

W. COMEY & S. S. TURNER.

Improvement in Loom Weft-Stop Mechanism.

No. 129,212.

Patented July 16, 1872.

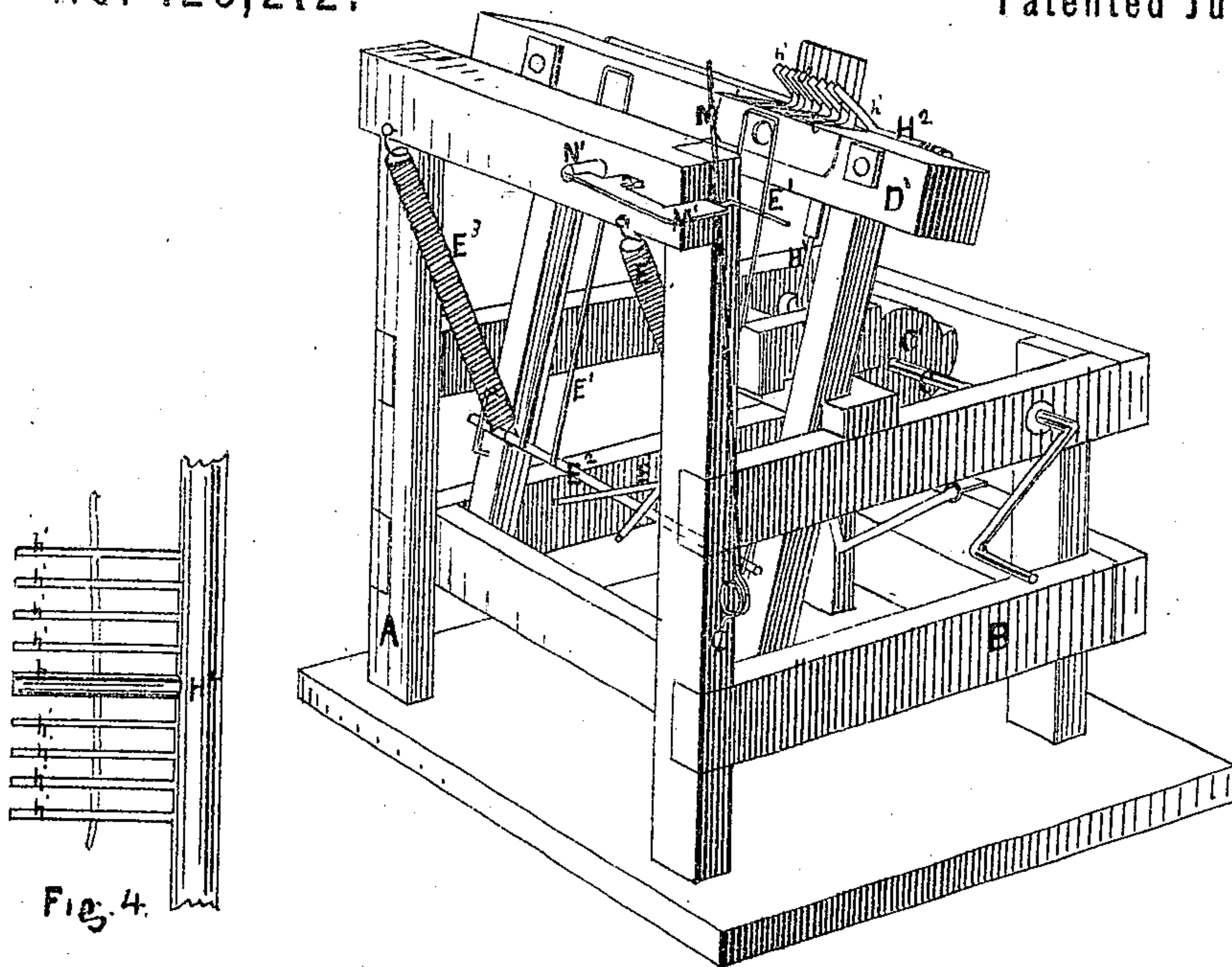


Fig. 1

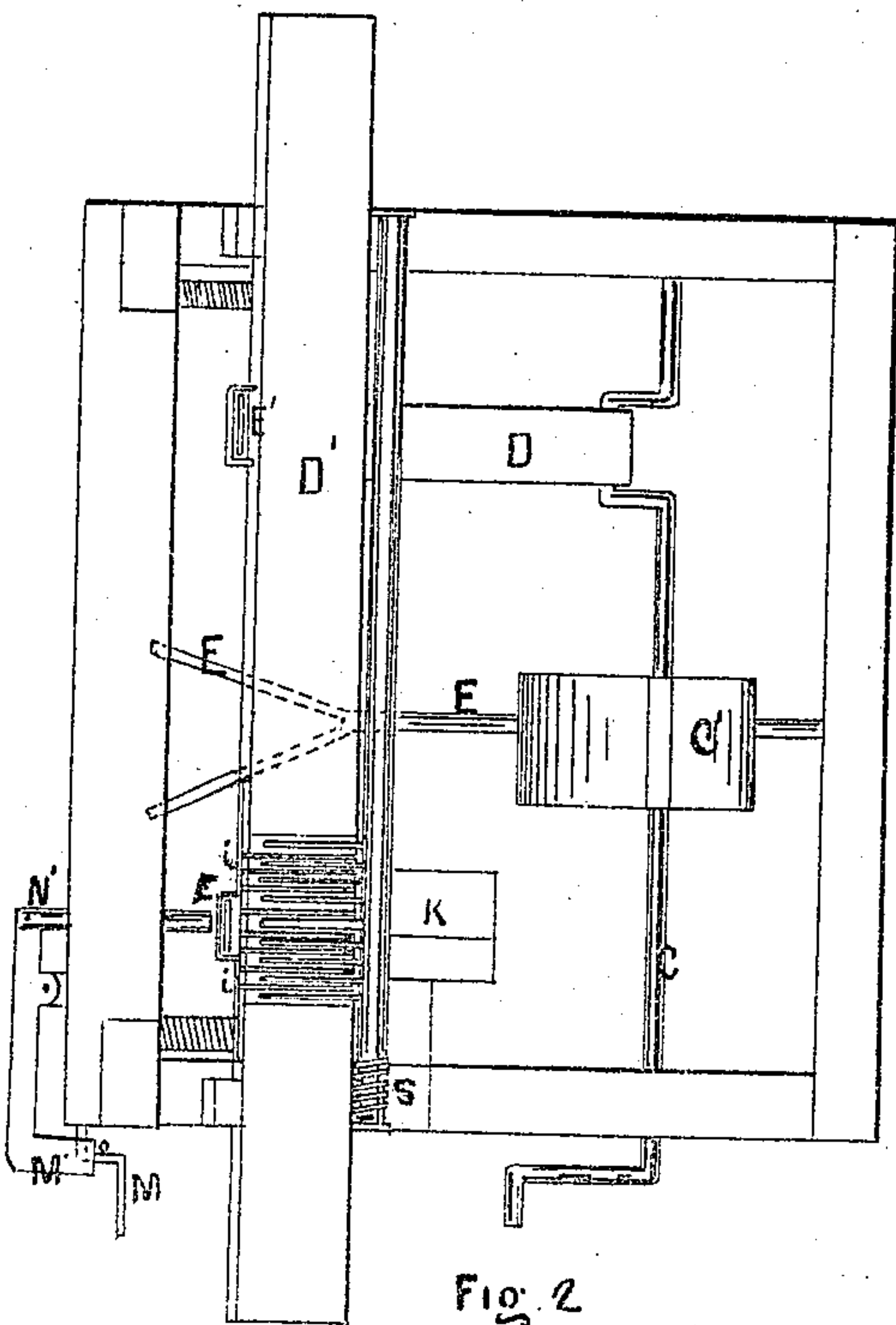


Fig. 2

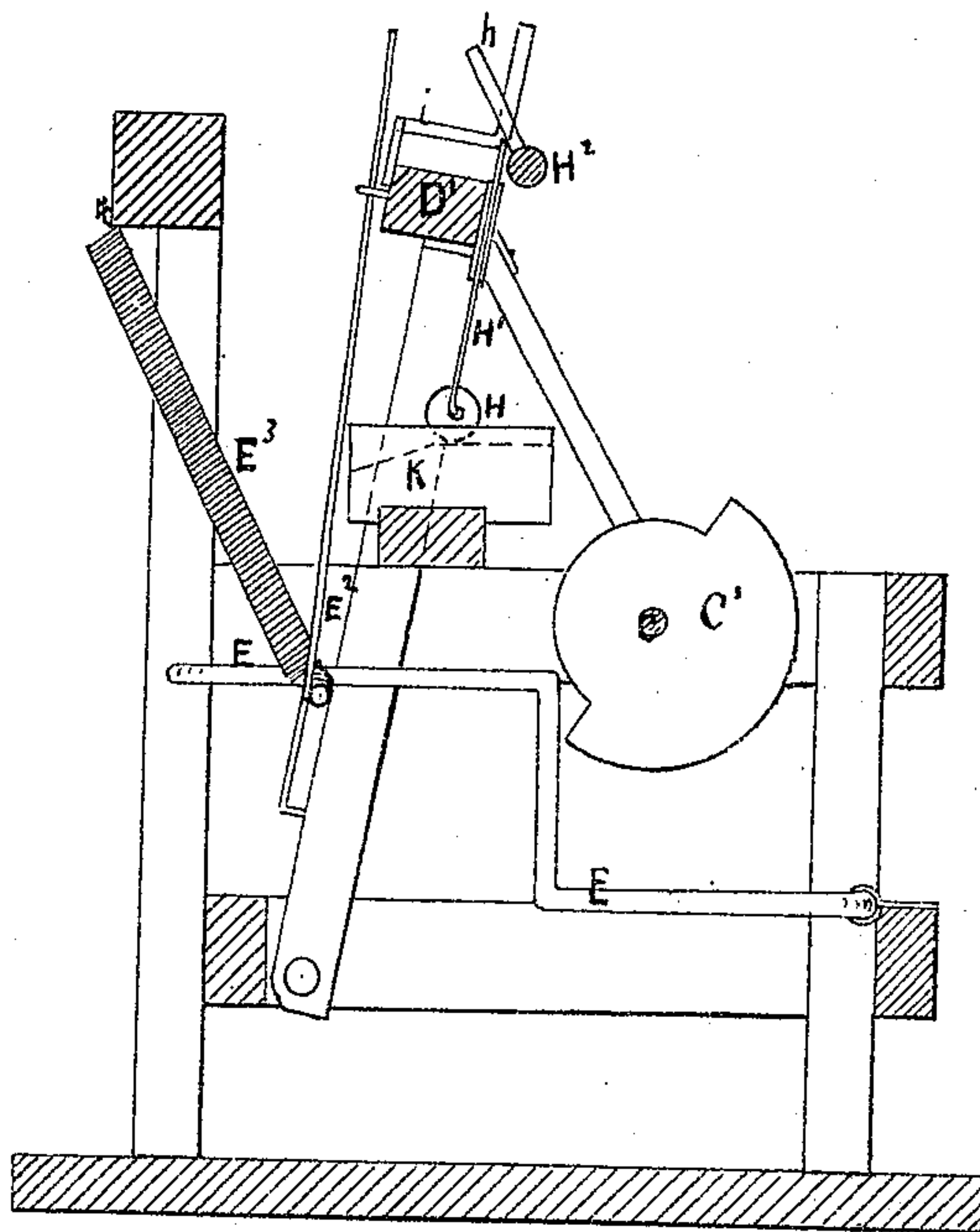


Fig. 3

WITNESSES

Frank L. Parker  
N. Henry Van Hook

Willard Comey.

Lidney S. Turner.

INVENTORS

per William Edson Attys



# UNITED STATES PATENT OFFICE.

WILLARD COMEY AND SIDNEY S. TURNER, OF WESTBOROUGH, MASS.

## IMPROVEMENT IN WEFT-STOP MECHANISMS FOR LOOMS.

Specification forming part of Letters Patent No. 129,212, dated July 16, 1872.

*To all whom it may concern:*

We, WILLARD COMEY and SIDNEY S. TURNER, of Westborough, in the county of Worcester and State of Massachusetts, have invented certain new and useful Improvements in Stop-Motions for Looms, of which the following is a specification:

The nature of our invention consists in a device for preventing the threads which have already been beaten up on a loom in which a number of shuttles are used from falling back onto the lay, and thus becoming entangled with the weft-detector device and preventing its action when the weft-thread next to be beaten up breaks. These threads, which it is necessary to prevent from falling onto the lay, are those that extend from the outer edge of the web to the shuttles that remain in the box. These threads are only liable to fall onto the lay when the same is beating up, and can only fall onto that portion of the lay that extends beyond the web, and it is upon this portion of the lay that the detectors are located. The device by which this is effected consists of reciprocating rods or bars attached to the lay outside of the space occupied by the web, and are actuated by suitable machinery, so as to project beyond the face of the lay while it is beating up, and thus to prevent the threads that have already been beaten up (and extending from the edge of the web to the resting-shuttles) from falling upon the detector device and preventing the action of the stopping device when the weft-thread next to be beaten up breaks. The detector that we use consists of an oscillating comb in combination with a fixed comb, the oscillating comb having combined with it a bar of sufficient strength to operate the shifting or stop-motion of the loom.

### *Description of the Accompanying Drawing.*

Figure 1 is a perspective view of our invention. Fig. 2 is a plan view of the same. Fig. 3 is a vertical section of the same. Fig. 4 is an enlarged view of the detector-comb.

### *General Description.*

Let A B represent the frame of a loom to which the other parts are attached. D is a lay, actuated by the shaft C. H<sup>2</sup> is a rod or shaft, supported in bearings on the back of

the lay, and is provided, near one or both ends, with a series of teeth, *h h' h' h'*, Figs. 1 and 4. These teeth *h h' h' h'* form the reciprocating comb-detector, and are arranged to fall between the corresponding teeth *i i*, &c., of the fixed comb in the shuttle-race, Figs. 1, 2, and 3. The reciprocating comb-detector is operated in one direction by a vertical rod, H<sup>1</sup>, Figs. 1 and 3, which is carried by the lay, and is provided at its lower end with a friction-roll, H, which, in traversing on the incline K, Fig. 3, causes the rod H<sup>1</sup> to rise as the lay moves back and to lift the weft-detector. As the lay advances the weft-detector is thrown forward by the rotation of the shaft H<sup>2</sup>, actuated by the coiled spring *s*. N', Figs. 1 and 2, is a sliding pin or bolt, pivoted to the lever M', and extending forward, as shown, so that at each forward motion of the lay it enters the channel in the race-way, into which the bar *h* of the detector falls when not held back by the weft-thread. In case the bar *h* does fall into this channel—which occurs when the weft-thread breaks—it comes in contact with the pin N' and pushes it back, which action communicates motion to the lever M' and thus actuates the shipping-lever M and stops the loom. E<sup>1</sup> and E<sup>1</sup> are two vertical rods, attached to a sliding bar, E<sup>2</sup>, which receives a vertical reciprocating motion through the action of the cam C', lever E, and the counterspring E<sup>3</sup>; or the motion may be communicated directly from the picker-shaft, or by any other suitable device. These rods E<sup>1</sup> and E<sup>1</sup> stand above the race-way, as shown in Fig. 3, while the lay is advancing, but are withdrawn to the position represented in Fig. 1 while the lay retreats. Thus the portions of the weft-threads outside the edge of the fabric that have been beaten up cannot fall upon the fixed comb *i i* of the lay, as they would otherwise be liable to do while the lay is bringing up the new weft-thread. These rods, being withdrawn just before the commencing of the back-stroke of the lay, do not interfere with the weft-thread that has just passed up.

In the drawing we have shown but one detector device, but in practice we have one at each end of the loom, so that they may work at either side of the warp or web.

We claim as our invention—

1. In combination with the lay of a loom, the vertically-reciprocating rods  $E^1$   $E^1$ , so arranged and operating that as the lay beats up they shall project above the lay and thus prevent the threads that have already been beaten up from falling back upon the lay and thus interfering with the action of the weft-detector, substantially as described, and for the purpose set forth.

2. The combination of the bar  $h$  with the removable comb  $h'$   $h'$   $h'$ , the sliding pin  $N'$ , and lever  $M'$ , operating substantially as described, and for the purpose set forth.

WILLARD COMEY.  
SIDNEY S. TURNER.

Witnesses:

WILLIAM EDSON,  
FRANK G. PARKER.