

T. BELL.

Shedding-Mechanisms for Looms.

No. 156,406.

Patented Nov. 3, 1874.

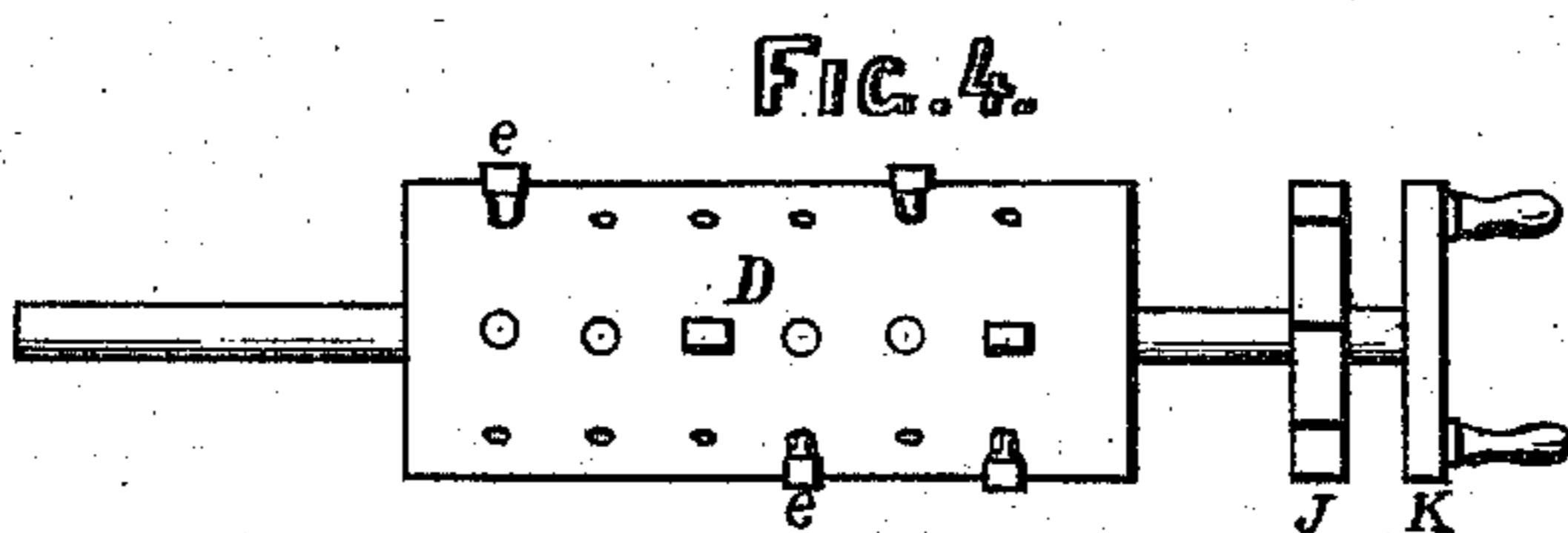
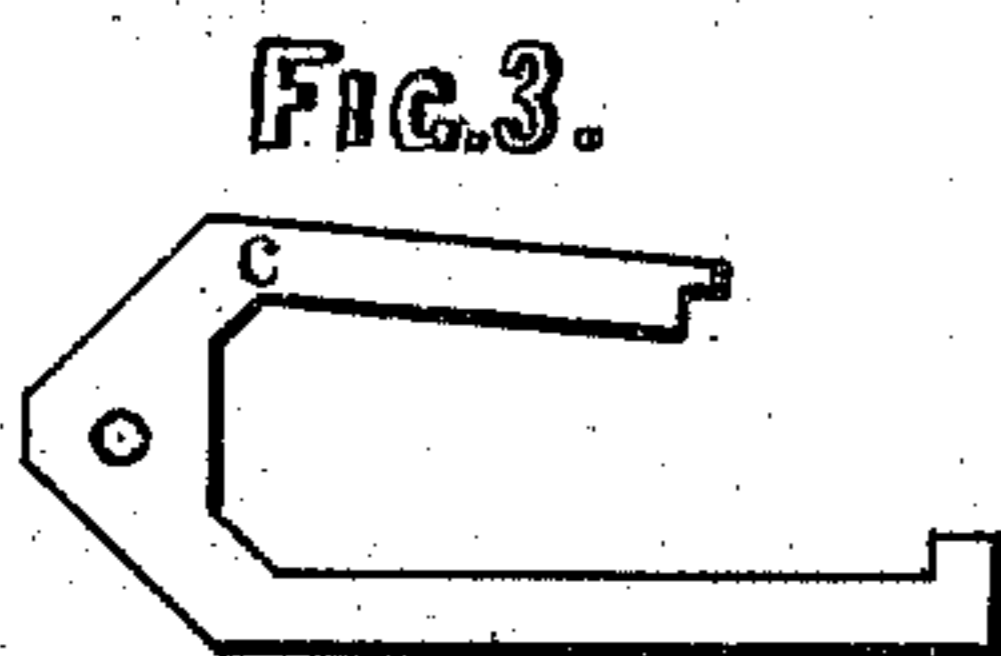
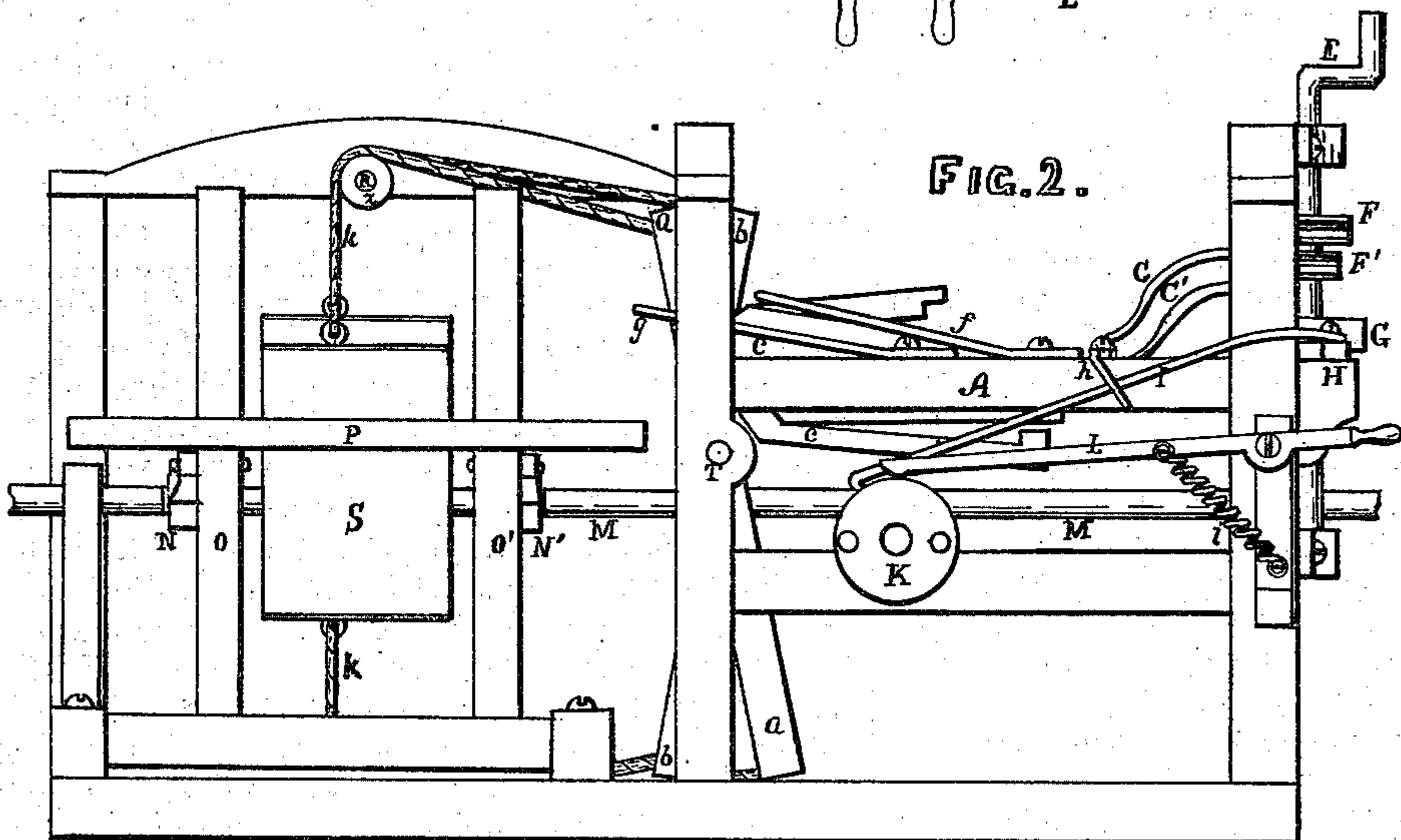
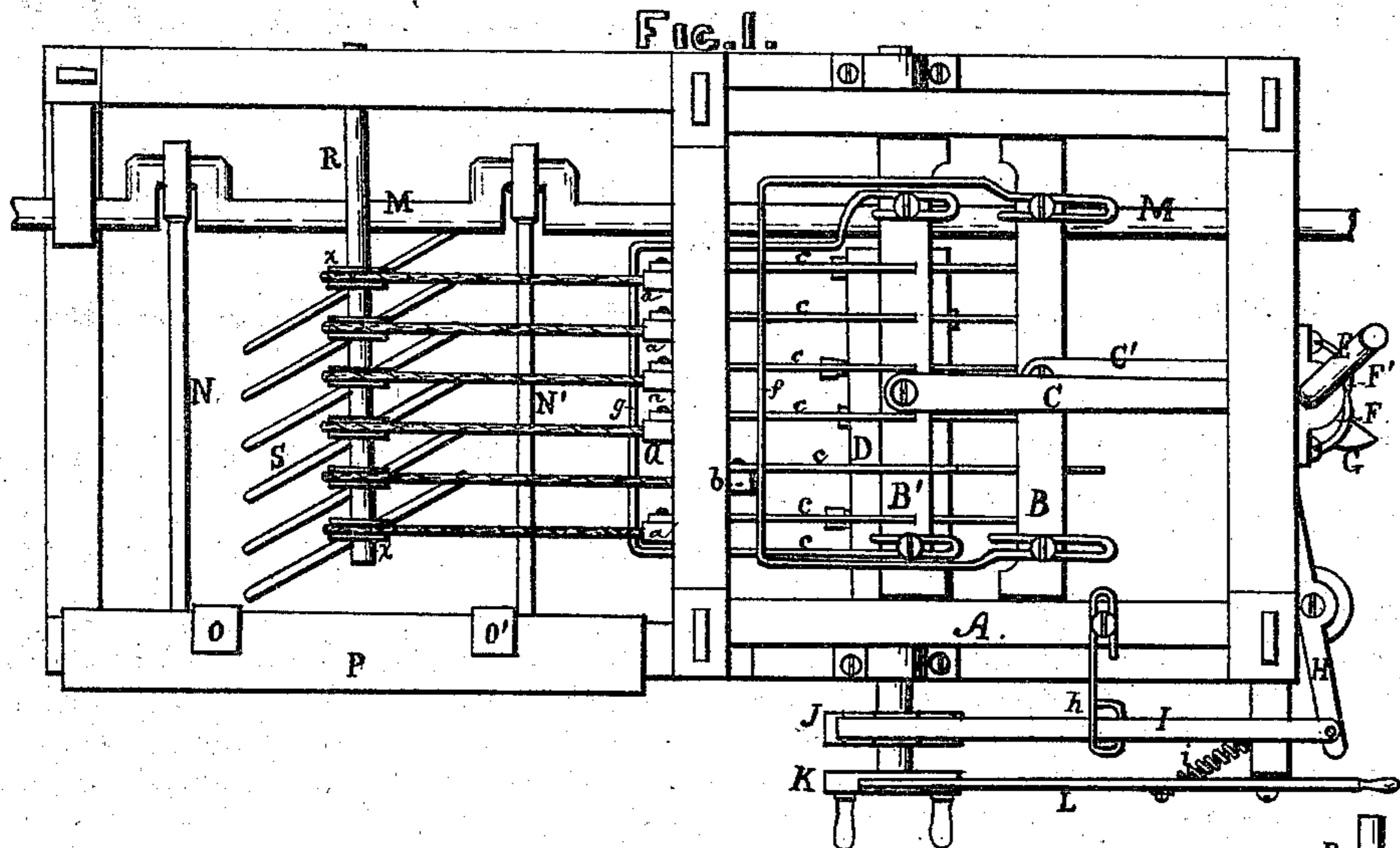


FIG. 5.



FIG. 6.

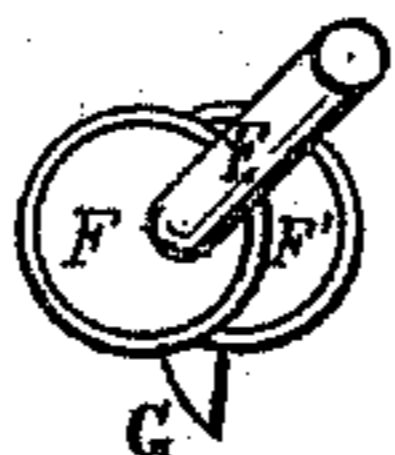
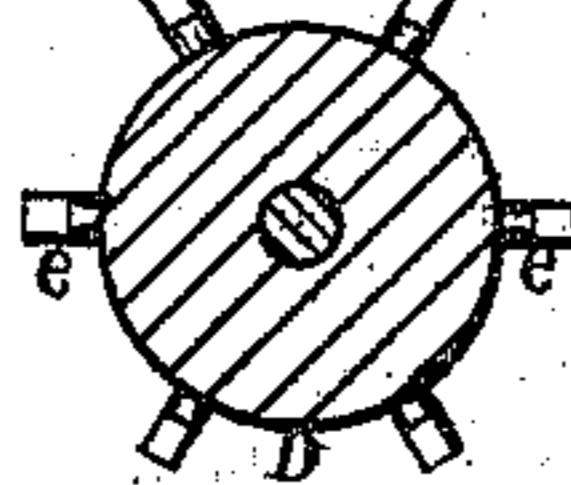


FIG. 7.



WITNESSES:

Wm. Hodge
S. A. Ellis

INVENTOR:

Thomas Bell
Per Cha D Moore
Atty.

UNITED STATES PATENT OFFICE.

THOMAS BELL, OF LAWRENCE, MASSACHUSETTS.

IMPROVEMENT IN SHEDDING MECHANISMS FOR LOOMS.

Specification forming part of Letters Patent No. **156,406**, dated November 3, 1874; application filed August 13, 1874.

To all whom it may concern:

Be it known that I, THOMAS BELL, of Lawrence, in the county of Essex and Commonwealth of Massachusetts, have invented a Shedding-Mechanism for Fancy Loom, of which the following is a specification:

The object of my invention is to furnish a shedding mechanism for fancy looms, which shall be simple in its application and effective for the purposes herein set forth.

My invention consists in the combination and arrangement of certain devices for operating the harnesses of looms, as described in the following specification.

Figure 1 is a top elevation of a loom with my improved shedding mechanism attached; Fig. 2, a side elevation; Fig. 3, one of the connecting-levers; Fig. 4, a roller provided with pins, ratchet-wheel, and hand-wheel; Fig. 5, ratchet-wheel; Fig. 6, an end view of shaft with eccentric wheels and cam attached; and Fig. 7, an end and sectional view of roller with pins attached.

Similar letters represent the same parts in each of the drawings.

In the drawings, A is the frame of a loom; B B', the actuating-slides, arranged to reciprocate horizontally in grooves in the loom-frame; C C', arms connecting the slides B B' with the eccentrics F F'; D, a roller containing the lifting pins *e e e*, &c.; G, a cam on shaft E; H, the pawl-lever; I, the pawl pivoted to H; J, the ratchet; K, the hand-wheel; L, the friction-brake; M, the crank-shaft; N N', connecting-rods; O O', the lever-arms supporting lathe P; R, the pulley-shaft, and S the harnesses; *a a b*, the vertical levers connected by cords to the harnesses. *c c c*, &c., are a series of double levers attached to the levers *a a a*, &c., and placed in or out of gear with the slides B B' by the pattern-roll D; *f*, an evenner attached to the slide B. *g* is another evenner attached to the slide B', and works on the opposite side of the levers *a a*

b, and is designed to bring the same back into place after being brought forward by the slide B'. The harnesses S, being attached to the levers *a a b*, are controlled by the pins *e e*, &c., of the roller D, and elevated or depressed to weave any desired pattern. *h* is a guide for the hook-pawl I; *i*, a spring holding friction-lever L; *k k*, the cords or straps connecting harnesses S with levers *a a b*, &c.

In the operation of my improved attachment the shaft E, upon which the eccentrics F F' and the cam G are attached, is revolved, so as to move the levers and harnesses in unison with other parts of the loom. The cam G is designed to move the lever H, which reciprocates the pawl I to operate the ratchet J, which is attached to the shaft of the roller D, which, by the pins *e e*, raise the levers *c c c* to engage with the slide B, all of the levers being engaged with the slide B' when not raised by the pins *e e*. The slides B B' are reciprocated by the eccentrics F F', connected therewith by the rods C C'. The evenner-rods *f* and *g* bring the levers *a a b* in line and position after the shed has been formed and the shuttle picked. The mechanism is so constructed as also to be changed by the hand-wheel K.

I claim as my invention and desire to secure by Letters Patent—

The combination of the shaft E, the eccentrics F F', the cam G, the lever H, the pawl I, the ratchet J, the hand-wheel K, the friction-lever L, the roller D, the connecting-levers *c c c*, &c., the vertical levers *a a b*, the slides B B', the evenners *f* and *g*, the connecting-rods C C', all being arranged and operating together in a manner and for the purpose herein set forth.

THOMAS BELL.

Witnesses:

CHAS. D. MOORE,
WILLIAM HYDE.