Nov. 5, 1929. J. O. McKEAN 1,734,590

SLUB CATCHER

Filed May 13, 1927

Fig. 1.

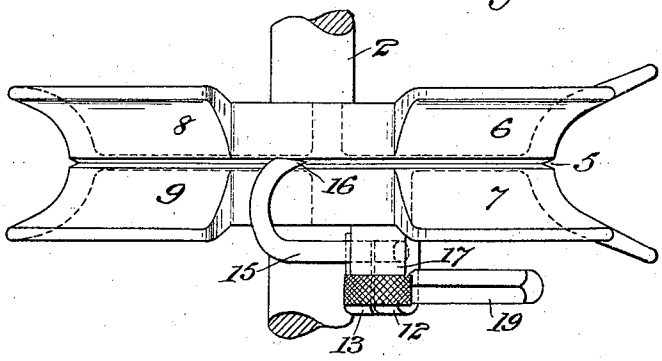


Fig. 2

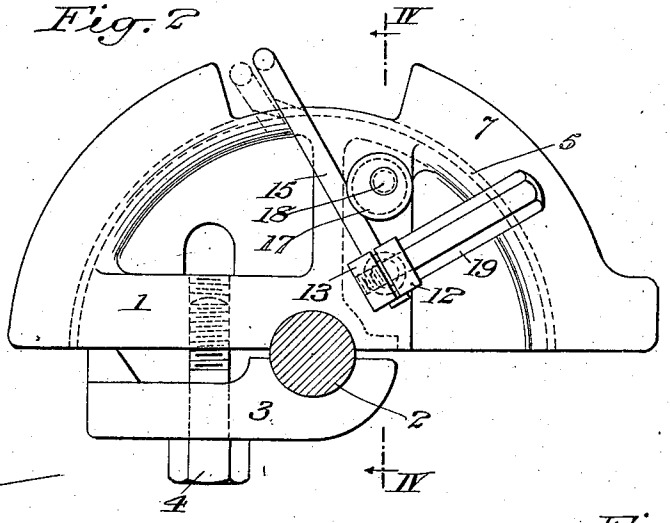


Fig. 3.

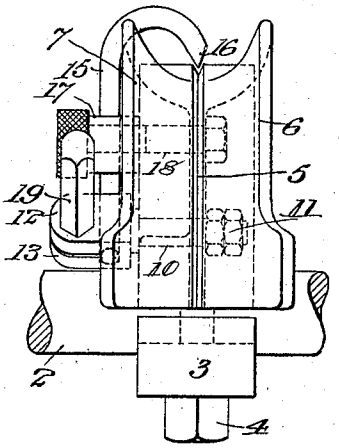


Fig. 5.

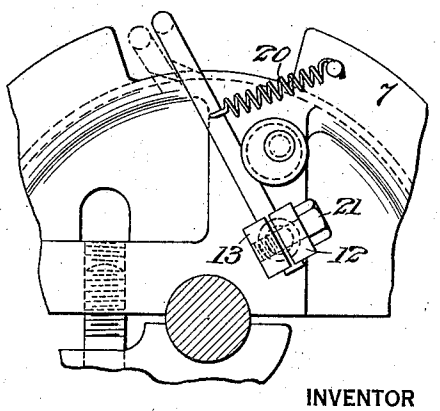
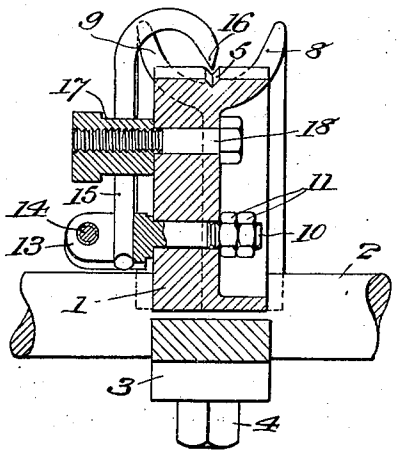


Fig. 4.



INVENTOR

John O. McKean

BY

Brumbaugh

ATTORNEYS

Patented Nov. 5, 1929 1,734,590

UNITED STATES PATENT OFFICE

JOHN O. McKEAN, OF WESTFIELD, MASSACHUSETTS, ASSIGNOR TO FOSTER MACHINE COMPANY, OF WESTFIELD, MASSACHUSETTS, A CORPORATION OF MASSACHUSETTS

SLUB CATCHER

Application filed May 13, 1927. Serial No. 191,079.

My invention consists in a novel and effective slub catcher comprising a stationary member along which the yarn is passed and a movable member having an element arranged in position to be engaged by a slub, knot or other enlargement of the yarn and moved thereby toward the stationary member to sever the yarn, means being provided for adjusting the movable member to suit yarns of different sizes and means also being provided tending to hold the movable member in its adjusted position.

My invention more particularly includes a stationary member having a yarn receiving groove of considerable length for presenting an extended wearing surface to the yarn, and a rocking hook-shaped member pivoted to the stationary member and having a tooth spaced from the bottom of the yarn receiving groove in position to be engaged by an enlargement of the yarn and moved thereby toward the bottom of the groove to pinch and break the yarn.

Practical embodiments of my invention are represented in the accompanying drawing, in which

Fig. 1 represents in top plan one form of slub catcher in which the movable member is held in its adjusted open position by gravity.

Fig. 2 represents a side view of the same.

Fig. 3 represents a front view of the slub catcher.

Fig. 4 represents a vertical transverse section taken in the plane of the line IV—IV of Fig. 2.

Fig. 5 represents a detail side elevation of another form of slub catcher in which the movable member is held in its adjusted open position by a spring.

The stationary member of the slub catcher is denoted by 1 and it is here shown as being clamped in position on its horizontal supporting shaft 2 by the clamp part 3 and bolt 4. This stationary member has a semicircular surface provided with a yarn receiving groove 5 extending along the same. This stationary member of the slub catcher is also provided with yarn guide flanges 6, 7 at its front and similar yarn guide flanges 8, 9 at its back. This groove 5 along within which the yarn is passed is preferably V-shaped and because of its considerable length the walls present extended wearing surfaces for the yarn, thereby materially lengthening the life of the slub catcher. This is particularly useful when the slub catcher is used in connection with mohair and worsted yarns which have a very abrasive action. This groove 5 serves to keep the yarn in a controlled position while it is passing through the slub catcher.

The movable member of the slub catcher is shown as pivoted to the stationary member by means of a bolt 10 which passes transversely through the stationary member, one end of which bolt is screw-threaded and provided with lock nuts 11 and the other end of which bolt is provided with a bifurcated head, the branches 12 and 13 of which are arranged by means of the screw 14 to clamp between them the shank 15 of a hook, the outer end of which is formed into a tooth 16 located above and spaced from the bottom of the yarn receiving groove 5 in the stationary member.

The position of the tooth 16 of the movable member with respect to the bottom of the groove 5 in the stationary member may be adjusted to suit yarns of different sizes. In the present instance I have provided for this purpose an eccentric cam 17, threaded onto a bolt 18 passing transversely through the stationary member, which eccentric cam engages the shank 15 of the movable member.

In the form shown in Figs. 1 to 4 inclusive the movable member is held in its adjusted open position by gravity operated means while in the form shown in Fig. 5 the movable member is held in its adjusted open position by spring means. The gravity means shown in Figs. 1 to 4 inclusive is a long head 19 on the clamp screw 14. The spring means shown in Fig. 5 is a coil spring 20 extending from the shank 15 of the movable member to the flange 7 of the stationary member, the screw 14 in this instance having a small head 21.

The operation of the slub catcher is as follows:

The position of the tooth 16 of the movable member with respect to the bottom of the groove 5 in the stationary member to suit

yarn of a predetermined size, is adjusted by first loosening the cross bolt 18, then turning the eccentric cam 17 to the desired position and finally tightening the bolt 18 to hold the cam in its rotatively adjusted position. It will be observed that the movable member is held in its adjusted open position either by gravity or spring means, such means in both instances being so adjusted as to make the operation of the movable member very sensitive, it being also understood that the cross bolt 10 which forms the pivotal connection for the movable member is very loosely mounted in the stationary member to permit the movable member to rock very easily. When a slub, knot or other enlargement in the yarn passing through the slub catcher comes into engagement with the tooth 16 of the movable member, it will rock the member and thereby move the tooth from its adjusted open position inwardly toward the bottom of the groove 5 in the stationary member, thereby pinching and breaking the yarn.

It will thus be seen that I have provided a slub catcher in which the yarn is guided in a controlled position along the groove in the stationary member, a large amount of wearing surface being presented to the yarn, thereby lengthening the useful life of the slub catcher. Furthermore, it will be seen that my providing an adjustable movable member, its tooth may be readily and accurately adjusted toward and away from the bottom of the groove in the stationary member to accommodate yarns of various sizes without interfering with the sensitive action of the movable member when the tooth is engaged by an enlargement of the yarn and moved to sever the same.

It is evident that various changes may be resorted to in the construction, form and arrangement of the several parts without departing from the spirit and scope of my invention; hence, I do not intend to be limited to the particular embodiments herein shown and described, but what I claim is:—

1. In a slub catcher, a stationary member having a semicircular surface provided with a yarn receiving groove of considerable length to present extended wearing surfaces for the yarn, a hook shaped movable member mounted on the stationary member and having a tooth arranged in position to be engaged by an enlargement of the yarn and moved thereby toward the bottom of the groove to sever the yarn, and means tending to hold the movable member in its open position.

2. In a slub catcher, a stationary member having a semicircular surface provided with a yarn receiving groove of considerable length to present extended wearing surfaces for the yarn, a hook shaped movable member mounted on the stationary member and having a tooth arranged in position to be engaged by an enlargement of the yarn and moved thereby toward the bottom of the groove to sever the yarn, means tending to hold the movable member in its open position, and means on the stationary member engaging the movable member to adjust the open position of the tooth with respect to the bottom of the groove to suit yarns of different sizes.

3. In a slub catcher, a stationary member having a semicircular surface provided with a yarn receiving groove of considerable length to present extended wearing surfaces for the yarn, a hook shaped rocking member pivoted to the stationary member and having a tooth arranged in position to be engaged by an enlargement of the yarn and moved thereby toward the bottom of the groove to sever the yarn, and means tending to hold the rocking member in its open position.

4. In a slub catcher, a stationary member having a semicircular surface provided with a yarn receiving groove of considerable length to present extended wearing surfaces for the yarn, a hook shaped rocking member pivoted to the stationary member and having a tooth arranged in position to be engaged by an enlargement of the yarn and moved thereby toward the bottom of the groove to sever the yarn, means tending to hold the rocking member in its open position, and means on the stationary member engaging the rocking member to adjust the open position of the tooth with respect to the bottom of the groove to suit yarns of different sizes.

5. In a slub catcher, the combination of a stationary member formed with a substantially V-shaped yarn receiving groove, a pin journaled in the member, a hook shaped member projecting from the end of the pin at a side of the stationary member and formed with a tooth at its end directed downwardly into the groove and arranged in position to be engaged by an enlargement of the yarn and moved thereby toward the bottom of the groove to sever the yarn, a counterweight on the pin for balancing the hook shaped member and a stop for limiting the movement of the arm under the action of the weight to normally maintain it in position with its point spaced above the bottom of the groove.

In testimony, that I claim the foregoing as my invention, I have signed my name this 10th day of May, 1927.

JOHN O. McKEAN.