

R. Lyon, Making Rivets,

No 57,045.

Patented Aug. 7, 1866.

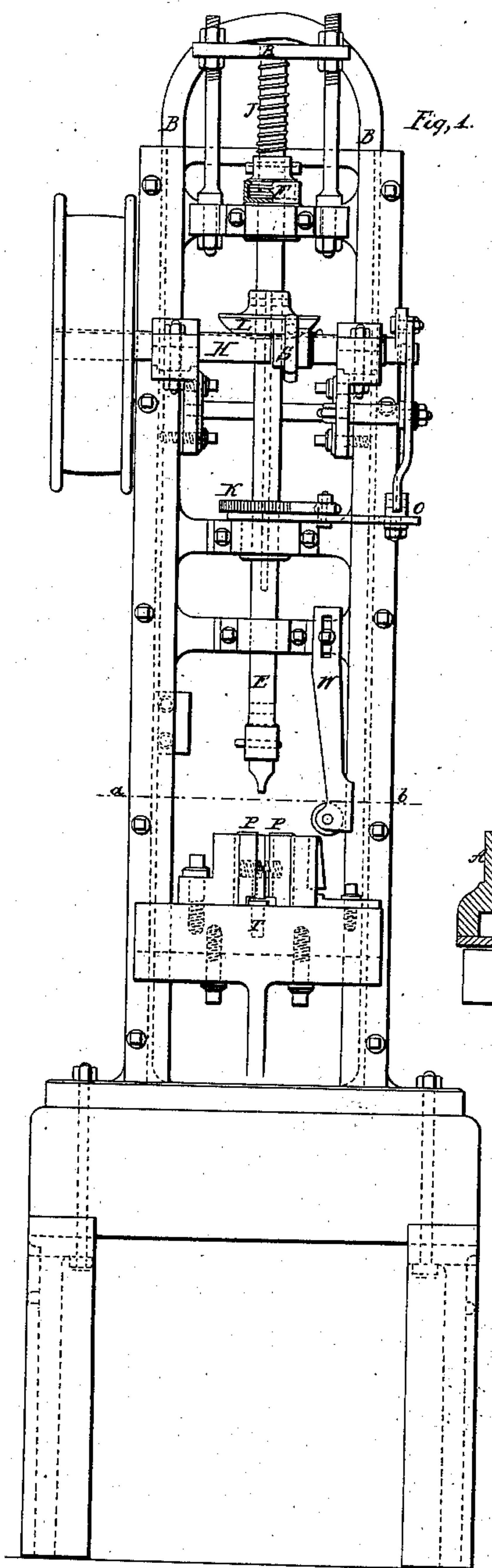


Fig. 1.

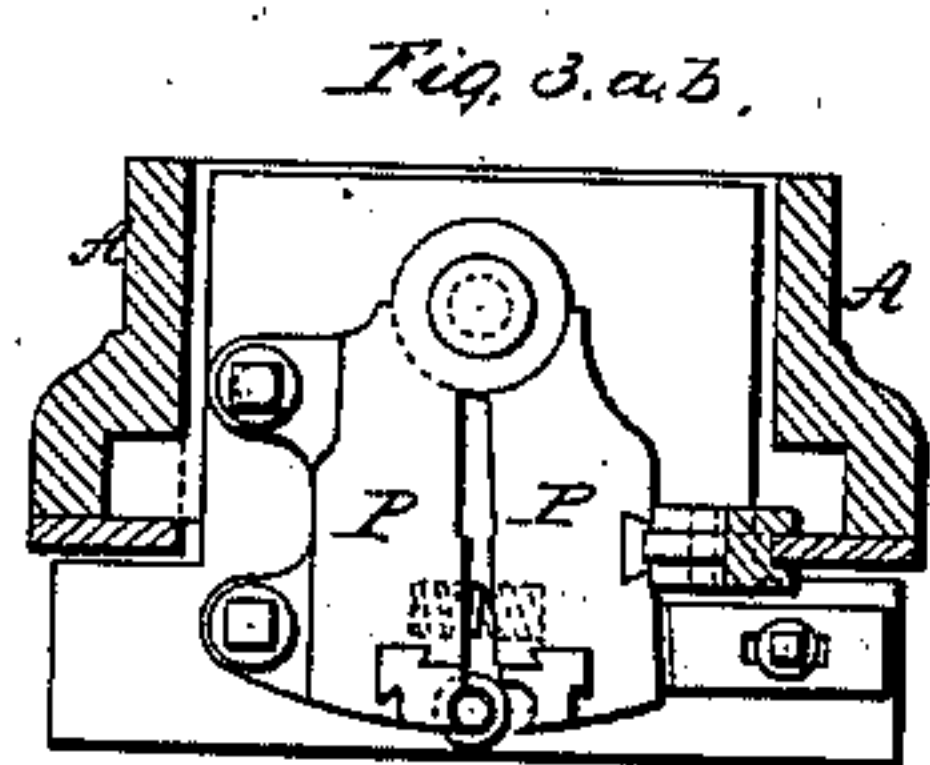


Fig. 3, a, b.

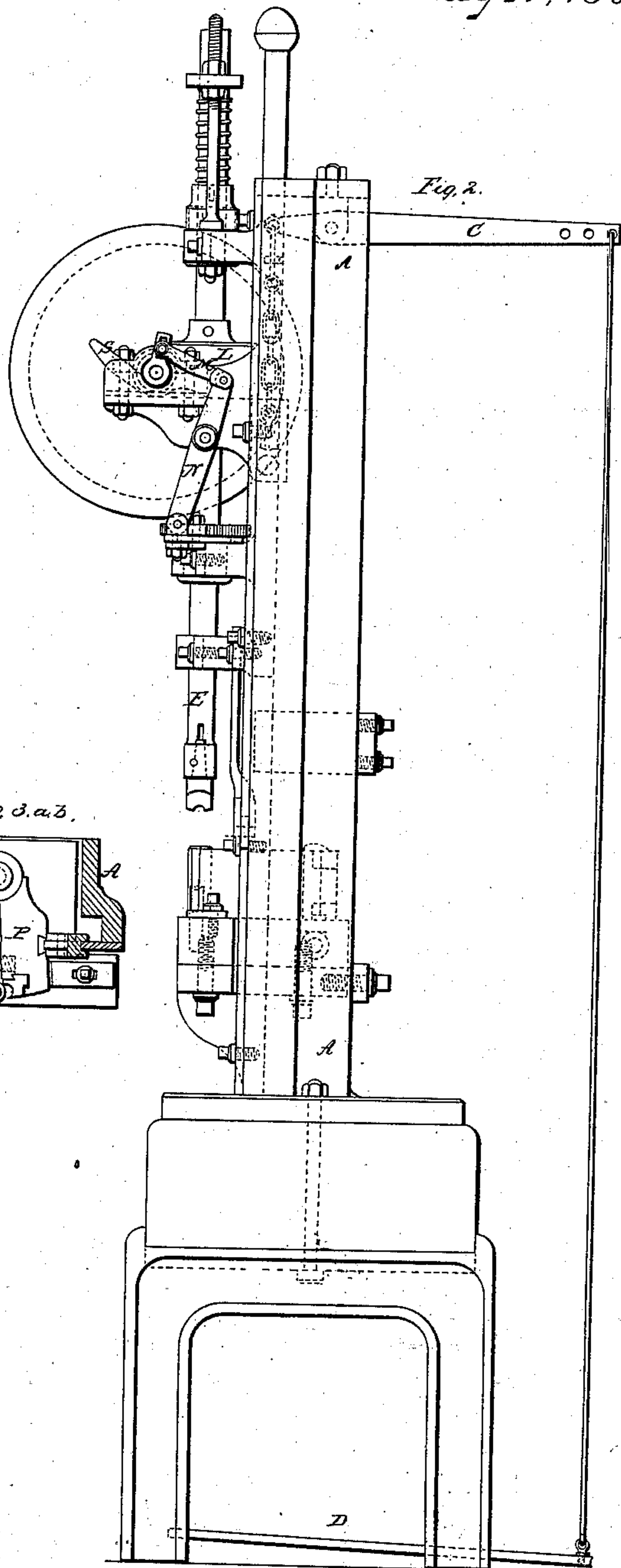


Fig. 2.

Witnesses;
E. Van Olinder
John W. Lyons.

Inventor,
Ransom Lyon

UNITED STATES PATENT OFFICE.

RANSOM LYON, OF WEST TROY, NEW YORK, ASSIGNOR TO HIMSELF, A. SHILAND, AND E. JOSEPH GERDORN, JR.

IMPROVEMENT IN RIVETING-MACHINES.

Specification forming part of Letters Patent No. 57,045, dated August 7, 1866.

To all whom it may concern:

Be it known that I, RANSOM LYON, of West Troy, in the county of Albany and State of New York, have invented a new and useful Machine for Riveting Hinges, Butts, &c.; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, in which—

Figure 1 is a front elevation. Fig. 2 is a side elevation. Fig. 3 is a transverse section on line *a b*.

A A represents an upright stationary frame; B B, the sliding frame; C, the lever, which connects with D, the treadle; E, the hammer; L, the flange on the hammer; F, the rubber packing; J, the spiral spring or rubber cushion; K, the ratchet-wheel; H, the driving-shaft; S S, the two arms on the shaft, which lift the hammer; M, the horizontal lever; N, the upright lever; O, the sliding or swivel joint; R, the adjuster; P P, the jaws for holding the hinge; T, the adjustable bed-plate; W, the arm attached to the sliding frame, bearing against the wedge-shaped piece on one of the jaws.

The sliding frame B B works in the upright stationary frame A A, and the motive power acts on the driving-shaft H, which connects with the sliding frame.

The sliding frame is raised by the lever C, which is connected with the treadle D, which is worked by the foot. By means of this the sliding frame B B, with the hammer E, is raised out of the way while the work is being changed. At the same time the rubber packing receives the force of the blow of the hammer. The hammer E works perpendicularly in the sliding frame, and is raised by the two lifting-arms S S on the driving shaft, which strike against the flange L. The hammer is again forced down by the spiral spring J. As the hammer is raised it is revolved by means of the ratchet-wheel K, through which it works, and in which there is a feather, with a corresponding groove in the hammer.

The ratchet-wheel is operated by the horizontal lever M, which works on the hub of the ratchet-wheel, and is connected with the upright lever N by the sliding or swivel joint O, and the upright lever is attached to the crank on the end of the driving-shaft.

The blow or force of the hammer is regu-

lated by the adjuster R bearing on the end of the spiral spring J, as required for a light or heavy blow.

A rubber cushion may be used in place of the spiral spring J.

The jaws P P, for holding the hinge, are attached to the adjustable bed-plate T, and are opened, to receive the joint of the hinge, by a spiral spring, which is inserted between the jaws, and the jaws are closed by the arm W, attached to the sliding-frame, a roller in the end of the arm acting against a wedge-shaped piece set in one of the jaws.

Specification of some of the novel features in this machine: First, the blow of the hammer is caused by the reaction of the spiral spring or rubber cushion, after the hammer is raised by the lifting-arms acting against the flange; second, a sliding frame holding a hammer, which is rotated as described, and the whole so arranged as to be raised or lowered by means of a lever and treadle, as described, and the hinge-clamp being at the same time closed and opened by the action of the arm attached to the sliding frame; third, the rubber packing receives the force of the blow of the hammer when raised; fourth, the force of the blow of the hammer may be increased or diminished by the adjuster R.

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

1. The combination and arrangement, as described, of stationary frame and sliding frame with hammer E, which is elevated by the arms S S on the driving-shaft, and forced down by the spiral spring J, and rotated, as described, by ratchet-wheel K, in connection with the levers M and N, which are acted upon by the crank on the driving shaft, these parts or their equivalents arranged and operating as and for the purpose set forth.

2. The arrangement of the adjustable bed-plate T, jaws P P, opened by spiral spring inserted between, and closed by the action of the arm W, in connection with the sliding frame, the whole arranged and operating as set forth.

3. The combination of the adjuster R, spiral spring J, rubber packing F, with hammer E, substantially as described.

RANSOM LYON.

Witnesses:

E. VAN OLINDA,
JOHN W. LYON.