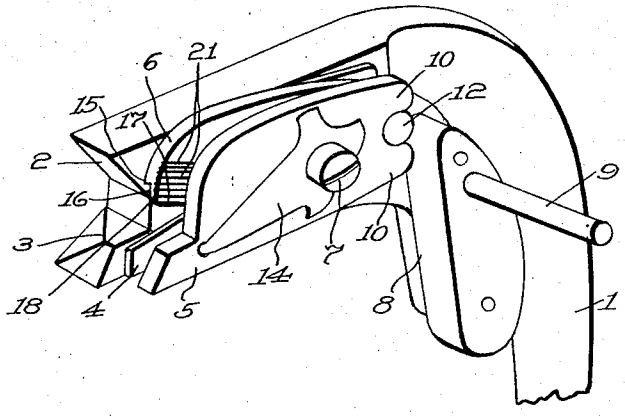
July 6, 1926. 1,591,289

H. A. DAVIS

SHUTTLE FEELER THREAD PARTER AND CLAMP

Filed Jan. 9, 1926

Fig. 1



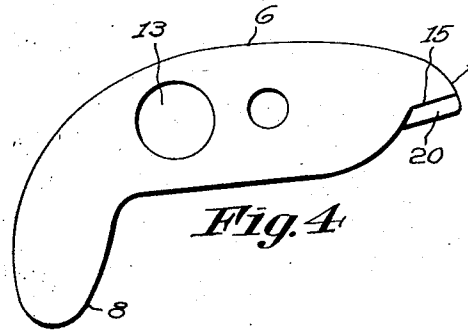


Fig. 4

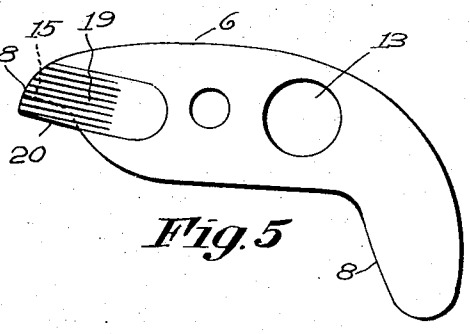


Fig. 5

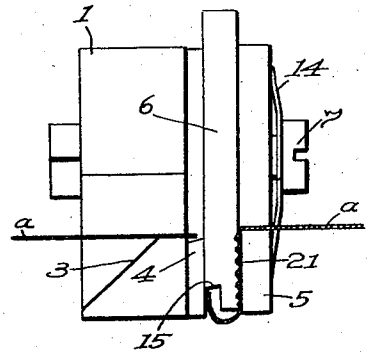


Fig. 2

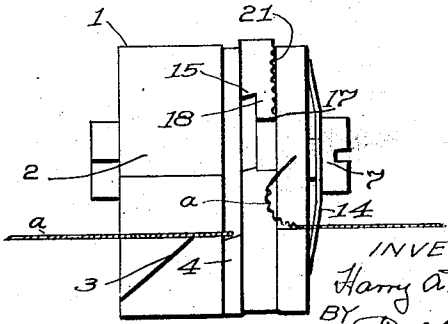


Fig. 3

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Patented July 6, 1926. 1,591,289

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SHUTTLE-FEELER THREAD PARTER AND CLAMP.

Application filed January 9, 1926. Serial No. 80,317.

This invention relates to shuttle feeler thread parters and clamps employed in looms.

It is now the ordinary practice to provide looms with a shuttle feeler thread parter and clamp whereby on call for replenishment of filling, the shuttle feeler moves to its shuttle feeling position and the parter and clamp are actuated to part the filling leading to the shuttle box and clamp the end leading to the cloth selvage, with the result that when the shuttle feeler moves to its initial or front position, the end of filling leading to the cloth selvage is positioned for the action of the temple thread cutter.

It has been common heretofore to provide a shuttle feeler thread parter and clamp comprising the fixed and movable parting members and the fixed clamping member to cooperate with one side of the movable parting member to clamp the thread. It has heretofore also been common to provide a shuttle feeler thread parter and clamp that would first clamp the thread of the outgoing filling carrier or bobbin and then cut it.

One of the objects of the present invention is to provide a shuttle feeler thread parter and clamp, comprising parting and clamping members, and a combined parter and clamp pivotally associated with the shuttle feeler between the parting members, and having a cutting edge on one face thereof and a clamping face on the opposite side, the edge of which extends beyond or below the parting edge.

When the thread has been cut and clamped by the shuttle feeler thread parter and clamp as heretofore constructed, it may happen at times that the clamped end may not be fully released when the feeler moves to its shuttle feeling position, in consequence of which the end of filling previously leading to the cloth selvage is liable to be drawn into the shed and form imperfect cloth. Another feature of the present invention, therefore, consists in providing the thread clamping portion of the parter and clamp with scored or grooved surfaces which will act, as the parter opens, to lift the end of filling from between the parting members and insure its release from between the clamping surfaces.

The above and other novel features of the invention and new combination of parts will best be made clear from the following description and the accompanying drawings of one good form thereof.

In the drawings:

Fig. 1 is a perspective view of a shuttle feeler thread cutter and clamp embodying the present invention;

Fig. 2 is an end view thereof, showing the thread as having been cut and clamped;

Fig. 3 is a similar end view, showing the thread parter and clamp of the present invention in its open position, with the previously clamped end of filling or thread released from between the clamping surfaces;

Fig. 4 is a detached detail in side elevation, showing the combined thread parter and clamp; and

Fig. 5 is a similar side elevation of the combined thread parter and clamp, looking to the opposite side to that of Fig. 4, and showing a slightly modified form of the invention.

The shuttle feeler 1 may be of usual construction and having its shuttle feeling end formed with a recess between the jaws 2 and 3 for engagement with the shuttle should it not be properly boxed, and for positioning the outgoing filling end for the action of the thread parter and clamp.

As hereinbefore noted, the shuttle feeler is caused to move into its rearward shuttle feeling position on call for replenishment of filling, but the means for effecting this movement is not herein shown and described because the details thereof form no part of the present invention and are now well understood by those familiar with the art. The shuttle feeler, in accordance with the present invention, has mounted thereon the thread parter and clamp, and, as shown in the present instance of the invention, there is mounted on the shuttle feeler a fixed thread parting member 4, and similarly, a fixed thread clamping member 5, between which is pivotally mounted the combined thread parter and clamp 6.

Extending laterally from the shuttle feeler is a bolt or pivotal support 7 on which the combined thread parter and clamp 6 is pivotally mounted, and extending frontwardly of the pivotal support 7 is the downturned or tail portion 8 of the combined thread parter and clamp, from which extends a pin 9, whereby the thread parter

and clamp is opened as the shuttle feeler starts on its shuttle feeling movement. The means acting upon the pin 9 for effecting opening movement of the combined thread parter and clamp may be of usual construction, and as it is now well understood by those familiar with the art, it is not herein shown and described.

Mounted on the pivotal support 7, as shown, is the fixed clamping member 5 having its frontwardly extending end portion provided with the jaws 10 and 11 which embrace a stud or pin 12 extending laterally from the shuttle feeler through an opening 13 formed in the front portion of the combined thread parter and clamp 6, the construction being such that in the present form of the invention, the clamping member 5 is held in fixed position.

The combined thread parter and clamp 6 is mounted on its pivotal support 7 between the clamping member 5 and the parting member 4, and a spring washer 14 interposed between the head of the pivotal support 7 and the clamping member 5 maintains the parts in co-related operative relation.

The combined thread parter and clamp 6 is of novel construction and is formed as a single member provided with a parting edge on one face and a clamping portion on its opposite face, the lower edge of which extends beyond the cutting edge of the parter, as indicated in Fig. 1.

The combined thread parter and clamp 6 may be conveniently formed of a single piece of material, and on the face thereof, for cooperation with the associated parting member 4, the thread parter and clamp is provided with the cutting edge 15 which may be formed by cutting away a portion of the combined thread parter and clamp on the face adjacent the parting member 4, as indicated at 16. The opposite side of the combined thread parter and clamp 6 is extended downwardly as at 17 beyond the cutting edge 15, with the result that when the feeler is in its backward shuttle feeling position and the tail portion 8 of the combined thread parter and clamp is struck by the lay or a part mounted thereon, the combined thread parter and clamp will be turned upon its pivotal support 7 to first clamp the filling between the extended face 17 and the adjacent face of the clamping member 5, and as the combined thread parter and clamp moves to full closed position, the cutting edge 15 will cooperate with the parting member 4 to part the filling leading to the filling carrier to be abandoned.

When the shuttle feeler moves to its rearward feeling position, it is desirable that the filling leading across the end of the shuttle feeler shall not be displaced by the end of the combined thread parter and clamp, and to respond to such condition, the combined thread parter and clamp 6 is provided with a rounded nose 18 which, if struck by the filling as the shuttle feeler moves to its rearward shuttle feeling position, will deflect the filling downwardly into cutting and clamping position.

As hereinbefore stated, the combined thread parter and clamp 6 may be formed of a single piece of material, such as metal, and have at one side thereof the cutting edge 15, while the opposite side is extended downwardly beyond said edge, to form the clamping portion of the combined thread parter and clamp, to cooperate with the clamping member 5 to clamp the thread before it is parted, and such construction is indicated in Fig. 1.

It is not always necessary, however, to make the combined thread parter and clamp 6 of a single piece of material, because the clamping face thereof may be formed by an insert made in the side portion of the combined thread parter and clamp, as indicated in Fig. 5. The insert 19, Fig. 5, may be conveniently secured to the side portion of the thread parter and clamp, and a preferred manner of making such connection between the insert and side of the thread parter and clamp is to weld the insert 19 into a suitable recess formed in the side face of the combined thread parter and clamp, as indicated in Fig. 5. In such case, the lower edge 20 of the insert, Fig. 5, extends beyond or below the cutting edge 15 of the combined thread parter and clamp, with the result that in the modified construction, as indicated in Fig. 5, the thread will first be clamped between the downwardly extended side portion of the insert and the adjacent clamping member 5 before the cutting edge 15 parts the filling in cooperation with the parting member 4. Whether the combined thread parter and clamp 6 be made of a single piece of material or whether an insert such as 19 be secured to the side of the thread parter and clamp as by welding, or otherwise, the parts are integrated and form a single combined parting and clamping member, the essentials in either case being that the lower edge of the clamping portion of the combined parter and clamp shall extend a substantial distance below the cutting edge 15 on the opposite face of the parter and clamp.

It happens at times, especially with some characters or kinds of filling, that when the end leading to the cloth selvage has been clamped between the clamping members, and the clamp is opened, the end of the previously clamped filling may not become detached from the clamping members, but, on the contrary, will adhere to one of them, especially where one of the clamping members is formed of fibroid material such as

is now in common use. To avoid this contingency, the extended side face 17 which forms the clamping portion of the combined thread parter and clamp is provided with a scored or grooved lifting surface, as indicated at 21, and such scores or grooves thus formed in the clamping surface are preferably arranged to extend transversely of the filling *a* when it is clamped between the clamping surfaces. Such scores or grooves not only insure a grasp of the filling as the clamping members are closed and thus secure the full clamping action on the end leading to the cloth selvage, but when the clamping members are separated or opened and the filling end previously clamped is to be released, such scores or grooves act as a thread lifter, as indicated in Fig. 3, and raise the previously clamped end of filling *a* as the movable clamping member rises to its open or unclamping position.

The character of the clamping member 5 which cooperates with the downwardly extended clamping surface 17 on the side of the combined parter and clamp 6, may be varied. It may, for instance, be formed of fibroid material or otherwise provided with a clamping portion on its inner face to cooperate with the clamping surface 17 on the side of the combined thread parter and clamp, and in case the clamping portion of the clamping member 5 is a substantial distance below the top of the clamping member 5, the downwardly extended side surface portion 17 of the combined thread parter and clamp will act effectively to clamp the thread before it is parted.

When the shuttle feeler is moved to its rearward feeling position, the combined thread parter and clamp is open, as indicated in Fig. 1, and the filling will be positioned for the action of the thread parter and clamp. As the lay moves frontward, the tail portion 8, in the present instance of the invention, will be struck by the lay or a part thereon, and cause the combined thread parter and clamp 6 to move to its closed position, as indicated in Fig. 2, thereby first clamping the thread *a* between the scored extended surface 17 at the side of the thread parter and clamp and the clamping member 5, and as the combined thread parter and clamp moves further to its closed position, the cutting edge 15 at the opposite side of the combined thread parter and clamp will cooperate with the cutting member 4 to cut the thread, as indicated in Fig. 2, and the clamped portion of the thread will be securely held between the scored or grooved surface 17 and the clamping member 5. The filling end having been parted and clamped, as above stated, the shuttle feeler will move to front position to hold the end leading to the cloth selvage for the action of the temple thread cutter. As the shuttle feeler moves to its rearward position, in the present instance, the thread parter and clamp is opened to release the end previously leading to the cloth selvage, and as the thread lifting surface 21 of the thread clamping portion 17 moves upwardly, the end of thread will be lifted and released, as indicated in Fig. 3.

What is claimed is:

1. In a shuttle feeler thread parter and clamp, the combination of the shuttle feeler having a parting member and a clamping member, and a thread parter pivotally mounted between said members, one face of the parter being formed with a parting edge and the other face with a scored clamping and lifting surface to lift the clamped thread when the clamp is opened.

2. In a shuttle feeler thread parter and clamp, the combination of the shuttle feeler having a parting member and a clamping member, and a thread parter pivotally mounted between said members, one face of the parter being formed with a parting edge and the other face of the parter being extended beyond the parting edge to form a thread clamp and provided with a scored lifting surface to lift the parted thread when the parter and clamp are opened.

3. In a shuttle feeler thread parter and clamp, the combination of the shuttle feeler having a parting member and a clamping member, and a thread parter pivotally mounted between said members, one face of the parter being formed with a parting edge and the other face of which is provided with an insert extending below the parting edge to form a thread clamp and provided with a scored lifting surface to lift the clamped thread when the parter and clamp are opened.

4. In a shuttle feeler thread parter and clamp, the combination of the shuttle feeler having a parting member and a clamping member, and a pivotally mounted combined thread parter and clamp having on one face a parting edge and on the opposite face a scored or roughened thread lifting surface forming a thread clamp to lift the clamped and parted thread when the parter and clamp are opened.

5. A shuttle feeler thread parter and clamp comprising relatively movable parting and clamping members to part and clamp the thread, one face of the movable clamping member being provided with a scored lifting surface to free the clamped thread when the clamp is opened.

6. A shuttle feeler thread parter and clamp comprising thread parting means and relatively movable clamping members, one of which has a scored lifting surface to clamp the thread when the clamping members are closed and acting to free the clamped

thread when the clamping members are opened.

7. In a shuttle feeler thread parter and clamp, the combination of the shuttle feeler having a parting member and a clamping member and a combined thread parter and clamp provided on one face with a thread cutting edge and on the opposite face with thread clamping and lifting scores or grooves which extend transversely of the thread when it is clamped.

8. In a shuttle feeler thread parter and clamp, a thread parting and clamping member formed on one face with a parting edge and on the opposite face with a scored metallic clamping and lifting surface extending in the plane of said face and having its edge projected below the parting edge on the opposite face.

In testimony whereof, I have signed my name to this specification.

HARRY A. DAVIS.