rod 31 which is selectively directed through a guide opening 32 provided in the lower transverse member 15. This short needle or rod 31 operatively engages from below the outer end portion of a lever 19 and which outer end portion of the lever 19 is urged downwardly by a retractile spring 33 of desired tension interposed between the outer extremity of the lever 19 and the lower cross member 15. In order that the associated rod 29 will offer no hindrance or obstruction to the lower control lever 19, said rod 29 is formed to provide a properly positioned elongated loop 34 through which the outer portion of the lever 19 is freely directed.

There are many things to cause a dobby head mechanism to miss, such as the jack hooks or latches L and L' binding in their grids or grates G, jack backs or connectors B unduly wearing, jack lifters or indicating levers binding or hanging up, etc. My attachment operates effectively to eliminate these many disadvantages. The tension of the springs 23, 28 and 33 is such as to maintain the rollers 26 in contact with the jack hooks or latches L and L' and the needles or rods 29 and 31 in contact with the jack lifters or indicating levers C and under sufficient tension to assure the return of the hooks or latches and lifters or levers should there be any tendency in connection with such parts to stick as from rust, bending, or any other cause. Should the strain on the rollers 26 be abnormal the springs 23 will permit the breaking of the pivotal joint 21 between the supplemental levers 22 and the main levers 19 or 19'. It is, therefore, believed that it will be readily understood that my attachment provides means resulting in increased production

in cloth as a result of making the operation of the dobby mechanism foolproof.

I also find it desirable to provide means to stop the loom should a jack lever H or a hook L or L' break as well as in the event of a mispick. As is well known, two levers C are associated with each jack lever H and supported above each of such pair of levers C is a normally open circuit closer comprising the contacts 35 and 36. Leading from the contact 36 is a conductor *a* which is comprised in the operating circuit for a conventional type of warp stop motion used in connection with looms of this kind and which stop mechanism is not shown.

Leading from the contact 35 is a conductor *b* which has communication with a conductor pin 37 pressing against a jack lever H. This pin 37 is carried by a suitably supported insulation bar 38. The contact member 36 which may be termed the movable contact, carries an insulation member 39 with which either of the pair of levers or jack lifters C contact as said lifters or levers C rise. As these lifters or levers C move upwardly the associated jack lever H should also rise but if the jack lever H should fail to operate the circuit would be grounded through the pin 37 and the loom causing the stop motion to become effective.

From the foregoing description it is thought to be obvious that an attachment for a dobby head constructed in accordance with my invention is particularly well adapted for use by reason of the convenience and facility with which it may be assembled and operated, and it will also be obvious that my invention is susceptible of some change and modification without departing from the principles and spirit thereof and for this reason I do not wish to be understood as limiting myself to the precise arrangement and formation of the several parts herein shown in carrying out my invention in practice except as herein-after claimed.

I claim:—

1. An attachment for a dobby loom comprising a frame to be supported by the dobby frame above the jack lifters, said first named frame having upper and lower horizontal members, control levers supported intermediate their ends upon the upper and lower portions of the first frame for rocking movement, means carried by the inner end portions of the control levers for contact from above with the jack hooks of the dobby, and rods slidably disposed between the horizontal members of the frame and interposed between the outer end portions of the control levers and the jack lifters.

2. An attachment for a dobby loom comprising a frame to be supported by the dobby frame above the jack lifters, said first named frame having upper and lower horizontal members, control levers supported intermediate their ends upon the upper and lower portions of the first frame for rocking movement, means carried by the inner end portions of the control levers for contact from above with the jack hooks of the dobby, rods slidably disposed between the horizontal members of the frame and interposed between the outer end portions of the control levers and the jack lifters, and means for constantly urging the outer ends of the control levers downwardly and the inner end portions upwardly.

3. An attachment for a dobby loom comprising a frame to be supported by the dobby frame above the jack lifters, said first named frame having upper and lower horizontal members, control le-

vers supported intermediate their ends upon the upper and lower portions of the first frame for rocking movement, supplemental control levers supported for swinging movement by the inner
5 portions of the first control levers, said supplemental levers having direct contact with the jack

hooks and having swinging movement independently of the first control levers, and yieldable means for normally holding said supplemental control levers in a fixed position with respect to the first named control levers.

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