July 11, 1944. F. L. FURGAL 2,353,302

SWEEPSTICK FOR LOOMS

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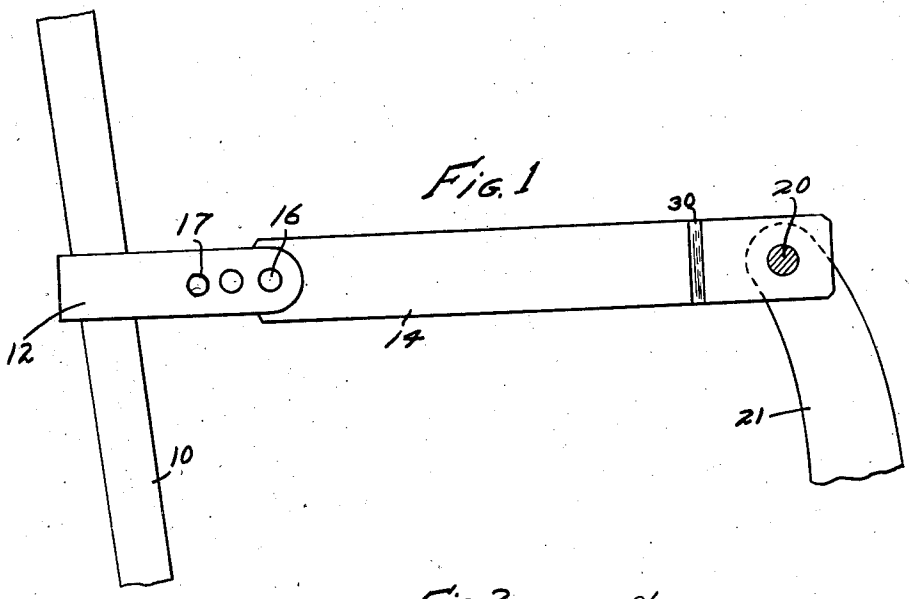


Fig. 1

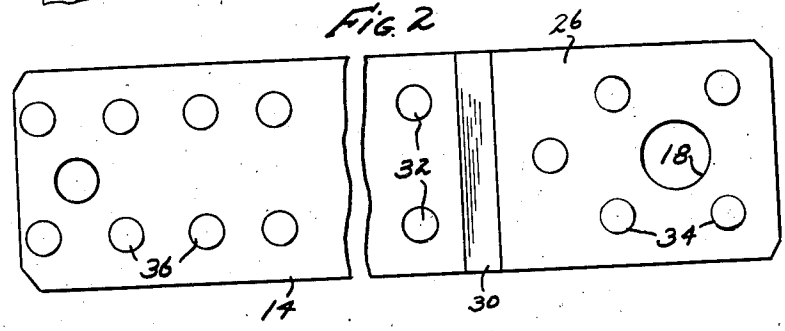


Fig. 2

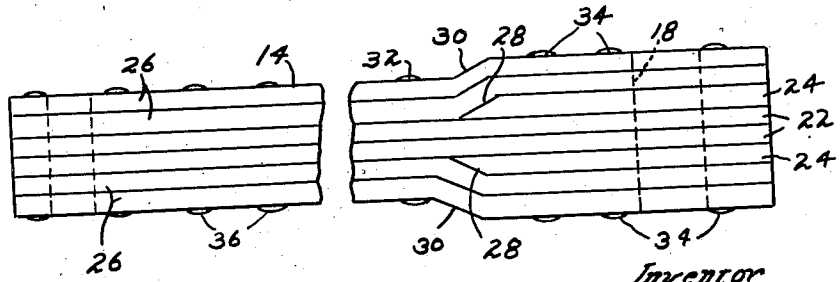


Fig. 3

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SWEEPSTICK FOR LOOMS

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5 Claims. (Cl. 139—151)

This invention relates to new and improved sweepsticks for looms.

The objects of the invention include the provision of a new and improved sweepstick for looms which is of a novel construction to greatly reduce jarring of the loom mechanism, particularly in the picking motion and including the picker stick and picking shaft, so as to reduce the tendency of the picking cam shoe screw to loosen, to reduce loosening of the picker shaft arm and wear of its bushings; to reduce breakage in the picker stick and to cushion the snap of the motion shaft; and in general to improve the quality of the cloth woven by reducing the tendency of the shuttle to fly off and thereby preventing the formation of kinks in the cloth.

Further objects of the invention reside in the provision of a relatively heavy laminated sweepstick for looms, the new sweepstick being made up of leather, rawhide, or leather-like layers which are solidly riveted together to form a sweepstick which will not wear out and which forms a cushion to reduce the inherent jarring in the loom mechanism.

Other objects and advantages of the invention will appear hereinafter.

Reference is to be had to the accompanying drawing in which

Fig. 1 represents a picker stick and its lug-strap and shows my new sweepstick in operative position relative thereto and connected to the picking-arm stud;

Fig. 2 is a view in side elevation of my new sweepstick, and

Fig. 3 is a top plan view thereof.

In the prior art it has been the practice to make sweepsticks for looms of wood or wood and canvas, and the deficiencies of these constructions have been recognized by the present inventor. Wooden sweepsticks impart a certain undesired degree of rigidity in the picking motion, and this rigidity has been found to be responsible for the loss of cam shoe screws, picker bolts and studs, and for loosening of the picker shaft arm and its bushings; and this invention presents a sweepstick construction which overcomes the disadvantages of the prior art sweepsticks.

In Fig. 1 I have shown a picker stick 10 which may be connected at its lower end to the usual picker stick stud, and at its upper end it may take the form of any conventional picker stick. The picker stick is connected in the usual manner to a lug-strap 12 which is pivotally connected to my new sweepstick 14. It is preferable to form an adjustable connection 16 between the sweepstick and the lug-strap, this connection including spaced holes 17, so that if the lug-strap breaks at one hole, the sweepstick stud may be inserted in the next hole. At the end of the sweepstick opposite the lug-strap, I provide an aperture 18 for the reception of the picking-arm stud 20 to pivot the picking arm 21 to the sweepstick shown conventionally in Fig. 1.

I prefer to make my new sweepstick of a plurality of laminations of rawhide, leather or other leather-like materials. I provide a pair of heavy leather or rawhide strips 22 which extend centrally of the sweepstick and longitudinally thereof from end to end. Adjacent the picking-arm end of the sweepstick I provide a relatively short strip 24 at either side of strips 22, strips 24 being of heavy rawhide or leather and extending from the extreme end of the sweepstick a short distance towards the lug-strap end of the sweepstick as shown in Fig. 3. These strips 24 should be strong and heavy and are for the purpose of greatly strengthening and rigidifying the picking-arm end of the sweepstick.

At either side of strips 24 I provide either one or two rawhide or leather strips 26. Strips 26 extend the length of the sweepstick and serve as side members therefor.

Strips 24 are preferably somewhat beveled at their ends 28 to provide reduced portions or angles which gradually merge into the outer sides of the central strips 22. Outer strips 26 are pressed inwardly as shown at 30 to conform to the beveled portions 28 of strips 24, and the parts are held and maintained in this condition by means of a pair of rivets 32. Rivets 32 extend directly through all of strips 22 and 26, but they do not penetrate strips 24. I provide a series of other rivets 34 passing through all of strips 22, 24, 26, and a still further series of rivets 36 serve to hold the narrower portion of the sweepstick solidly together by passing through strips 22, 26. None of the rivets interfere with the characteristics of my new sweepstick, but serve to solidly bind the laminations together and to hold the outer strips 26 in their bent form at 30 while at the same time adding a certain desired weight to the sweepstick.

By the construction described it will be seen that I have provided a relatively heavy sweepstick which, while operating efficiently to carry out the picking motion, serves to deaden the sharp jarring action occasioned by the picking loom and picking cam shoe. The new sweepstick is practically indestructible and will serve to cushion and reduce the jarring of the loom mecha-

nism and thereby obviate the loosening and breakage of the various parts of the picking motion as brought out in the objects of the invention. It will be easily apparent to one skilled in the art that my new sweepstick will deaden the snap of the picking shaft which is inherent in looms and the consequent deleterious effects derived therefrom. Especially is this true as to wear on the picker bolts, the picking shaft arm and bushings, and liability to breakage of the picker stick itself. Also a better quality of cloth will be woven due to an improved action of the shuttle occasioned by the jarring insulation of the new sweepstick.

Having thus described my invention and the advantages thereof, I do not wish to be limited to the details herein disclosed, otherwise than as set forth in the claims, but what I claim is:

1. A sweepstick for looms comprising an elongated laminated leather member including longitudinal central straight leather strips extending from end to end of the member, a short straight leather-like strip at either side of the combined central strips adjacent an end thereof, and an outside strip extending the length of the member at the outer side of each short strip and extending therebeyond to also cover the central strips at their sides.

2. A sweepstick according to claim 1 including rivets securing the strips together, certain rivets penetrating all the strips and other rivets penetrating only the central and outside strips just beyond one end of the short strips to hold the outside strips closely to the central strip at this point.

3. A sweepstick according to claim 1 including a connection for a lug-strap at one end of the sweepstick, said lug-strap including means forming a series of holes for adjustable securement to said connection.

4. A sweepstick according to claim 1 including means forming a connection to the picker arm of a loom, said means being located at the end of the sweepstick embodying the short strips.

5. A sweepstick according to claim 1 including means forming an aperture through all of the strips at one end of the sweepstick, said aperture receiving a picker arm stud, and means forming an aperture at the other end of the sweepstick for reception of a lug strap bolt.

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