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A. E. HEALEY.
BRAKING DEVICE FOR LOOMS.
APPLICATION FILED AUG. 24, 1906.

Patented Mar. 1, 1910.
2 SHEETS—SHEET 1.

Fig. 2

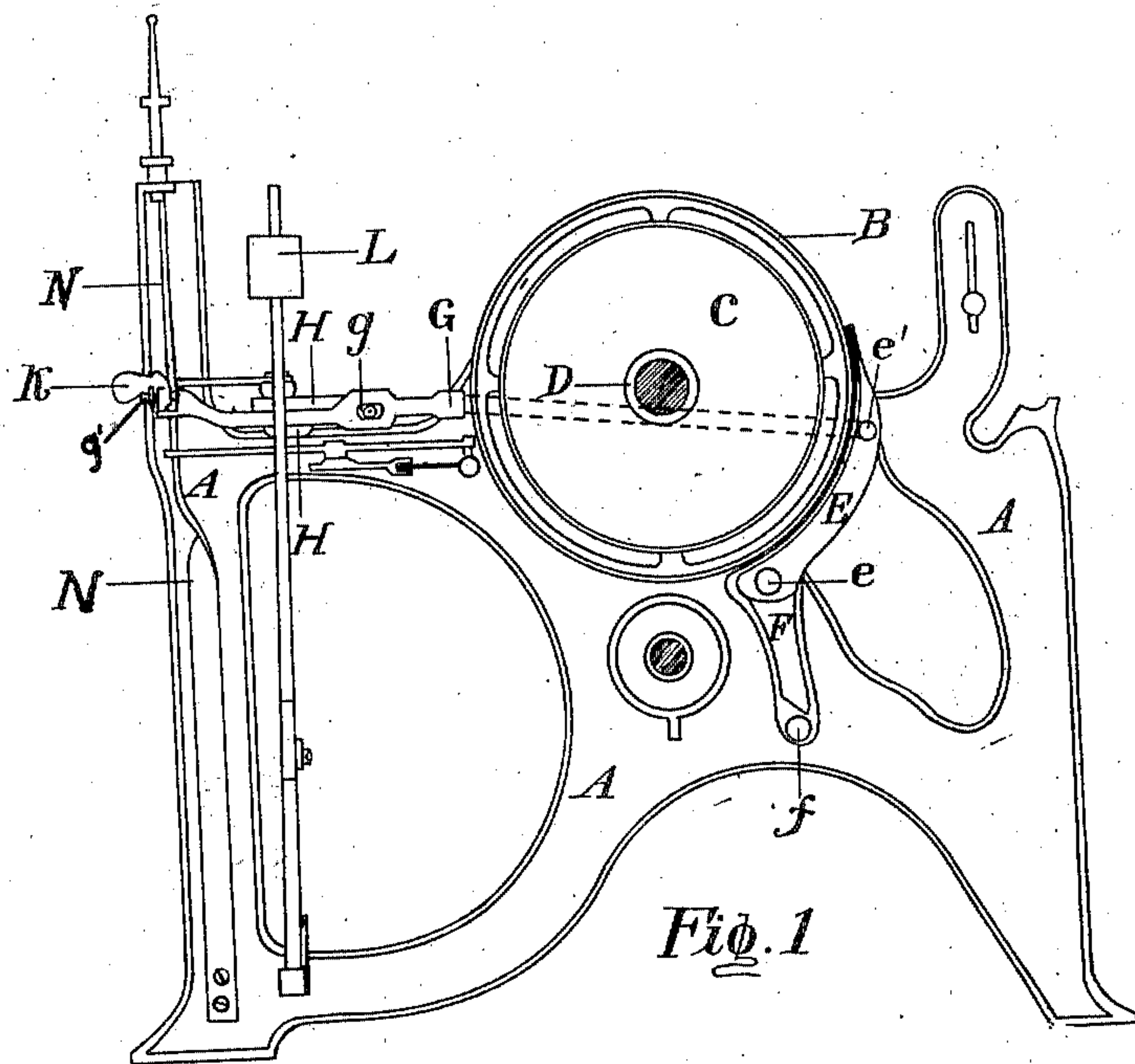
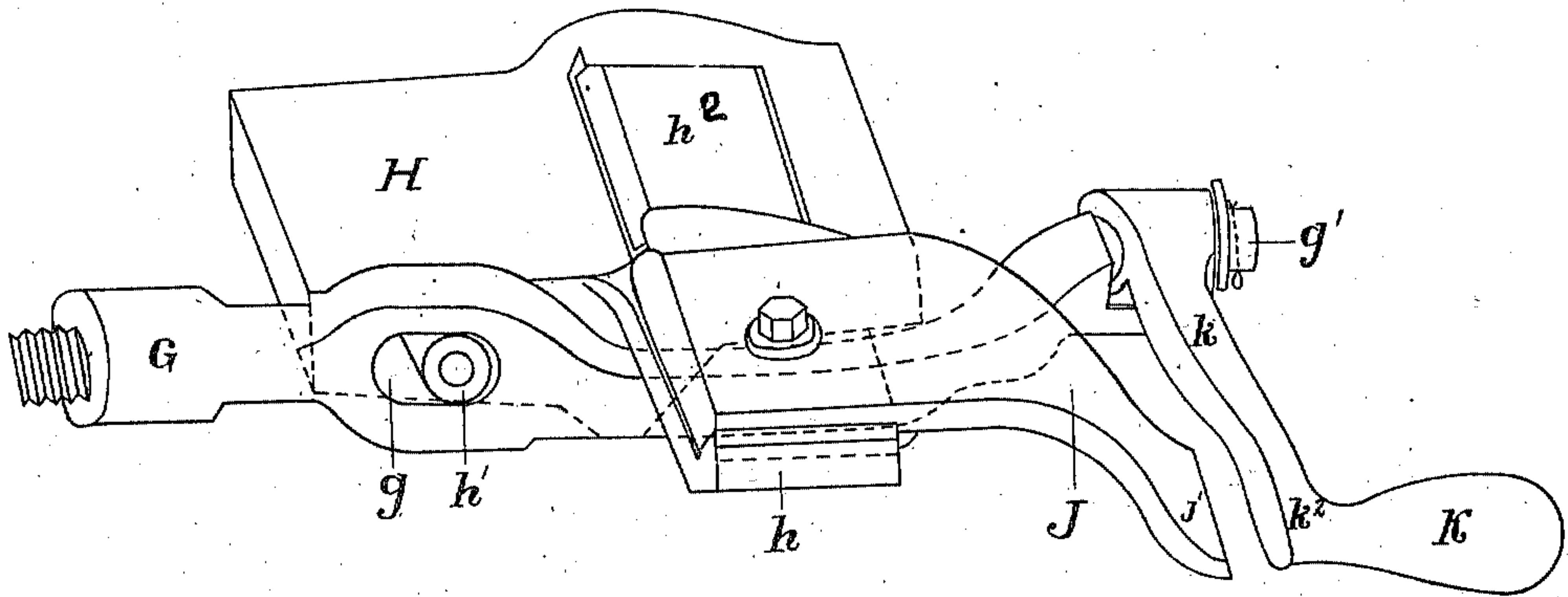


Fig. 1

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Fig. 4

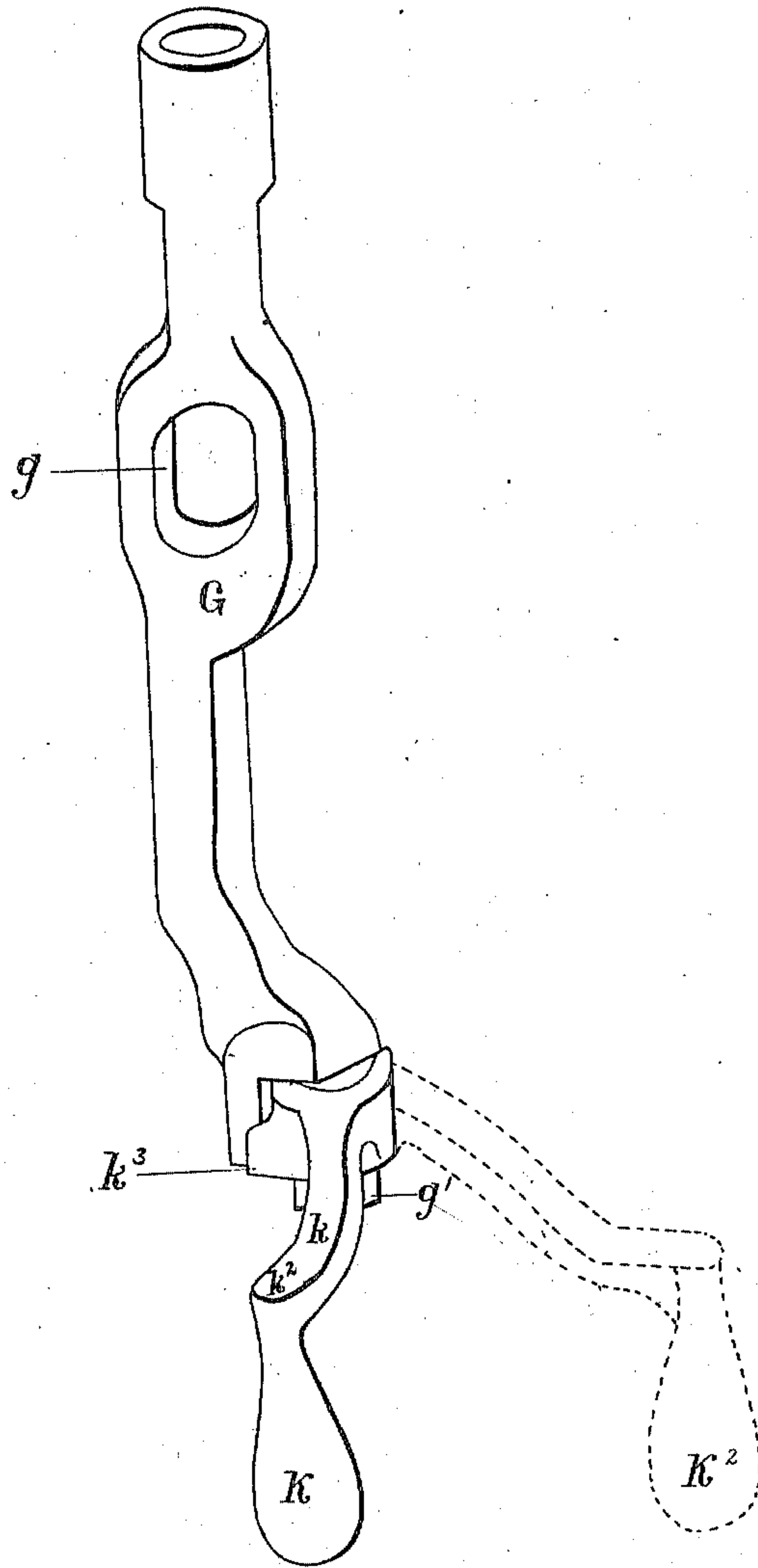
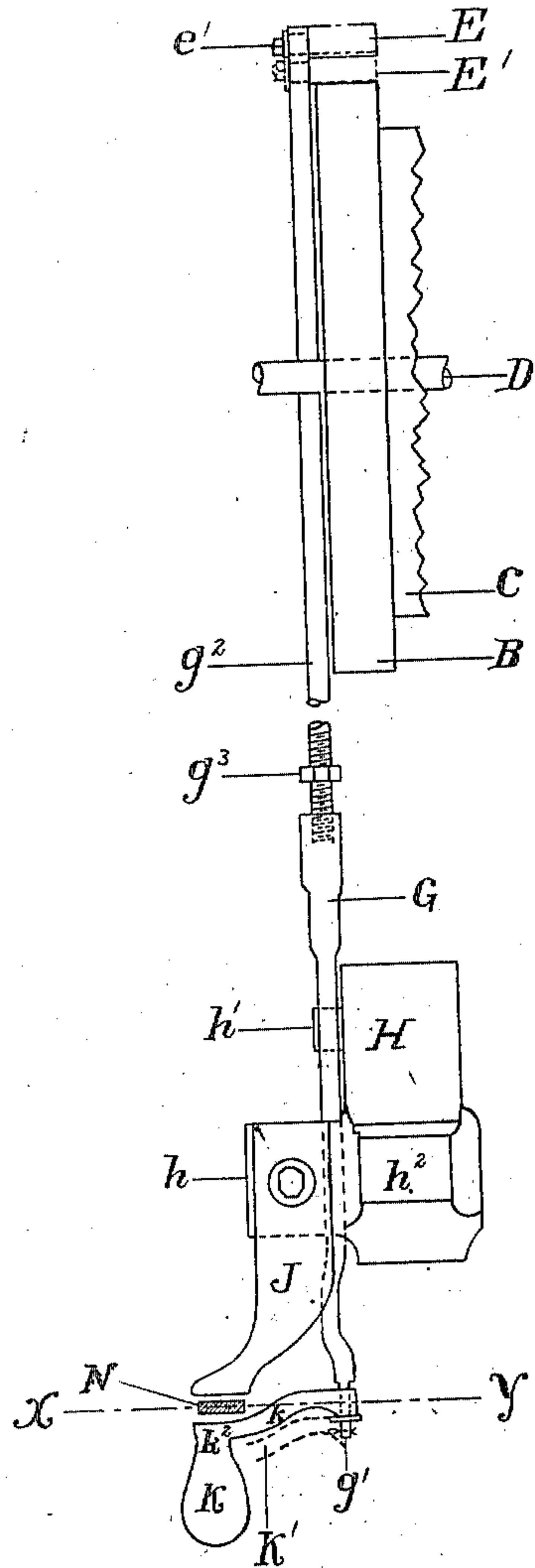


Fig. 3



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UNITED STATES PATENT OFFICE.

AQUILLA EMMETT HEALEY, OF FALL RIVER, MASSACHUSETTS, ASSIGNOR OF ONE-HALF TO RICHARD BOARDMAN, OF FALL RIVER, MASSACHUSETTS.

BRAKING DEVICE FOR LOOMS.

950,917.

Specification of Letters Patent.

Patented Mar. 1, 1910.

Application filed August 24, 1905. Serial No. 275,633.

To all whom it may concern:

Be it known that I, AQUILLA EMMETT HEALEY, of Fall River, in the county of Bristol and Commonwealth of Massachusetts, have invented an Improvement in Braking Devices 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 automatic braking devices for arresting the motion of a loom after the belt has been shifted to the loose pulley.

The moving parts of power looms running at ordinary speed have a considerable momentum which causes the loom to run for several picks after the power has been cut off. This over-running causes bad work; and it is desirable to arrest the motion of a loom as promptly as possible after the power has been cut off.

Power looms are commonly provided with means for cutting off the power and thereby stopping the loom upon the happening of various contingencies which prevent the proper operation of the loom, *e. g.* the breakage of the filling or warp-threads, or the failure of the shuttle to enter the shuttle-box. In these cases and other cases it is desirable to bring the loom to rest as soon as possible.

In the annexed drawings Figure 1 represents an end view of the material parts of a loom with my device applied. Fig. 2 is an isometric view of the frog, the bunter, the brake-rod and the brake-pull. Fig. 3 is a top view of the balance wheel, the brake rod, the frog, the bunter and the brake-pull. Fig. 4 is an isometric view of the front portion of the brake-rod and the brake-pull.

A is the loom frame.

B is the balance wheel revolving with the shaft D.

C is the belt pulley.

E is the brake shoe acting on B, and it is supported on the toggle F and is given freedom of movement at the pins *f* and *e*. E carries a stud *e'* to which is attached one end of the brake-rod. The brake rod is rigid throughout its length and is made in two parts G and *g*² with means for adjusting the length by screw and set-nut as shown at *g*³. The front portion G of the brake rod is provided with a slot *g* which engages a stud

h' on the frog H. The brake-pull K is pivoted on the front end of the brake rod so that the brake-pull while normally held horizontal by the lug *h*³ can be turned upward to release the brake. When the loom is running the pull is horizontal as shown in Fig. 3. The part of K nearest the starting handle is bent toward the front of the loom, so as to cross in a slanting direction, the path of the starting handle in moving from its tight pulley to its loose pulley position. With the starting handle in its tight pulley position the brake-rod end of K is inside, and the handle end of K is outside the path of the starting handle. K is held against endwise motion on the brake-rod by the washer and pin *g'*.

The frog H slides upon the loom frame A. It has the ordinary frog plate *h*², and carries the bunter J of ordinary construction which rests against the starting handle N when said handle is in its tight pulley position.

The starting handle N is of the usual construction and is under tension to move along the line X Y toward Y when released from the retaining catch in the frame by which it is held in its tight pulley position and which is of the usual construction, too familiar to require description.

When the loom is running the parts of my brake assume the position shown in Fig. 3. The brake E is then out of engagement with the balance wheel B; and the brake-pull slants across the path of the starting handle N. When the starting handle N is released from its retaining catch, it moves along the line X Y toward Y against the slanting or curved portion *k* of the brake pull K. As N continues its motion toward Y it forces K forward into the position indicated by the dotted lines K'. Through the washer and pin *g'* the forward motion of K is transmitted through the brake-rod G, *g*² to the brake E which is drawn up against the balance wheel B into the position shown at E' thereby arresting the motion of the loom.

It is practically necessary that the operative should be able to release the brake in order to manipulate the loom by hand when necessary. In my device such release is accomplished by turning the brake pull into a vertical position, shown at K², Fig. 4. When K² is in a vertical position it is out of engagement with N and the brake-rod is

then free to slip back and release the brake. When the loom is put in operation the brake-pull K is returned to its horizontal position in which it is held by the lug k^3 which strikes against G. The stud h' on the frog H acting on the brake-rod serves to set the brake when the dagger on the lay L strikes the frog plate h , and pushes the frog forward. The slot g allows the brake rod to be drawn forward by the starting handle independently of the operation of the frog.

I am aware that it is not new to operate a loom-brake by mechanism actuated by the starting handle, and I do not claim this as my invention; but so far as I am aware it is new to operate a loom-brake by a horizontal pull actuated by the starting handle, using the same brake and brake-rod which are operated by the frog.

20 Having thus described my invention, I claim:

1. In a loom-brake, a starting handle and a brake-shoe, in combination with a movable brake-pull slanting horizontally across the path of the starting handle, and means to connect the brake-pull with the brake-shoe.

2. In a loom-brake, a brake-shoe and a starting handle, in combination with a horizontal brake-pull, mounted upon a movable support, and slanting across the path of the starting handle, and engaged thereby as said handle moves from its running to its stopped position, a movable support for said brake-pull, and means to connect said support with said brake-shoe.

3. In a loom-brake, a starting handle, a horizontal brake-pull engaged by said starting handle as said handle moves from its running to its stopped position, said pull being pivoted on its support so as to be rotated out of engagement with said starting handle, and a movable support for said pull.

4. In a loom-brake, the combination of a starting handle, a brake-shoe, a brake-rod engaging said shoe, and a brake-pull attached to the end of said rod and slanting horizontally across the path of said starting handle, as said handle moves from its running to its stopped position.

5. In a loom-brake, the combination of a starting handle, a brake-shoe, a brake-rod engaging said shoe, a horizontal brake-pull slanting horizontally across the path of the starting handle and pivoted on the end of said rod so as to be rotated out of engagement with the starting handle.

6. In a loom-brake, a starting handle, a brake-shoe, a frog, a brake-rod, engaging said shoe and said frog, in combination with a pivoted brake-pull slanting horizontally across the path of said starting handle and engaged by said handle as said handle moves from its running to its stopped position.

7. In a loom-brake, the combination of a starting handle, a brake-shoe, a brake rod engaging said shoe, and a brake-pull connected to the end of said rod and slanting horizontally across the path of said starting handle, as said handle moves from its running to its stopped position.

8. In a loom brake a brake shoe, a shipper lever, a brake pull having one edge thereof disposed diagonally across the path of the shipper lever, and means connecting said brake shoe and said brake pull, release of the shipper lever causing displacement of the brake pull and thereby exerting a pull upon the brake shoe.

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Witnesses:

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