No. 801,223. PATENTED OCT. 10, 1905.

H. CÔTÉ.

THREAD CUTTING TEMPLE FOR LOOMS.

APPLICATION FILED MAY 20, 1905.

Fig. 1

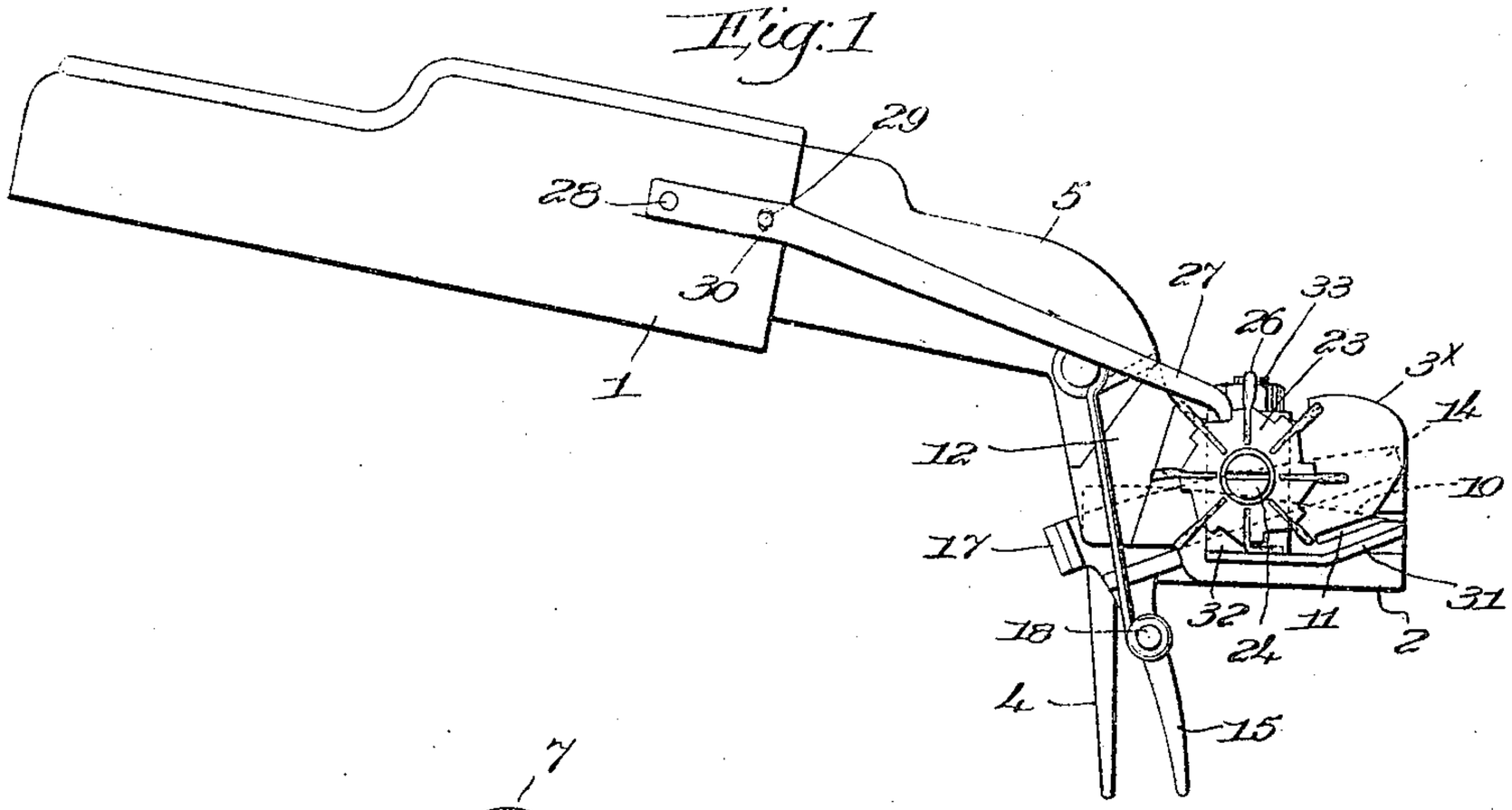


Fig. 2.

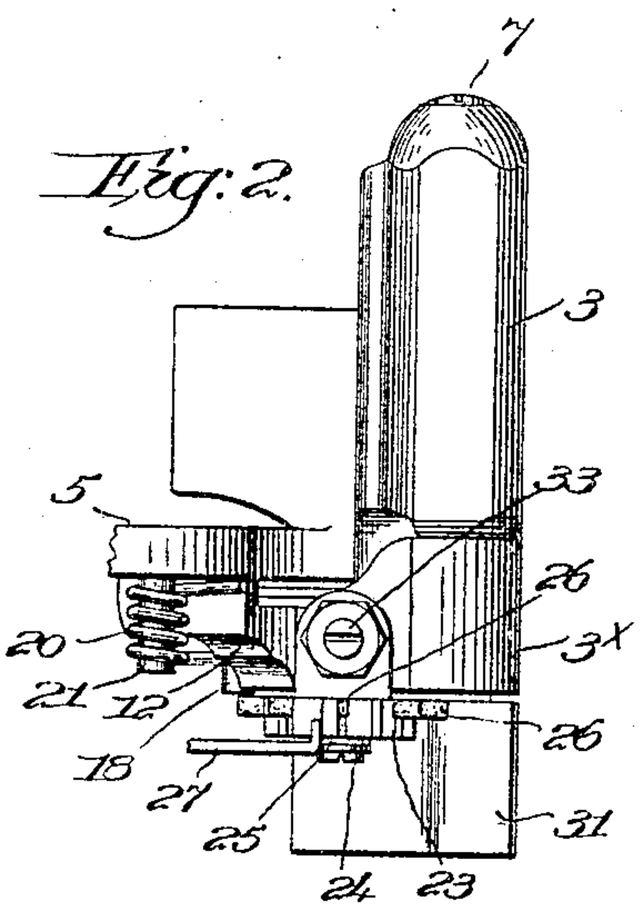


Fig. 3.

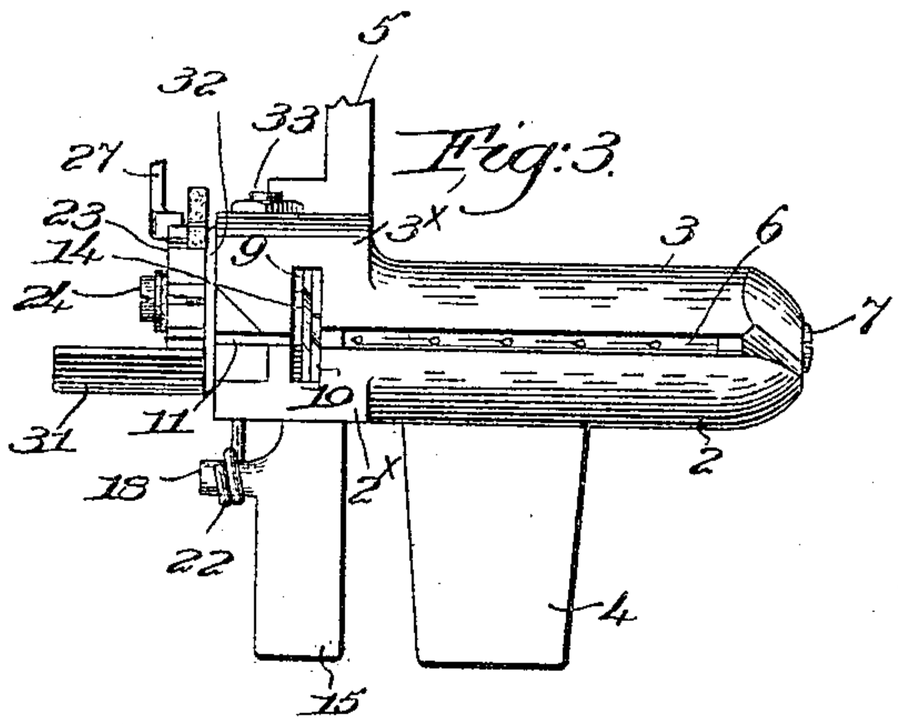


Fig. 5.

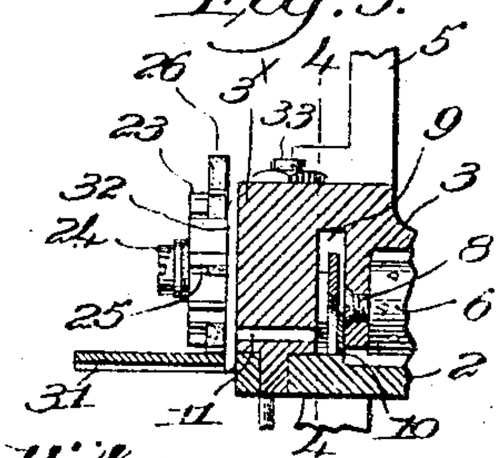
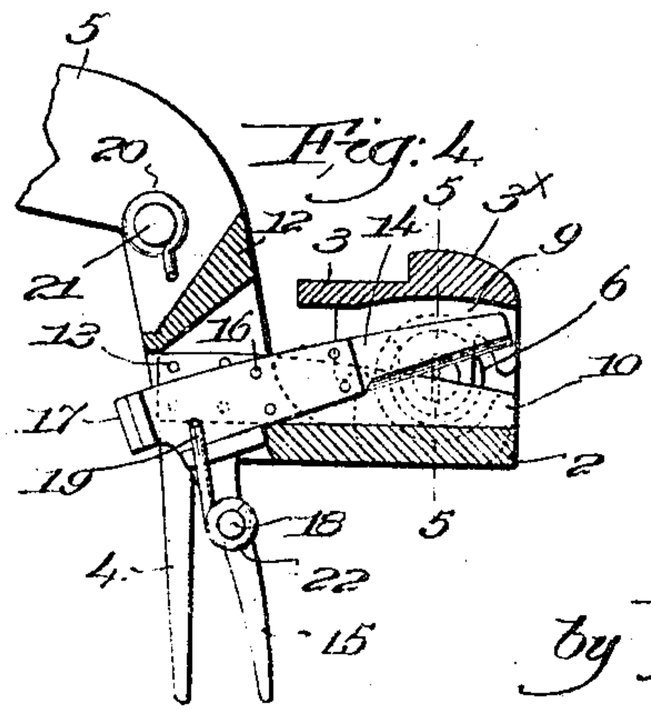


Fig. 4.



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UNITED STATES PATENT OFFICE.

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THREAD-CUTTING TEMPLE FOR LOOMS.

No. 801,223. Specification of Letters Patent. Patented Oct. 10, 1905.

Application filed May 20, 1905. Serial No. 261,351.

To all whom it may concern:

Be it known that I, HENRY CÔTÉ, a citizen of the United States, and a resident of West Warren, county of Worcester, State of Massachusetts, have invented an Improvement in Thread-Cutting Temples for Looms, of which the following description, in connection with the accompanying drawings, is a specification, like letters on the drawings representing like parts.

This invention relates to thread-cutting temples more particularly adapted for use in automatic filling-replenishing looms, such temples being designed to sever the filling or thread end extending from the selvage of the cloth to the replenishing mechanism after such mechanism has been operated to supply the shuttle with fresh filling. Such temples are usually employed in connection with a parting device to sever the thread end adjacent the shuttle, the parting device being often mounted on or adjacent to the shuttle-feeler. If the severed thread end is not removed, it is apt to catch in the cloth and be woven into the selvage thereof, making an imperfection in the cloth.

My present invention has for its object the production of a thread-cutting temple provided with means to clear the severed thread end from the proximity of the selvage to prevent the end from being woven into the cloth.

The various novel features of my invention will be fully described in the subjoined specification and particularly pointed out in the following claims.

Figure 1 is a side elevation of a thread-cutting temple embodying one form of my invention. Fig. 2 is a top plan view of the temple-head, the shank being broken off. Fig. 3 is a front elevation thereof. Fig. 4 is a sectional detail on the line 4 4, Fig. 5, looking toward the right, and Fig. 5 is a section on the line 5 5, Fig. 4, looking toward the left.

Referring to Fig. 1, the temple-stand 1, adapted to be secured to the breast-beam of the loom, the temple-head comprising the pod 2, cap 3, the heel 4 and shank 5, both attached to the pod, the shank being longitudinally movable in the stand and the toothed roll 6 rotatably mounted on inner and outer pivots 7 8, carried by the cap, are substantially of well-known construction. The outer ends of the cap and pod are longitudinally extended, as at $3^{\times}$ $2^{\times}$, (see Fig. 3,) and an upright transverse slot 9 is formed therein and an elongated shear-like cutting-blade 10 is secured to the shank and extends forward to the front face of the portion $2^{\times}$, as shown in Fig. 4, the upper cutting edge of the blade lying just below the cloth-receiving opening between the adjacent longitudinal edges of the pod and cap. An extension of this opening is formed by a slot 11 in the extension $2^{\times}$, (see Fig. 1,) extending well back for a purpose to be described. The shank 5 has an enlargement 12 behind the extension $3^{\times}$ of the cap and slotted in alinement with the slot 9, the rear end of the blade 10 being secured to the shank at 13, and the movable cutting-blade 14 is inserted in the slots.

A heel 15 is rigidly secured, as at 16, Fig. 4, to the blade 14, the heel having a lateral enlargement or stop 17 and a lateral lug 18, and a wire spring 19, spirally coiled at 20 to fit over a stud 21 on the shank 5, has one end bearing against a shoulder on the shank, the opposite downturned end of the spring being looped at 22 around the lug 18.

The spring normally acts to lift the outer end of the blade 14, as clearly shown in Fig. 4, so that the thread end entering the slot 11 will pass between the cutting edges of the blades. As the lay beats up it strikes the heel 15 and rocks the blade 14, so that the two blades are brought together with a shearing action, and if a thread end is between them it will be severed, the general action so far described being very similar to that in other thread-cutting temples now in use; but the shear-blade arrangement of the cutters is in itself novel, so far as I am aware.

Usually the thread end is also severed adjacent the shuttle, and sometimes the cut piece of thread will work into the selvage of the cloth and be woven thereinto, making an imperfection. In order to prevent such an occurrence, I have mounted on the temple-head a thread-clearer which operates to move away the loose severed end of thread from the proximity of the selvage, as will be described. A ratchet 23 is rotatably mounted on a stud 24 in the outer end of the cap extension $3^{\times}$, said ratchet having a broad toothed face, Figs. 2, 3, and 5, and provided with a series of radial slits

25, each slit being adapted to receive and hold a flexible wiper 26, such as a piece of felt long enough to project considerably from the face of the ratchet, but only about half as wide as the face. The ratchet serves as a rotatable carrier for the wipers, and it is rotated intermittingly or step by step by a pawl 27, pivoted at 28 on the stand 1 and guided by a pin 29, entering a slot 30 in the pawl. (See Fig. 1.) This allows the ratchet a slight freedom of movement on the pin 28 to clear one tooth after another, it being manifest that on each forward beat of the lay the temple-head will be moved toward the stand, so that the pawl advances the ratchet one tooth. A thin metallic shelf 31 extends laterally from the outer end of the temple-head below the notch 11 (see Fig. 1) and is carried under the ratchet and so close to it that as the wipers move around they wipe over the upper surface of the shelf. A narrow extension 32 of the shelf is bent up between the ratchet and the temple-head and then turned over and secured by a screw-stud 33 to the cap extension, the pivot-stud 24 of the ratchet passing through the part 32. The thread end lies across the shelf as it is carried part way into the notch 11 between the blades, and when said end is severed if it does not drop off the shelf at once it is caught by one or more of the wipers 26 and wiped along over the shelf under and past the ratchet and swept clear of the shelf, so that it cannot be drawn into the selvage. As shown in Figs. 1 and 3, the shelf is inclined immediately beneath the notch 11, tending thereby to slide the end along to be caught by the wipers. When the severed thread end is released by the wipers, it is in such position that it is far removed from the fell of the cloth, and hence cannot possibly be woven in.

My invention is not restricted to the precise construction shown and described, as modifications can be made in various particulars without departing from the spirit and scope of my invention.

Having fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. A temple-head provided with a toothed roll and having a transverse slot at its outer end, coöperating fixed and movable shear-blades located in the slot, means to operate the movable blade, and an automatically-actuated thread-clearer adjacent the blades to remove the severed end of the thread.

2. A temple-head provided with a toothed roll and having a transverse slot at its outer end, coöperating fixed and movable thread-parting blades located in the slot, means to operate the movable blade, and a rotatable thread-clearer mounted on the temple-head adjacent said blades.

3. A temple-head provided with a toothed roll, an automatically-actuated, rotatable thread-clearer mounted on the outer end of the temple-head, fixed and movable thread-parting blades located between the thread-clearer and the outer end of the temple-roll, and means to operate the movable blade.

4. A temple-head provided with a toothed roll, a rotatable carrier mounted on the outer end of the temple-head and provided with flexible clearers to engage and remove the severed thread end, means to rotate the carrier intermittingly, and automatically-operated thread-parting means on the temple-head between the outer end of the roll and the thread-clearer.

5. A temple-head provided with a toothed roll and having a shank, a stand in which the shank is longitudinally movable, a pawl on the stand, a ratchet rotatably mounted on the outer end of the temple-head and having a series of flexible wipers, a laterally-projecting shelf over which the wipers pass, and automatically-operated thread-cutting blades between the outer end of the roll and the ratchet, the movement of the temple-head relatively to the stand effecting coöperation between the pawl and ratchet to intermittingly move the wipers over the shelf and thereby withdraw the severed thread ends.

6. A temple-head provided with a toothed roll, automatically-actuated means mounted on the temple-head to clear the thread end from the proximity of the selvage of the cloth, and thread-cutting means located between the said means and the outer end of the roll.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

HENRY CÔTÉ.

Witnesses:
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