

No. 748,105.

PATENTED DEC. 29, 1903.

H. R. ROSS, A. McKEE, A. LAIRD & R. McKEOWN.

WEFT REPLENISHING MECHANISM FOR LOOMS.

APPLICATION FILED APR. 7, 1902.

NO MODEL.

3 SHEETS—SHEET 1.

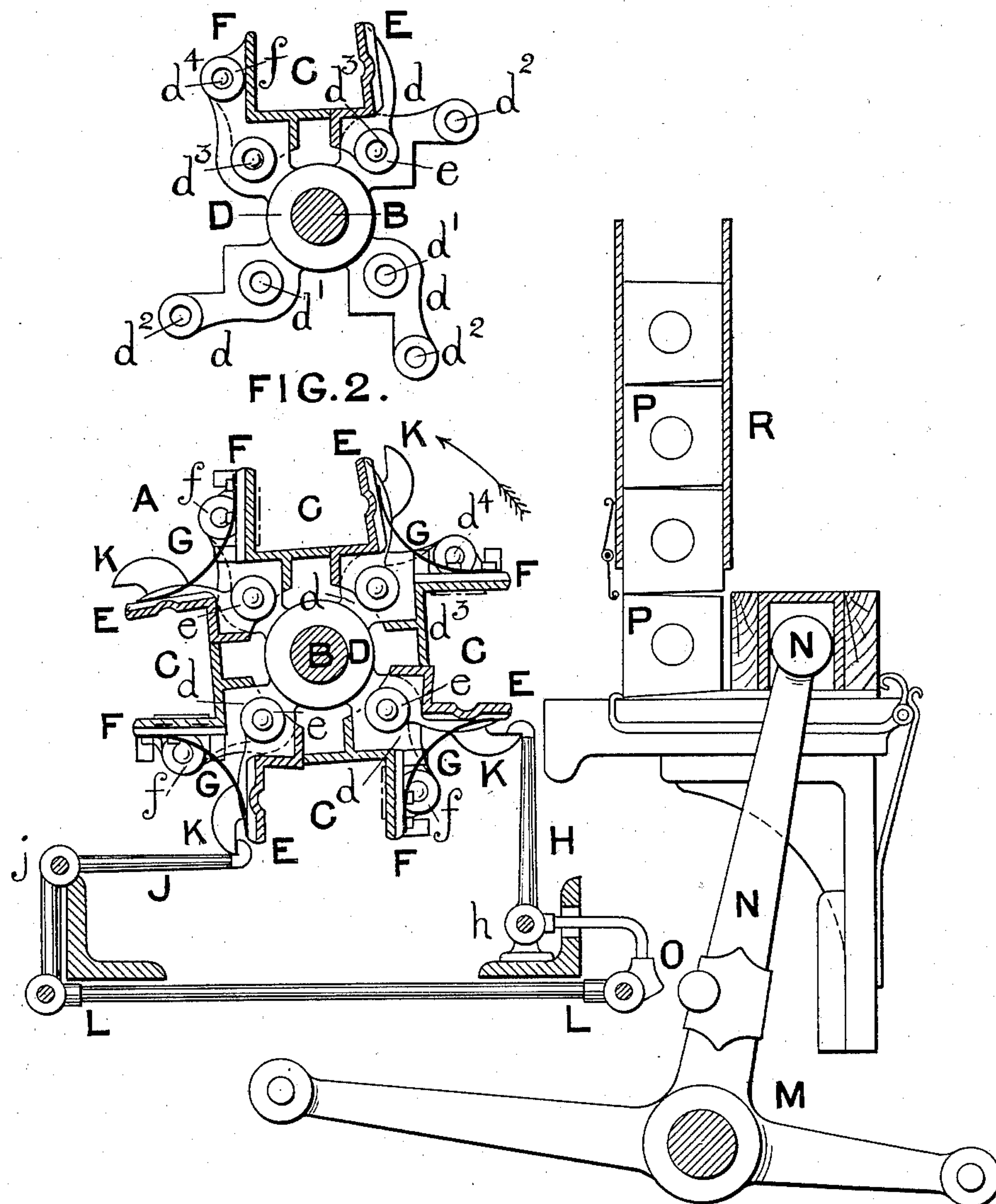


FIG. 1.

WITNESSES.

E Howard
Joseph Bates.

INVENTORS.

Hugh R. Ross
Andrew McKee
Andrew Laird
Robt. McKeown
L. Q. O'Saew O'Brien
att~~y~~

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3 SHEETS—SHEET 2.

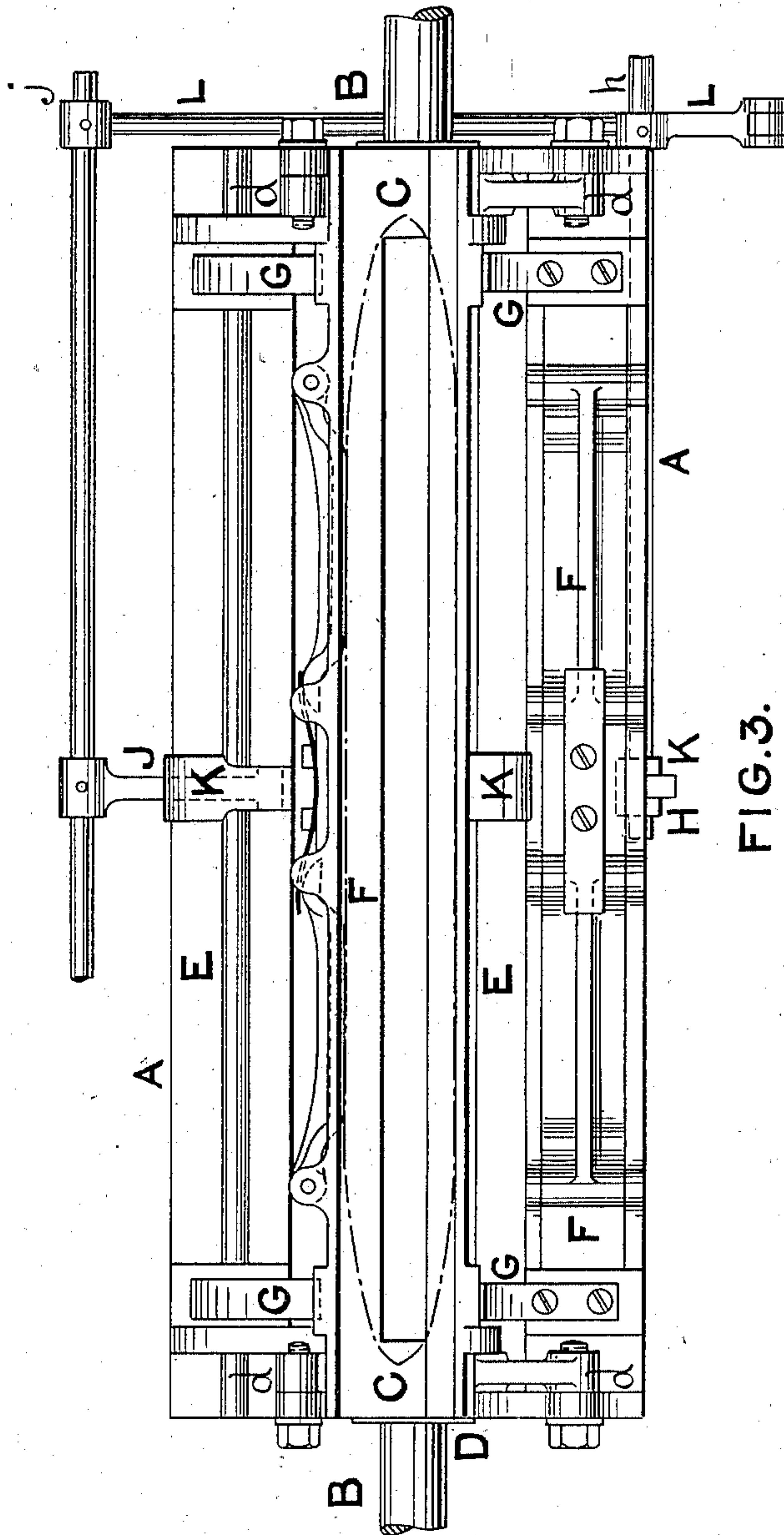


FIG. 3.

WITNESSES.

E. Howard.
Joseph Bates.

INVENTORS.

Hugh R. Ross.
Andrew McKee.
Andrew Laird.
Robt. McKeeown.
Charles O'Brien
att'y.

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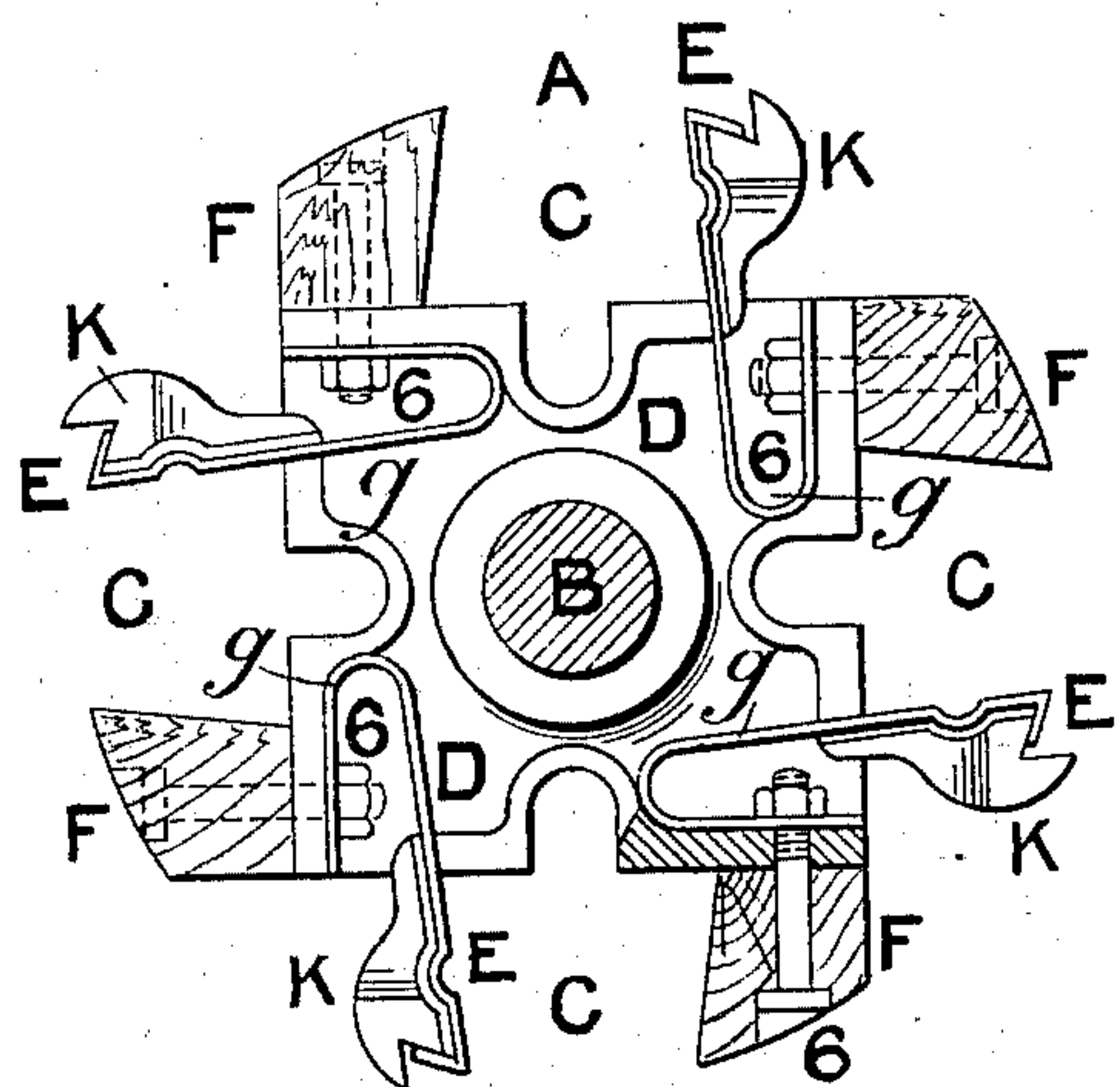


FIG. 4.

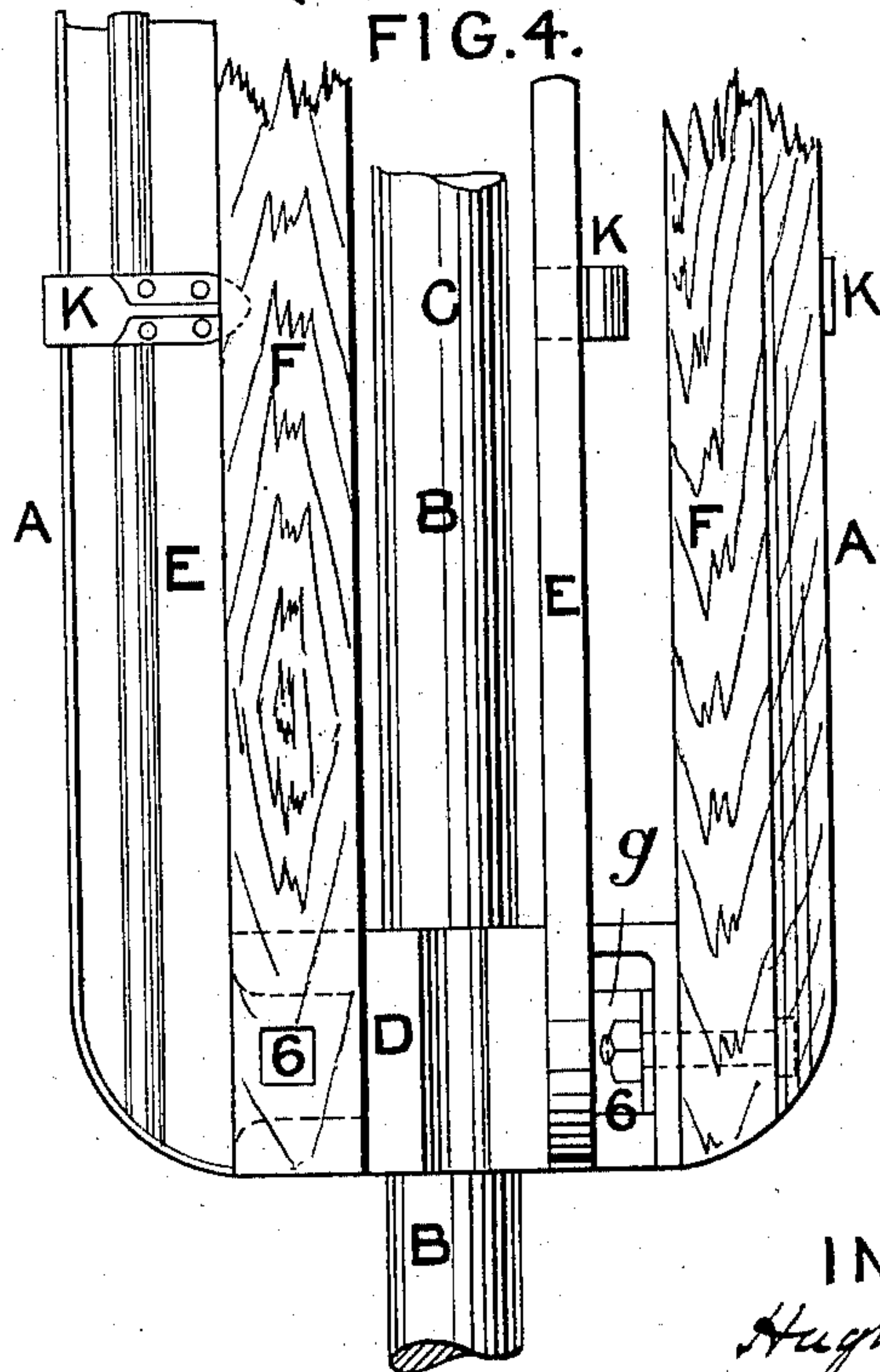


FIG. 5.

WITNESSES.

E. Howard.

Joseph Bates.

INVENTORS.

Hugh R. Ross

Andrew McKee

Andrew Laird

Robt. McKee

By Jonathan Ormery
att'y.

UNITED STATES PATENT OFFICE.

HUGH R. ROSS, ANDREW MCKEE, ANDREW LAIRD, AND ROBERT MCKEOWN,
OF BELFAST, IRELAND; SAID MCKEE, LAIRD, AND MCKEOWN ASSIGNORS
TO SAID ROSS.

WEFT-REPLENISHING MECHANISM FOR LOOMS.

SPECIFICATION forming part of Letters Patent No. 748,105, dated December 29, 1903.

Application filed April 7, 1902. Serial No. 101,841. (No model.)

To all whom it may concern:

Be it known that we, HUGH ROBERT ROSS, ANDREW MCKEE, ANDREW LAIRD, and ROBERT MCKEOWN, British subjects, and residents of Belfast, in the county of Antrim, Ireland, have invented certain new and useful Improvements in Weft-Replenishing Mechanism for Looms for Weaving, of which the following is a specification.

This invention relates to improvements in apparatus for supplying fresh shuttles to looms on the absence or failure of the weft-thread described in the specification of Ross's Patents Nos. 631,407 and 679,429. It is designed to simplify the construction of the apparatus and render it more certain in its action both in discharging the spent shuttle and receiving the fresh one.

It consists, essentially, in constructing the revolving box with a loose side at one side (or both sides) of each shuttle-chamber, which as the box rotates engages with and is drawn open by a catch to release the spent shuttle and also in the next position to receive the fresh shuttle and is held in normal or closed position by a spring to retain the shuttle in position.

The invention will be fully described with reference to the accompanying drawings.

Figure 1 is an end elevation, partly in section, of shuttle-box and shuttle-changing mechanism; Fig. 2, an end elevation of the supporting-bracket D with two only of the sides E and F in position; Fig. 3, a plan of Fig. 1; Fig. 4, an end elevation, partly in section, showing modified form of shuttle-box; Fig. 5, a part plan of Fig. 4.

We now build up the shuttle-box A on a rotary spindle B, with preferably four shuttle-chambers C. On the spindle B is fitted two or more plates or brackets D, to which the sides E and F of the shuttle-chambers C are fitted. One side, F, is fixed or rigid and the other side, E, pivoted or movable, so that it can be drawn away from the other side, F, and the chambers opened either for the purpose of receiving or ejecting the shuttle.

In Figs. 1, 2, and 3 the plates or brackets D are constructed with projections or lugs d ,

with holes d' d^2 to receive pins d^3 d^4 , and the sides E and F of the shuttle-chambers are metal plates or castings with lugs e and f , by which they are secured to the plates or brackets D by the pins d^3 and d^4 .

The fixed sides F are held rigidly to the plates or brackets D by the two pins d^3 d^4 passing through the two holes d' d^2 in the bracket D and through two holes in the lugs e and f .

The movable sides E are pivoted to the brackets D by the pin d^3 passing through the lugs e thereof and through the holes d' of the brackets D.

The movable sides E are forced inward by the springs G, attached to the back of the fixed side F or in other suitable position.

In Figs. 4 and 5 the movable sides E are made of spring-steel with the part g bent backward to form a spring and take the place of the spring G of Fig. 1. The sides E are secured to the brackets D by the bolts 6 and the fixed sides F by the bolts 7.

Below the shuttle-box A are fitted two pivoted catches H and J, which as the shuttle-box is rotated engage lugs K on the backs of the movable sides E and draw them back to open the chambers.

The catches H and J are pivoted at h and j , respectively, and are connected together by a rod L.

On the shaft M of the pusher N, which feeds the fresh shuttles to the box, or otherwise connected thereto, is mounted a striker or lever O, which at each movement of the pusher N strikes the projecting end L and draws back the catch H and J every time the pusher is operated to release the movable sides E and permit of the further rotation of the shuttle-box.

The movable side E is drawn back and the chamber C opened by the catch J to discharge or eject the spent shuttle and by the catch H to receive a fresh shuttle P from the magazine R.

What we claim as our invention, and desire to protect by Letters Patent, is—

1. A shuttle-box for looms comprising in its construction a number of chambers to receive

the shuttles, a movable side to each chamber, and means for opening the chambers to discharge the spent shuttle and to receive the fresh shuttle, substantially as described.

5 2. A shuttle-box for looms comprising in its construction a plurality of chambers to receive the shuttles, a movable side to each chamber, a spring to compress the movable
10 the side back to open the chamber and discharge the spent shuttle and also to receive the fresh shuttle, substantially as described.

3. A shuttle-box for looms comprising in its construction a central shaft, brackets D,
15 mounted on said shaft provided with projecting lugs, two brackets pinned to the brackets D forming the sides of the shuttle-chambers and a pin d^3 passing through the lugs of the bracket D and through the lugs of the side E
20 upon which the side E is pivoted, substantially as described.

4. The combination with a revolving shuttle-box constructed with a number of shuttle-chambers and a movable side to each, of piv-
25 oted catches H and J to engage the movable side, and open the shuttle-chamber, a connecting-rod connecting the two catches, and means for operating the catches, substantially as described.

5. The combination with a revolving shuttle-box, constructed with a number of shuttle-chambers and a movable side to each, of piv-
30 oted catches J and H to engage the movable sides and open the shuttle-chambers, a connecting-rod connecting the two catches, and
35 a striker O to operate the catches, substantially as described.

6. The combination with a revolving shuttle-box A, having a number of shuttle-chambers C and loose sides E, the shuttle-magazine
40 R, the pusher N for feeding the shuttles, and the pusher-shaft M, of the catches H and J to engage the loose sides E and open the shuttle-chambers, the rod L connecting the catches
45 G and H, and the striker O mounted upon the shaft M to operate the catches, substantially as described.

In witness whereof we have hereunto signed our names, in the presence of two subscribing witnesses, this 25th day of March, 1902.

HUGH R. ROSS.
ANDREW McKEE.
ANDREW LAIRD.
ROBERT McKEOWN.

Witnesses:

R. FREDERIC RINGWOOD,
WALTER A. NELSON.