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E. E. CLARK

WHIPSTICK FOR AXMINSTER LOOMS

Filed March 1, 1924

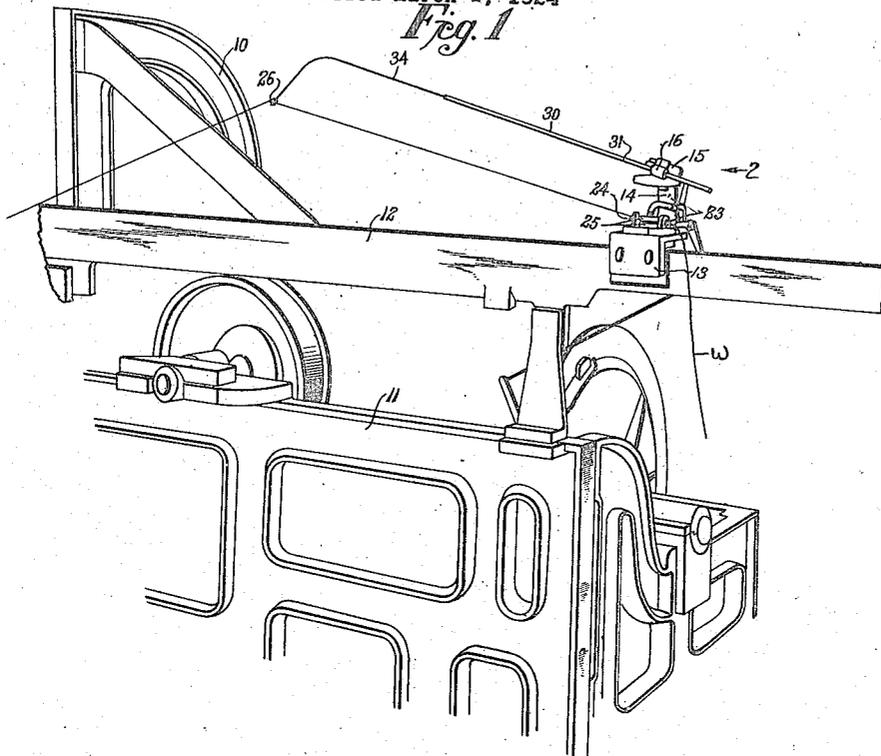


Fig. 3



Fig. 5

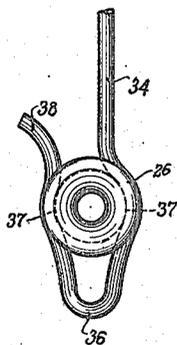


Fig. 4

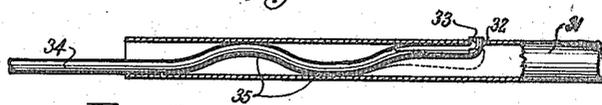
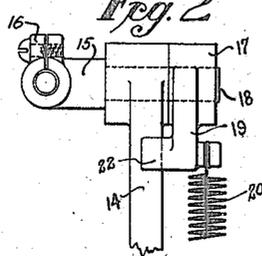


Fig. 2



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EVERETT E. CLARK, OF WORCESTER, MASSACHUSETTS, ASSIGNOR TO CROMPTON & KNOWLES LOOM WORKS, OF WORCESTER, MASSACHUSETTS, A CORPORATION OF MASSACHUSETTS.

WHIPSTICK FOR AXMINSTER LOOMS.

Application filed March 1, 1924. Serial No. 696,348.

To all whom it may concern:

Be it known that I, EVERETT E. CLARK, a citizen of the United States, residing at Worcester, in the county of Worcester and State of Massachusetts, have invented a new and useful Whipstick for Axminster Looms, of which the following is a specification.

This invention relates to Axminster looms and more particularly to the whip sticks which are used to tension the filling on this type of loom.

In such looms the filling usually passes through a needle by which it is introduced into the shed, a small shuttle on the opposite side of the fabric acting to hold the filling as the needle is withdrawn and the filling beaten in place. The filling is usually drawn from a large stationary package and passes through a friction device to the eye of a whip stick which is normally raised. As the needle is introduced into the shed the stick is lowered to regulate the tension of the filling.

It is the principal object of my invention to improve upon the construction of whip sticks by providing a detachable eye holder which shall be readily replaceable.

A further object of my invention is to provide the whip stick with an improved mounting for the filling eye so that the latter may be quickly replaceable when broken.

With these and other objects in view which will appear as the description proceeds, my invention resides in the arrangement and combination of parts hereinafter described and set forth in the claims.

In the accompanying drawings wherein I have shown one convenient form of my invention,

Fig. 1 is a perspective view of one end of an Axminster loom having my invention applied thereto,

Fig. 2 is a detail end view looking in the direction of arrow 2, Fig. 1,

Fig. 3 is a side elevation of the whip stick,

Fig. 4 is an enlarged section taken on line 4-4 of Fig. 3, and

Fig. 5 is a detail showing the end of the eye holder and the eye.

Referring more particularly to Fig. 1 it will be seen that loom side 10 and end frame 11 jointly support run 12 on which may be mounted in any approved manner the nee-

dle motion or other mechanism for introducing the filling (not shown). Mounted upon the run 12 is a stand 13 provided with an offset arm 14 in the upper portion of which is rotatably mounted a holder 15 having removably secured thereto clamp 16. A lever 17 is fastened to stud 18 secured to the holder and is provided with an arm 19 to which is secured the upper end of spring 20. The lower end of said spring is connected as at 21 to a fixed part of the structure and serves to hold the whipstick in raised position. A suitable stop 22 carried by arm 19 serves to limit angular motion of the holder 15 under influence of the spring 20.

Mounted on the bracket 13 are thread guides 23 and 24 between which are mounted filling tensioning clamps 25. The filling indicated at W rises from the source of supply, passes through guide 23, between the clamps 25, through guide 24, and extends through the eyelet 26 to the needle (not shown). The matter thus far described is of the usual construction and forms no part of my present invention.

My improvements relate more particularly to the construction of the whip stick indicated generally at 30. It has been found in the operation of the aforescribed mechanism that the whip stick is not infrequently caused to descend very rapidly with the result that the stick is either broken or bent and it is not unusual for the eye 26 to strike some part of the loom and be broken. When this occurs it is necessary to stop the loom and repair the damaged parts. This operation is facilitated by the use of my improved whip stick, which is formed of two readily detachable members. In carrying out my invention I provide a tubular supporting member 31 which passes between and may be adjusted longitudinally with respect to the holder 15 and clamp 16. The outer end of the supporting member is provided with an opening 32 which receives a laterally bent end 33 of filling eye member 34. That part of the eye member adjacent the end 33 is made sinuous as indicated at 35 so as to be frictionally held against the opposite interior portions of the supporting member 31. In this way the two members are held together, but when it becomes necessary to remove the eye member, the

end 33 is depressed until it is entirely out of the opening 32, after which the parts may be separated.

By referring to Fig. 5 it will be seen that the outer end of the filling eye member 34 is reversely bent as at 36 to provide substantially parallel arms having curved portions 37 spaced from the bent end of the member and affording a socket in which the eye 26 is resiliently held. The extreme end of the member 34 is curved away from the body portion thereof as at 38 to facilitate placing of the porcelain eye.

From the foregoing it will be seen that I have provided a very simple whip stick so formed as to permit the ready removal and replacement of a damaged eye member. If the eye is damaged it may be removed and a new one slipped into the socket formed in the eye member and the bent end thereof, the new eye being held in place by spring pressure due to the resilience of member 34.

Having thus described my invention it will be apparent that changes and modifications may be made therein by those skilled in the art without departing from the spirit and scope of the invention and I do not wish to be limited to the details herein disclosed but what I claim is:

1. A whip stick for Axminster looms comprising a supporting member, a filling eye carrying member, and resilient releasable interlocking connections between said members.

2. A whip stick for Axminster looms comprising a supporting member, a filling eye carrying member, and means associated with the eye carrying member and engaging the supporting member defining a detachable connection between the members.

3. A whip stick for Axminster looms comprising a supporting member, a filling eye member, and resilient means carried by one

member and engaging the other member and normally preventing longitudinal movement of the members, said means being depressible to permit disengagement of said members.

4. A whip stick for Axminster looms comprising a supporting member, a filling eye carrying member, a portion of one member extending into the other member, and means defining a detachable connection between the members.

5. A whip stick for Axminster looms comprising a tubular supporting member, and a resilient member having a portion removably held in the tubular member and carrying a filling eye.

6. A whip stick for Axminster looms comprising a tubular supporting member, and a filling eye carrying member having one end extending into the tubular member and bent to engage opposite sides of the tubular member and having a depressible portion to extend through an opening in said tubular member to prevent relative longitudinal movement of said members.

7. A whip stick for Axminster looms comprising a tubular supporting member and a filling eye carrying member having one end extending into the tubular member and bent laterally to extend through an opening in said tubular member to hold the members together, said bent end of the filling eye carrying member being depressible to disengage said members.

8. A whip stick for Axminster looms having a filling eye holding member formed with a reversely bent end, the bent end being resilient and forming with the member a socket to receive the filling eye and hold the same between said member and the reversely bent end.

In testimony whereof I have hereunto affixed my signature.

EVERETT E. CLARK.