

(No Model.)

H. A. REMINGTON.
BRAKING MECHANISM FOR LOOMS.

No. 406,473.

Patented July 9, 1889.

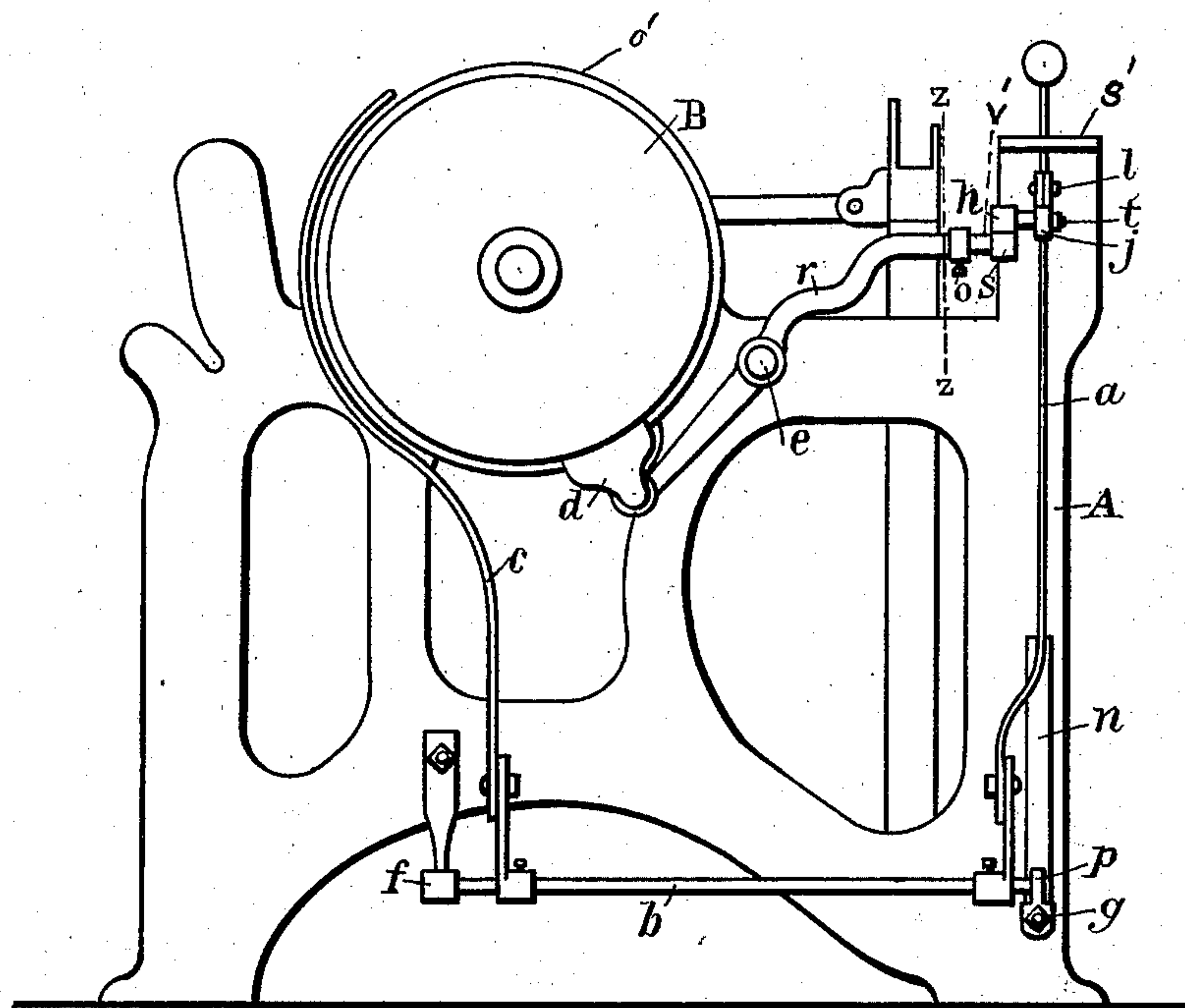


Fig. 1.

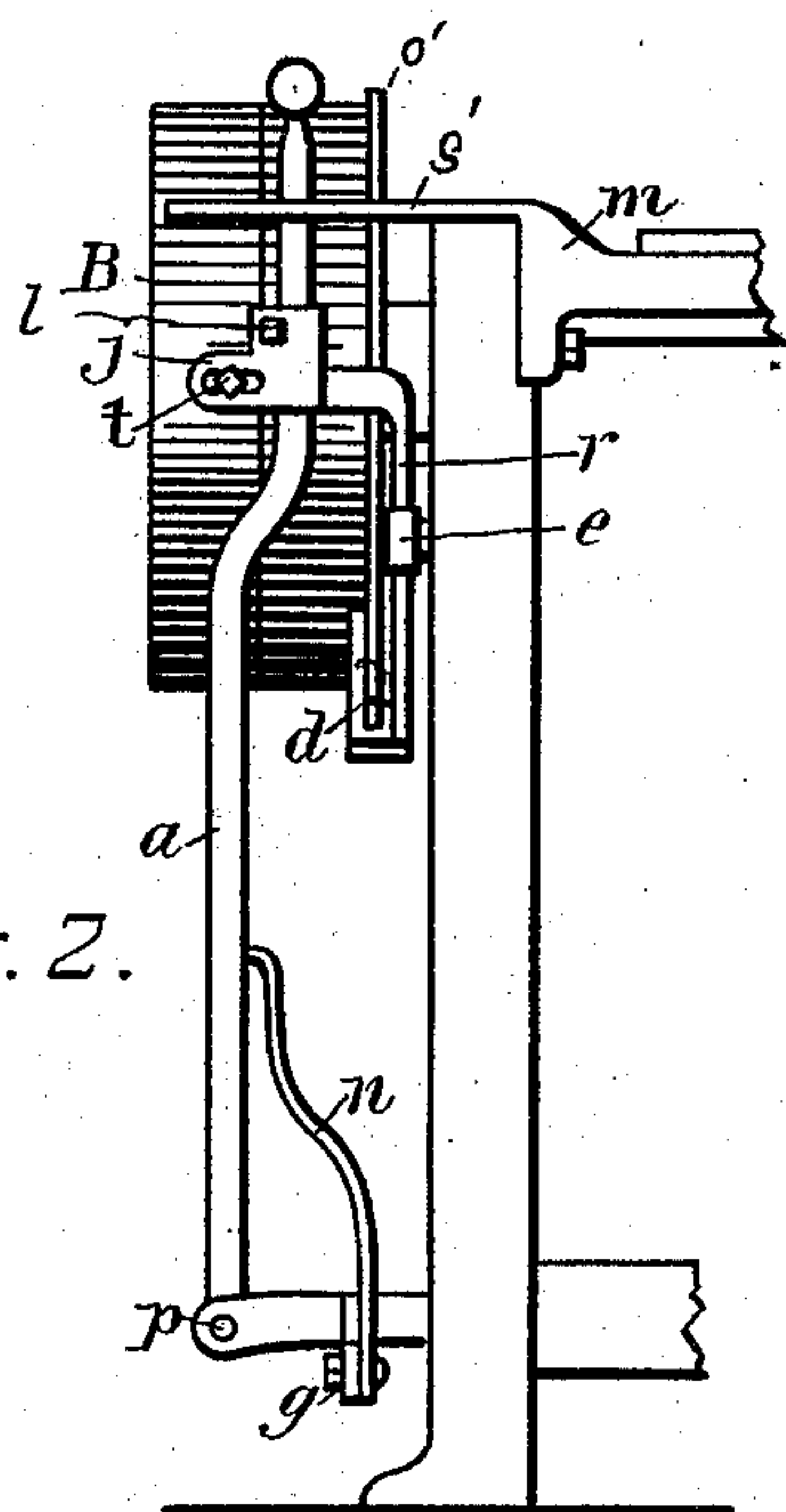


Fig. 2.

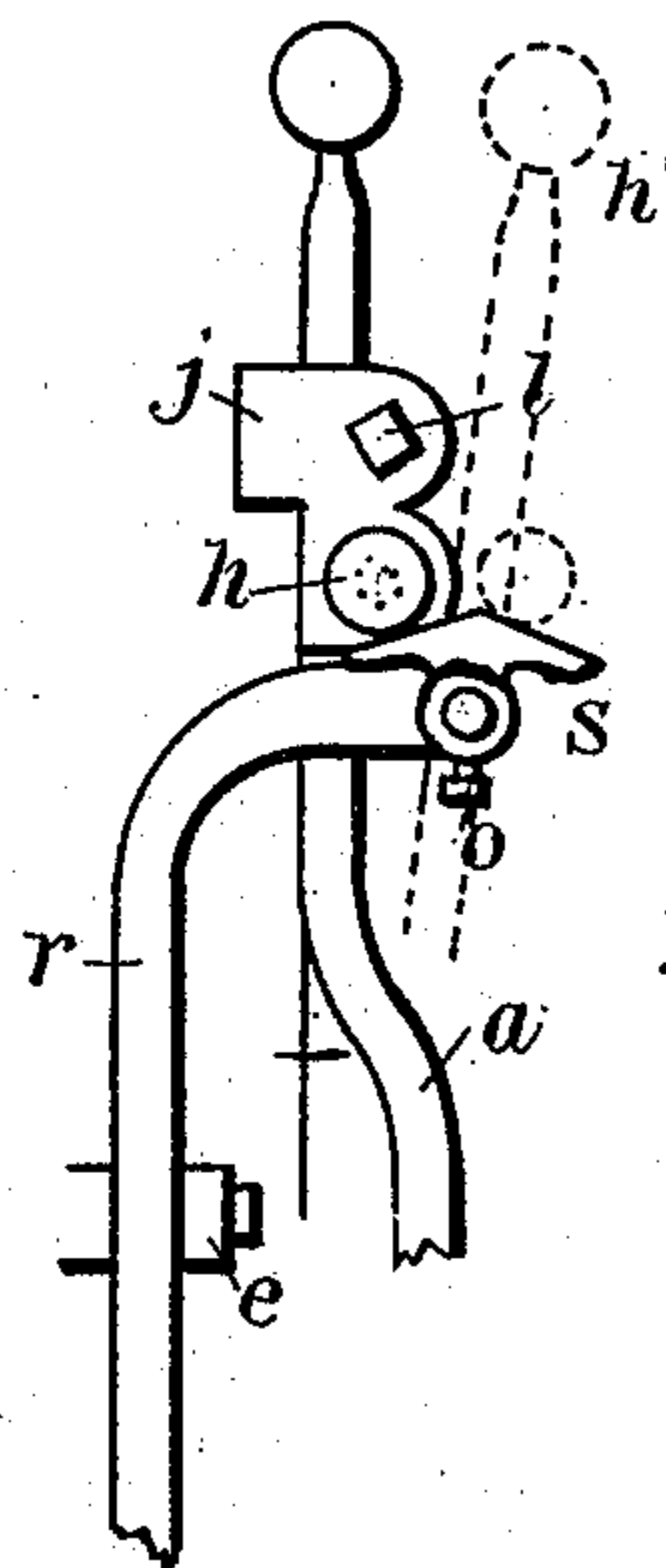


Fig. 3.

Witnesses

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BRAKING MECHANISM FOR LOOMS.

SPECIFICATION forming part of Letters Patent No. 406,473, dated July 9, 1889.

Application filed February 26, 1889. Serial No. 301,233. (No model.)

To all whom it may concern:

Be it known that I, HORATIO A. REMINGTON, of River Point, in the county of Kent and State of Rhode Island, have invented certain
5 new and useful Improvements in Braking Mechanism for Looms; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters
10 of reference marked thereon, which form a part of this specification.

This invention is an improvement in brakes as applied to the driving-pulleys of looms for weaving for the purpose of checking the momentum of the moving parts of the machinery.
15 These brakes as heretofore constructed and applied were intended only for the purpose of stopping the loom as soon as possible after the driving-belt had been thrown off, and had
20 the disadvantage of leaving the loom locked against all motion, making it necessary for the operative to work other devices before the loom could be turned forward or back, as might be and generally is required. This
25 difficulty is overcome in this invention and the loom is free to be turned backward or forward as soon as the belt is clear off of the fast pulley. This brake also performs another function—in checking the fast driving-pulley
30 when in starting the belt is shifted onto it from the loose pulley and preventing the loom from starting until the belt has passed far enough onto the fast pulley to give the loom sufficient speed to throw the shuttle clear
35 across and box it properly, which a loom starting slowly as the belt is shipped onto the fast pulley will not do, unless the belt is thrown on very suddenly.

Figure 1 is an elevation of the end of a loom, showing the braking devices and their arrangement. Fig. 2 is a front elevation of a part of the same end of the loom shown in Fig. 1. Fig. 3 shows a back view of the devices between the dotted line *z z*, Fig. 1, and the front
45 of the loom.

A is the end frame of the loom.

B denotes the driving-pulleys, which consist of the usual fast and loose pulleys, the latter being the outer one. A small rocker-shaft *b* is placed across the lower part of the
50 end frame and held in bearings *f p*, attached to that frame. To this shaft *b* is attached the

belt-shipper arm *c*, that controls the position of the belt on the driving-pulleys. At the other end of the rocker-shaft *b* is secured the shipper-lever *a*, by which the belt-shipper is
55 operated. This lever *a* is guided in the usual way in a slot in a plate *s'*, attached to the top of the end frame, and has a ball placed on its upper end for the hand of the person who operates it. A short distance below the guide-plate *s'* a plate *j*, is clamped to the shipper-lever *a*, in which plate a slot is made to receive the stud *t*, that carries the friction-roll
60 *h*, the stud *t* of the roll being held in the slot by a screw-nut on its outer end to allow of its being adjusted in proper position. The plate *j* is clamped to the lever *a* by a bolt *l*, which also allows of its adjustment up or down on the lever. A brake-lever *r* is held on a
70 stud *e*, fastened in the end frame. The lower part of this lever extends down under the driving-pulleys B, and has a brake-shoe *d* secured to its lower end. The face of the shoe *d* is curved and has a groove made in it to fit
75 on the raised rim or flange *o'* on the inner edge of the inside pulley, which is fast on its shaft. The upper part of the brake-lever *r* is extended up toward the lever *a*, and has a stud *v'* in a hub on the end of the lever, in
80 which it is held by a set-screw *o*. The outer end of the stud *v'* has a cross-bar *s*, made with a double inclined top surface, so placed that the roll *h* will pass over the inclines when the lever *a* is moved out or in.
85

The way in which the parts described operate is as follows: Suppose the belt to be on the fast or inner pulley and the lever *a* swung in toward the loom, as in Fig. 2, with the loom running. To stop the loom, the lever *a* is
90 pushed out or set free, so that the spring *n* will press it out. As it moves the roll *h* will ride on the inclined surface of the bar *s* on the brake-lever *r*, and will depress that end of that lever and raise the other end, so as to
95 press the brake-shoe *d* up against the rim *o'* of the fast pulley and check its motion. As the belt passes fully onto the loose pulley, the roll *h* will pass off the outer side of the incline and gradually release the brake from the
100 fast pulley, leaving it free to be turned by hand in either direction. In starting, the lever *a* is pulled in toward the loom, and the roll *h*, riding on the outer incline, will press

up the brake-shoe against the fast pulley, so as to prevent its moving until the belt is far enough on to start the loom up to full speed, or fast enough to throw the shuttle with due
5 force. Then as the roll *h* passes off the inner incline it will ease up the brake and leave the fast pulley free to run the loom.

It will be readily seen that by means of the bolt *l* the plate *j* can be adjusted for height
10 on the lever *a*, and the roll *h*, by means of the slot in which its stud *t* sets, can be moved in and out, while the cross-bar *s* can also be set to incline more or less either way by means of the set-screw *o*, and thus adjust all these
15 parts to operate the brake at the right time and to the best advantage.

Having thus described my improvements, what I claim as my invention is—

1. A friction roll or stud attached to the lever for operating the belt-shipper, in combination with a brake-lever having a cross-bar

attached to it with its surface made with a double incline, and the shipping-lever, substantially as and for the purpose set forth.

2. The adjustable plate *j*, having a slot in it and carrying a stud with a friction-roll, substantially as described, and its adjusting-bolt
25 *l*, in combination with a brake-lever carrying a cross-bar adjustably attached to it with its surface made with a double incline, stud *v'*
30 and set-screw *o*, and shipping-lever *a*, substantially as and for the purpose set forth.

3. The combination of the plate *j*, bolt *l*, stud *t*, roll *h*, and lever *a* with the brake-lever
35 *r*, shoe *d*, cross-bar *s*, having a double-inclined surface, stud *v'*, and set-screw *o*, substantially as described, and for the purpose specified.

HORATIO A. REMINGTON.

Witnesses:

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