

J. COWNGILL.
STOPPING MECHANISM FOR LOOMS.

No. 110,208.

Patented Dec. 20, 1870.

Fig. 1

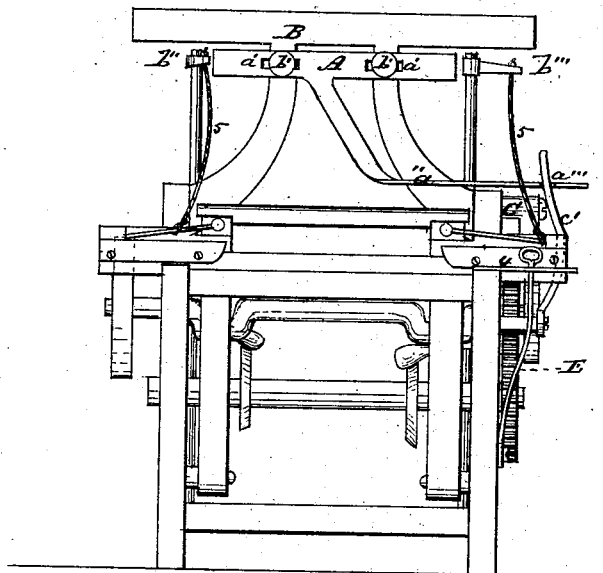


Fig. 3

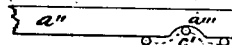
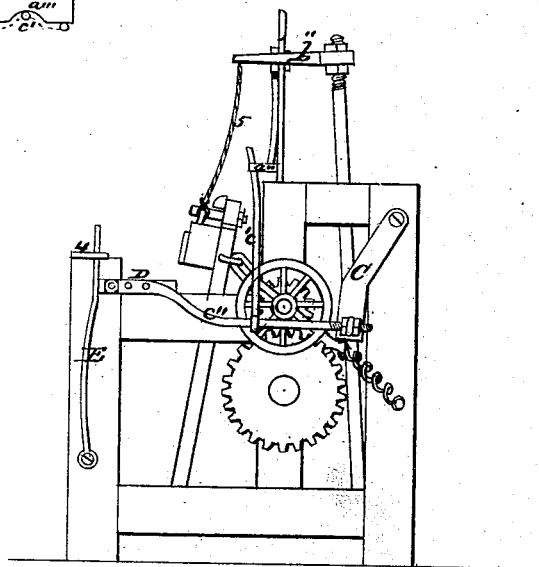


Fig. 2



Witnesses:

Ben. Morrison
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Inventor

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United States Patent Office.

JAMES COWNGILL, OF PHILADELPHIA, PENNSYLVANIA.

Letters Patent No. 110,208, dated December 20, 1870.

IMPROVEMENT IN STOPPING-MECHANISMS FOR LOOMS.

The Schedule referred to in these Letters Patent and making part of the same.

I, JAMES COWNGILL, of the city of Philadelphia, in the State of Pennsylvania, have invented certain Improvements in the Stop Motion of Looms, of which the following is a specification.

Nature and Objects of the Invention.

My invention relates to the combination of a sliding bar with the brake and frog of a loom, in such a manner that, when either of the picker-straps break, its picker-staff will come in contact with and move the slide, so as to cause the latter to move the brake and belt-shifter, and thus stop the loom; the object of my invention being to prevent what weavers call a "smash up," or damage to the loom, if the shuttle fails to pass out of the "shed" when the picker-strap breaks.

Description of the Accompanying Drawing.

Figure 1 is a front view of the frame of a loom embodying my invention.

Figure 2 is a view of the right-hand end of fig. 1.

Figure 3 is a sectional plan view of the forward end of the sliding bar in contact with the arm of the brake.

General Description.

The slide A is attached to an elevated part, B, of the frame of the loom by means of two bearings, consisting of slots *a' a'* in the slide, and headed bolts, *b' b'* in the frame, so that the said slide A can be freely moved longitudinally right and left, in horizontal directions, between the two picker-staffs *b'' b'''*.

Projecting from the lower edge of the slide A is an arm, *a''*, near the outer end of which there is a Λ -notch, *a'''*, into and out of which the upright arm *c'* of the usual brake C is moved alternately by the slide A when the latter is put in motion, as will be explained.

The brake C is connected to a sliding frog, D, by means of the rigid bar *c''*, which carries the arm *c'*.

The length of the bar *c''* is such that, when the brake C is brought into action, the frog D pushes the spring bar E of the band-shifter out of its detent in the plate 4, and thus shifts the driving-band of the loom from the usual tight pulley to the loose one, not shown.

The picker-staffs *b'' b'''* vibrate horizontally, and, by means of their respective straps, move the pickers and the shuttle (not shown) right and left in the usual well-known manner.

When the loom is working, the middle of the slots *a'* of the slide A rest upon the supporting-bolts *b' b'*, and the said slide A remains stationary, with its ends just clearing the inward strokes of the picker-staffs; but, if either of the picker-straps *b' b'* break, its picker-staff strikes that end of the slide A, drives it forward, so as to displace the arm *c'* from the notch *a'''* to the edge of the arm *a''*, (see fig. 3,) and thus bringing the frog D and brake C into action, shift the band to the loose pulley (not shown) and stop the motion of the loom.

The devices are very simple of construction, can be applied to any loom of the class, and are entirely effective for the purpose.

Claim.

I claim as my invention—

The combination of the sliding bar A with the brake C and frog D of a loom, so as to be operated by the picker-staffs *b'' b'''*, substantially as and for the purpose hereinbefore set forth.

JAMES COWNGILL.

Witnesses:

BENJ. MORISON,
WM. H. MORISON.