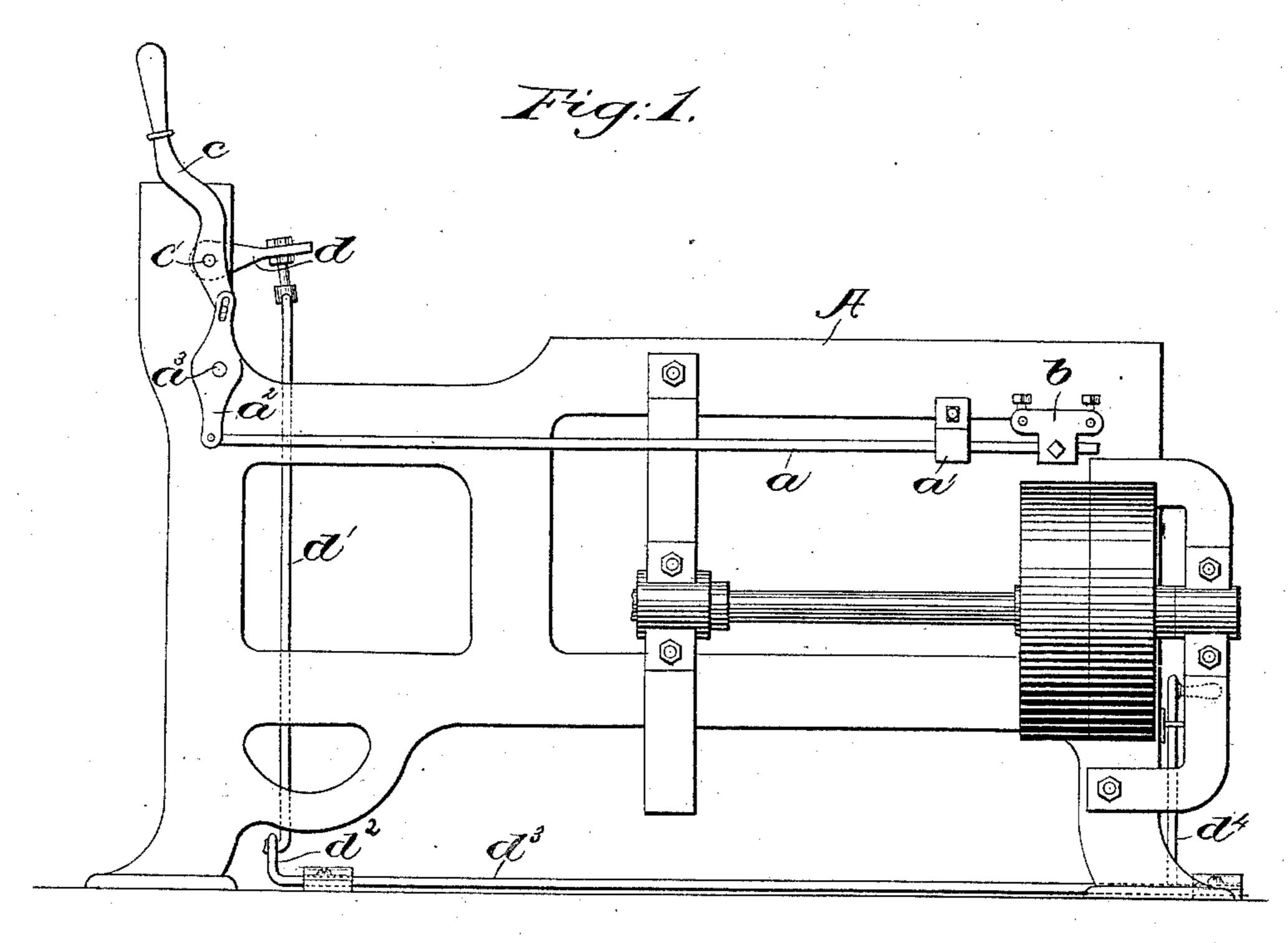
(No Model.)

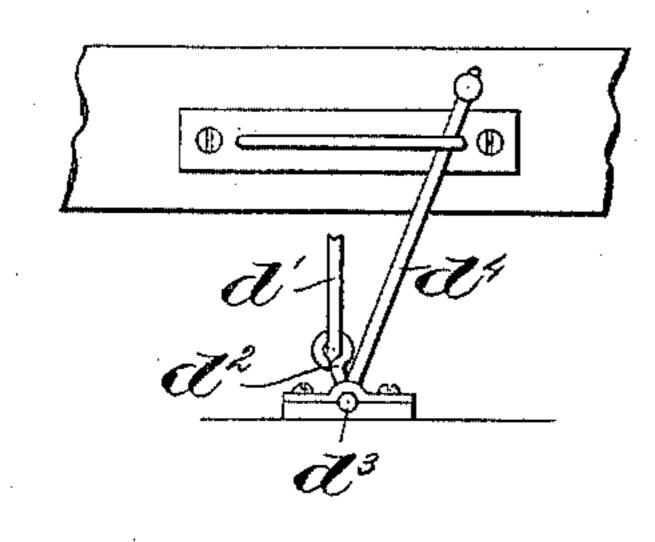
## R. E. RHOADES. LOOM.

No. 467,644.

Patented Jan. 26, 1892.







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## United States Patent Office.

ROLAND E. RHOADES, OF PITTSFIELD, MAINE.

## LOOM.

SPECIFICATION forming part of Letters Patent No. 467,644, dated January 26, 1892.

Application filed January 9, 1891. Serial No. 377, 208. (No model.)

To all whom it may concern:

Be it known that I, ROLAND E. RHOADES, of Pittsfield, county of Somerset, State of Maine, have invented an Improvement in 5 Looms, of which the following description, in connection with the accompanying drawings, is a specification, like letters on the drawings

representing like parts.

In looms as ordinarily constructed the ship-10 per-rod is located at one side and is connected to a rock-shaft having its bearings in the frame-work extending transverse the loom, said rock-shaft having at each end a handlever, by which it may be turned to move the 15 shipper-rod. By this construction the loom may be stopped and started from one end at either side thereof. It is frequently very desirable, however, to stop and start the loom from the rear end; and my invention compre-20 hends an operating shaft or lever accessible at the rear end of the loom, which is connected with the shipper-rod. The operating-shaft is herein represented as a rock-shaft, having at one end a hand-lever or arm, by which it may 25 be operated, and which is accessible at the rear of the loom, and having at the other end a short arm, which is connected with the transversely-arranged rock-shaft by a link or otherwise, so that as the said rock-shaft is turned 30 by the hand-lever at the rear of the loom the transverse rock-shaft with which it is connected will be turned and by its connection with the shipper-rod the latter will be moved.

Figure 1 shows in side elevation a loom-35 framehaving ashipper rod and means for moving it in usual manner and also means for moving it from the rear embodying this invention; Fig. 2, a rear end view of the rockshaft and means at the rear of the loom for

40 moving it.

The loom-frame A may be of any wellknown or suitable construction. The shipper-rod a is herein shown as having its bearings at one end in box a' and as connected at I

the other end with a lever  $a^2$ , pivoted at a 45 point between its ends, as at  $a^3$ , to the main frame-work. The shipper-rod a has at its rear end any usual fork b for moving the belt. The opposite end of the lever  $a^2$  is connected to the lower end of a hand-lever c, which is se- 50 cured to a rock-shaft c', having its bearings in the main frame-work. The rock-shaft c'has at its opposite end a hand-lever, (not shown, but similar to the hand-lever c, so that when either hand-lever is operated the 55 lever  $a^2$  will be turned on its pivot and the shipper-rod a moved. The arm d is secured to the rock-shaft c', preferably at a point midway between its ends, which is connected by a link d' with a short arm  $d^2$  on the front end 60 of a rock-shaft  $d^3$ , arranged at right angles with relation to the rock-shaft c' and extending rearwardly, as best shown in Fig. 1. At the opposite or rear end of this rock-shaft  $d^3$ a hand-lever  $d^4$  is secured, by which said rock- 65 shaft  $d^3$  will be turned. By the construction herein described, when the operator is at the rear end of the loom by moving the handlever  $d^4$  the rock-shaft  $d^3$  will be moved, and by means of the link d', arm d, rock-shaft c', 70 lever c, and lever  $a^2$  the shipper-rod will be moved.

I claim—

In a loom, the shipper-rod a, rock-shaft c', connected therewith by lever  $a^2$ , and hand- 75 lever c, attached to said rock-shaft, combined with the rock-shaft  $d^3$ , having at one end a short arm  $d^2$ , connected with the arm d, fast upon the rock-shaft c', and a hand-lever at the opposite end of rock-shaft  $d^3$ , substan- 80 tially as and for the purpose set forth.

In testimony whereof I have signed my name to this specification in the presence of

two subscribing witnesses.

ROLAND E. RHOADES.

Witnesses:

CORA D. BURNS, CARRIE E. LIBBY.