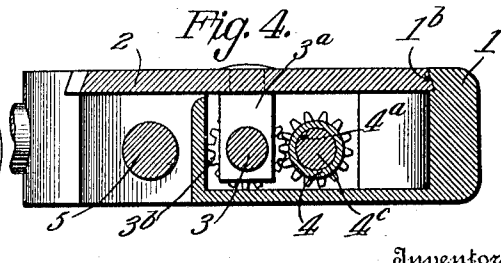
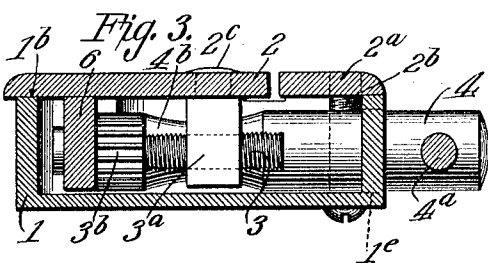
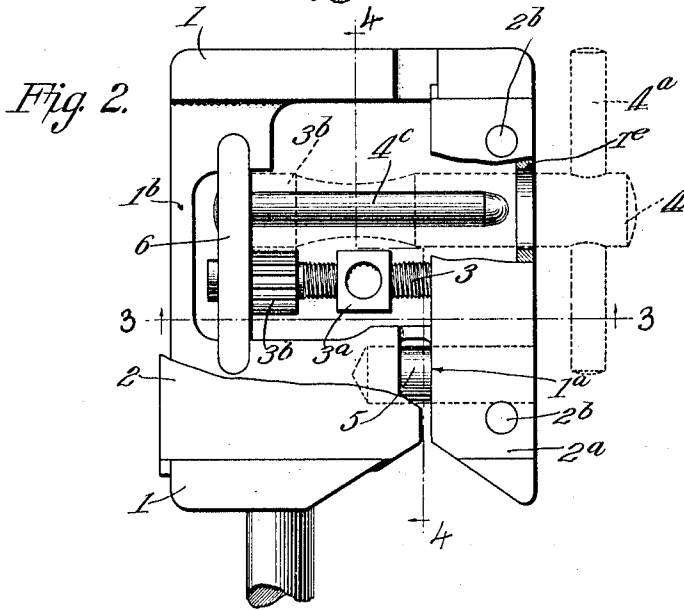
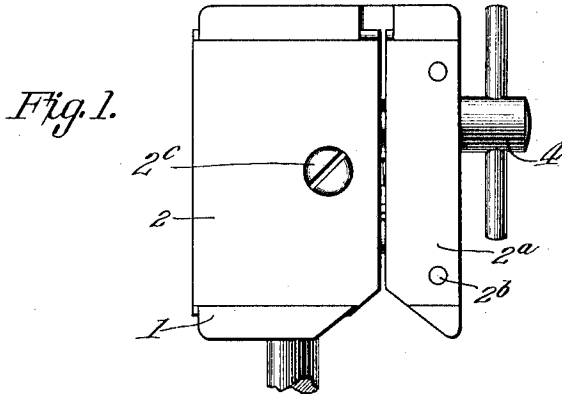


W. HURD.  
YARN STRIPPER.

APPLICATION FILED DEC. 21, 1911.

1,041,088.

Patented Oct. 15, 1912.



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# UNITED STATES PATENT OFFICE.

WILLIAM HURD, OF TROY, NEW YORK.

YARN-STRIPPER.

1,041,088.

Specification of Letters Patent.

Patented Oct. 15, 1912.

Application filed December 21, 1911. Serial No. 667,217.

To all whom it may concern:

Be it known that I, WILLIAM HURD, of Troy, in the county of Rensselaer and State of New York, have invented certain new and useful Improvements in Yarn-Strippers; and I hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, which form part of this specification.

This invention is an improvement in yarn strippers used on bobbin winders or coners; and consists essentially of a metal body or box having a notch or slot in its lower side through which the yarn may pass, and two steel blades secured to the face of the block for scraping the yarn drawn through said slot. One of these blades is preferably fixed and the other one is slidable, and can be adjusted by means of a nut attached to it and engaging a rotatable screw secured in the box; said screw being provided with a pinion which is operated by a removable pinion, preferably attached to a key by which it can be inserted into and withdrawn from the box.

The objects of the invention are to provide novel means for adjusting the width of the opening between the scraping blades; and novel means for preventing the position of the blades being altered except by the use of the special pinion-key.

I will describe the invention in detail with reference to the accompanying drawings in which—

Figure 1 is a side elevation of the stripper. Fig. 2 is an enlarged view thereof partly in section. Fig. 3 is a transverse horizontal section on line 3—3, Fig. 2. Fig. 4 is a transverse section on line 4—4, Fig. 2.

The device consists of a box or body 1 which may be of brass or other metal and which has a short vertical slot 1<sup>a</sup> in its lower edge and is provided on one side, at right angles to the slot 1<sup>a</sup>, with a transverse channel 1<sup>b</sup>, the top and bottom sides of which are undercut so as to form dove-tail grooves for the engagement of a slidable steel plate 2 at one side of the slot and of a steel plate 2<sup>a</sup> at the opposite side of the slot; which plate 2<sup>a</sup> may be fixedly secured in position by screws or rivets 2<sup>b</sup>.

The body is recessed beneath the plate 2 and said plate is connected by a screw 2<sup>c</sup> to a traveler nut 3<sup>a</sup> which is mounted upon a rotatable threaded shaft 3, which may be

mounted in the block in any suitable way. As shown in the drawings this shaft 3 is journaled at one end in a bearing plate 6, which is fixed in the block; and said shaft is provided with a pinion 3<sup>b</sup> adjacent its bearing. If shaft 3 is rotated it will shift nut 3<sup>a</sup> to right or left according to the rotation of the shaft, and consequently slide plate 2 toward or from plate 2<sup>a</sup>; the opening between these plates forms the yarn stripper space, and this space can be adjusted with the greatest nicety by turning shaft 3.

The shaft 3 may be turned to adjust the width of the stripper slot by means of a removable pinion 4<sup>b</sup>, which is preferably attached to a key shank 4 which is provided at its outer end with a finger-piece 4<sup>a</sup>; and this pinion 4<sup>b</sup> can be inserted by means of the key-piece through an opening 1<sup>c</sup> in the end of the body into position to engage pinion 3<sup>b</sup>. Preferably to insure accuracy of adjustment I attach a stud 4<sup>c</sup> to plate 6 opposite opening 1<sup>c</sup> to engage a socket 4<sup>d</sup> in the inner end of the key-piece 4, so that when the pinion 4<sup>b</sup> is inserted into place within the stripper it will be directed into accurate mesh with pinion 3<sup>b</sup>.

The screw shaft 3 is preferably made with a pitch of 40 threads to the inch, (which is the same as in micrometers), and for each revolution of the shaft 3 the blade 2 will be moved .025 of an inch. Therefore without having the key calibrated the foreman can readily adjust the blades within a very few thousandths of the desired width without making any measurements. By removing the key from the stripper one of the gears is also removed and consequently no external force applied to the blades will have any effect on them.

Inserted in the block and below the lower edge of the notch 1<sup>a</sup> is a pin 5 which is preferably of glass or porcelain and under which the yarn passes while it is running between the blades, said pin crossing the slot 1<sup>b</sup> as shown.

The practical advantages of this device are: First, the fact that the blades may be adjusted absolutely parallel. Second, that the screws which adjust the movable blades are uniform in all strippers; which permits of a micrometer adjustment so that all strippers in the mill may be set uniform without the aid of gages. Third, that the scraper blade may be adjusted to any desired point

and then, by simply removing the key, it is permanently locked in that position; and cannot be re-adjusted without the key.

Other advantages of the device are that the blades may readily be ground so as to keep them sharp; that the construction permits of hardened blades which it is easy to grind accurately; that the movable blade may readily be taken off and ground when the working edge becomes worn; and that the device is locked at all times and its adjustment can be altered only by the person inserting the removable pinion; and the construction of the key-pinion is one that cannot be readily duplicated.

What I claim is:

1. A yarn stripper comprising a body; a pair of stripper plates attached thereto, mechanism inclosed within the body for adjusting the space between the plates, and a removable device adapted to be inserted within the body and engaged with the adjusting mechanism to operate the latter.

2. A yarn stripper comprising a body having a notch for the passage of the yarn; a fixed stripper plate at one side of the notch; a slidable plate at the opposite side of the notch; a rotatable screw mounted and inclosed within the body; a connection between said screw and the slidable plate, and a removable device adapted to be partly inserted in the body and engaged with the screw to operate the latter.

3. A yarn stripper comprising a body; a pair of stripper plates attached thereto, a rotatable screw, a nut attached to one plate and engaging said screw; a pinion on said screw; and a removable pinion adapted to be engaged with the pinion on the screw, to operate the latter.

4. A yarn stripper comprising a body having a notch for the passage of the yarn; a fixed stripper plate at one side of the notch; a slidable plate at the opposite side of the notch; a rotatable screw mounted and inclosed within the body; a traveling nut on said screw within the body; a connection between said nut and the slidable plate within the body; and means for rotating the screw.

5. In a yarn stripper the combination of

a body; a pair of stripper plates attached thereto; a nut attached to one plate; a rotatable screw in the body engaging said nut; a pinion on said screw; and a removable key provided with a pinion on its end adapted to be inserted into the body and engaged with the pinion on the screw to operate the latter.

6. A yarn stripper comprising a body having a notch for the passage of the yarn; stripper plates at opposite sides of the notch; a rotatable screw mounted within the body; a traveling nut on said screw; a connection between said nut and one of the stripper plates; a pinion on the screw; and a removable pinion adapted to be inserted in the body and engaged with the screw pinion to rotate the latter.

7. A yarn stripper comprising a hollow body provided with a yarn notch; a plate fixed at one side of this notch; a slidable plate at the opposite side of the notch; a screw rotatably mounted in the body; a pinion on said screw; a traveling nut on said screw connected with the slidable plate; and a key having a pinion on its end adapted to be inserted into the body and engage the screw pinion to rotate the latter.

8. A yarn stripper comprising a hollow body provided with a yarn notch, a plate fixed at one side of this notch; a slidable plate at the opposite side of the notch; a bearing plate secured within the body; a screw rotatably connected to said bearing plate; a pinion on said screw; a traveling nut on said screw connected to the slidable plate, a stud attached to said bearing plate beside the screw; and a socketed key having a pinion on its end adapted to be inserted into the body through the opening and its socket engaged with the pin while its pinion is engaged with the screw pinion to rotate the latter.

In testimony that I claim the foregoing as my own, I affix my signature in presence of two witnesses.

WM. HURD.

Witnesses:

H. E. MAY,

W. H. CAMPBELL.