(No Model.)

A. M. BAIRD.

RIVETING MACHINE.

No. 571,503. Patented Nov. 17, 1896.

Fig. 1.

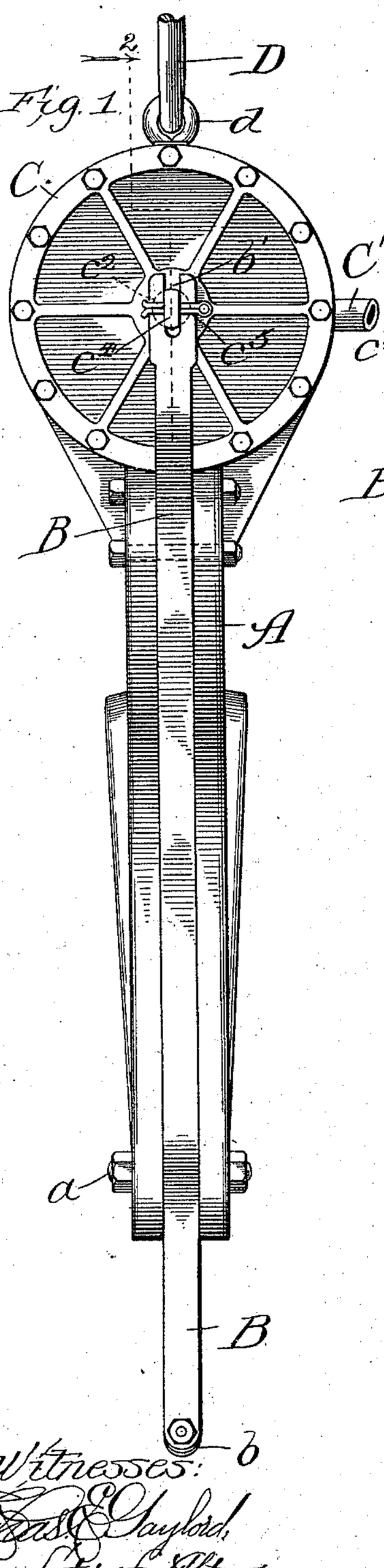
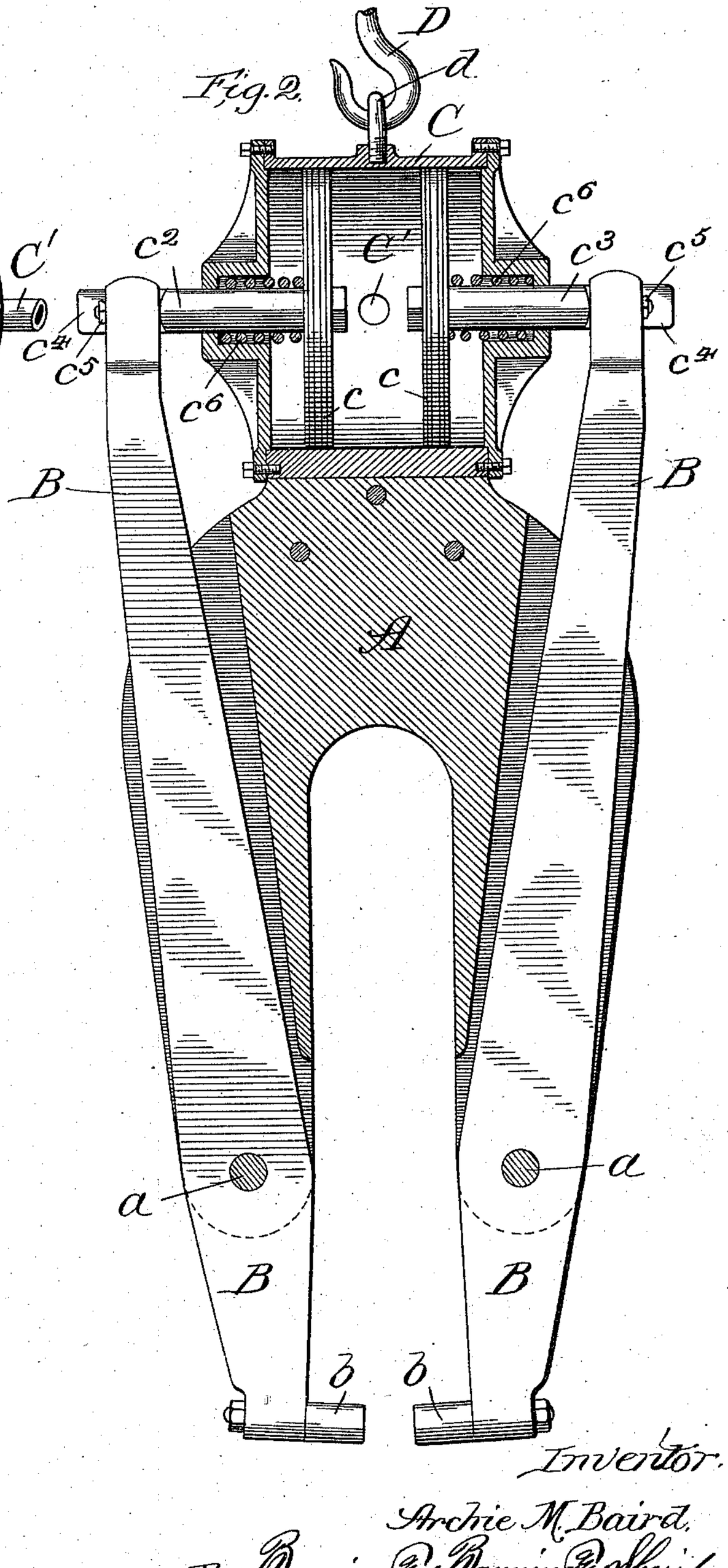


Fig. 2.



Witnesses:
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UNITED STATES PATENT OFFICE.

ARCHIE M. BAIRD, OF TOPEKA, KANSAS.

RIVETING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 571,503, dated November 17, 1896.

Application filed March 17, 1896. Serial No. 583,537. (No model.)

To all whom it may concern:

Be it known that I, ARCHIE M. BAIRD, a citizen of the United States, residing at Topeka, in the county of Shawnee and State of Kansas, have invented certain new and useful Improvements in Riveting-Machines, of which the following is a specification.

The object of my invention is to provide a simple, efficient, and economical portable machine for heading rivets; and the invention consists in the features, combinations, and details of construction hereinafter described and claimed.

In the accompanying drawings, Figure 1 is a plan view of my machine, looking at it from the top; Fig. 2, a side elevation, partly in section, taken on the line 2 of Fig. 1.

In the art to which this invention relates it is well known that boilers, water-tanks, and different parts of locomotive construction have heretofore been riveted together piece by piece and built up, as it were, largely by manual labor, owing to the fact that no efficient and economical machine had been provided to meet the wants of this peculiar class of structures.

My invention, therefore, is intended to be used particularly in connection with boilers, water-tanks, &c., and to overcome the objections and defects of the existing mechanisms by providing a simple, economical, and efficient machine having the greatest amount of power for the least amount of material and taking up the least amount of space, so that it is capable of being used in the construction of water-tanks such as are used on the tenders of locomotives where the space for operating is limited.

In constructing a machine in accordance with my improvements I provide a bifurcated frame portion A, substantially **C**-shaped in contour and of the desired strength to support the operating parts. To the free ends of the bifurcated frame, as at *a*, I pivot two vibrating actuating-levers B, which at their outer ends are provided with headers *b*, and which have their inner ends extending over and beyond the frame, so as to inclose between them the operating mechanism. To operate the actuating-levers as desired, I provide a fluid-pressure cylinder C, and secure it to the heel of the frame portion. This cylinder is provided with two reciprocating pistons *c* and *c'*, each provided with piston-rods c^2 and c^3, which extend out of the cylinder-heads to engage the inner free ends of the actuating-levers. The inner free ends of the actuating-levers are preferably bifurcated, as at *b'*, so as to span the flattened ends c^4 of the piston-rods. These flattened ends are perforated and provided with split keys c^5, that serve to draw the inner ends of the actuating-lever inwardly and away from the work.

The fluid-pressure is admitted into this cylinder through the port C' between the piston, so as to operate to move the cylinders away from each other and bring the operating ends of the actuating-lever together to head a rivet. When the fluid-pressure is shut off and allowed to escape from the cylinder, the springs c^6 act to return the cylinders to their normal inner position and open the operating ends of the actuating-levers.

By having the actuating-levers pivoted to the free ends of the bifurcated frame and the fluid-pressure cylinder secured to the rear or heel portion of the frame and between the inner ends of the levers the mechanism is made very compact and powerful with the least amount of material, so that it can be dropped by means of a falls and tackle—the hook D of which is shown in the figures as inserted in the eye on the cylinder—into a tank or boiler, and the riveting operations be performed economically and efficiently.

I claim—

A machine of the class described having combined a bifurcated frame portion, two vibrating actuating-levers pivotally secured to the free ends of the frame portion and provided with acting jaws at their outer free ends and their inner free ends arranged to extend over and beyond the frame portion, a fluid-pressure cylinder secured to the heel of the bifurcated frame portion and between the actuating-levers, two reciprocating pistons movably mounted in the cylinder portion and having their piston-rods extending out of op-

posite ends of the cylinder so as to engage the actuating-levers and operate the same, said cylinder having a fluid-port located between the reciprocating pistons so as to supply fluid-pressure between the same and operate the actuating-levers, and mechanism for returning the pistons, piston-rods and actuating-levers to their inoperative position, substantially as described.

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Witnesses:
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