

(No Model.)

N. W. PRATT.
RIVETING MACHINE.

No. 561,606.

Patented June 9, 1896.

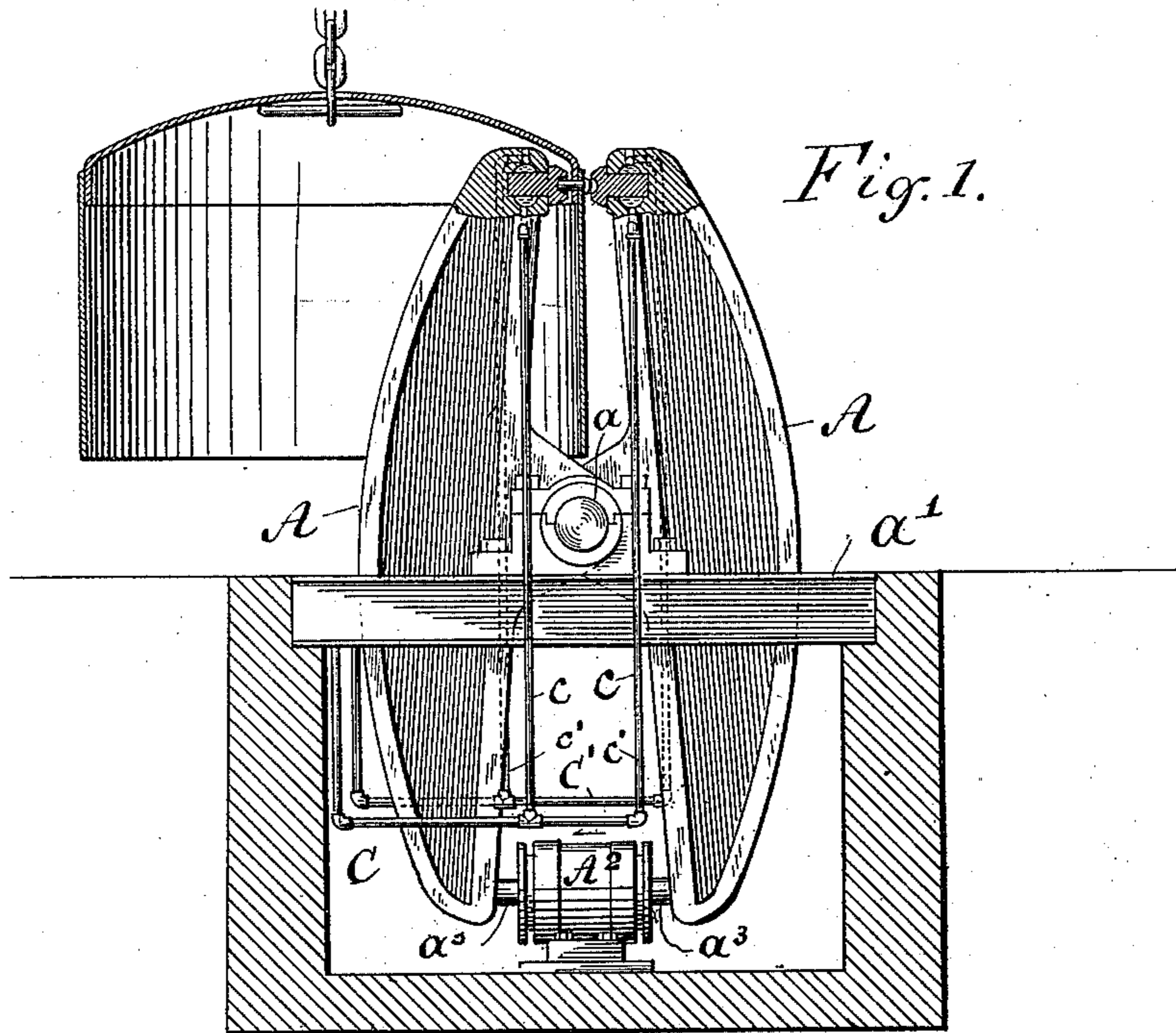
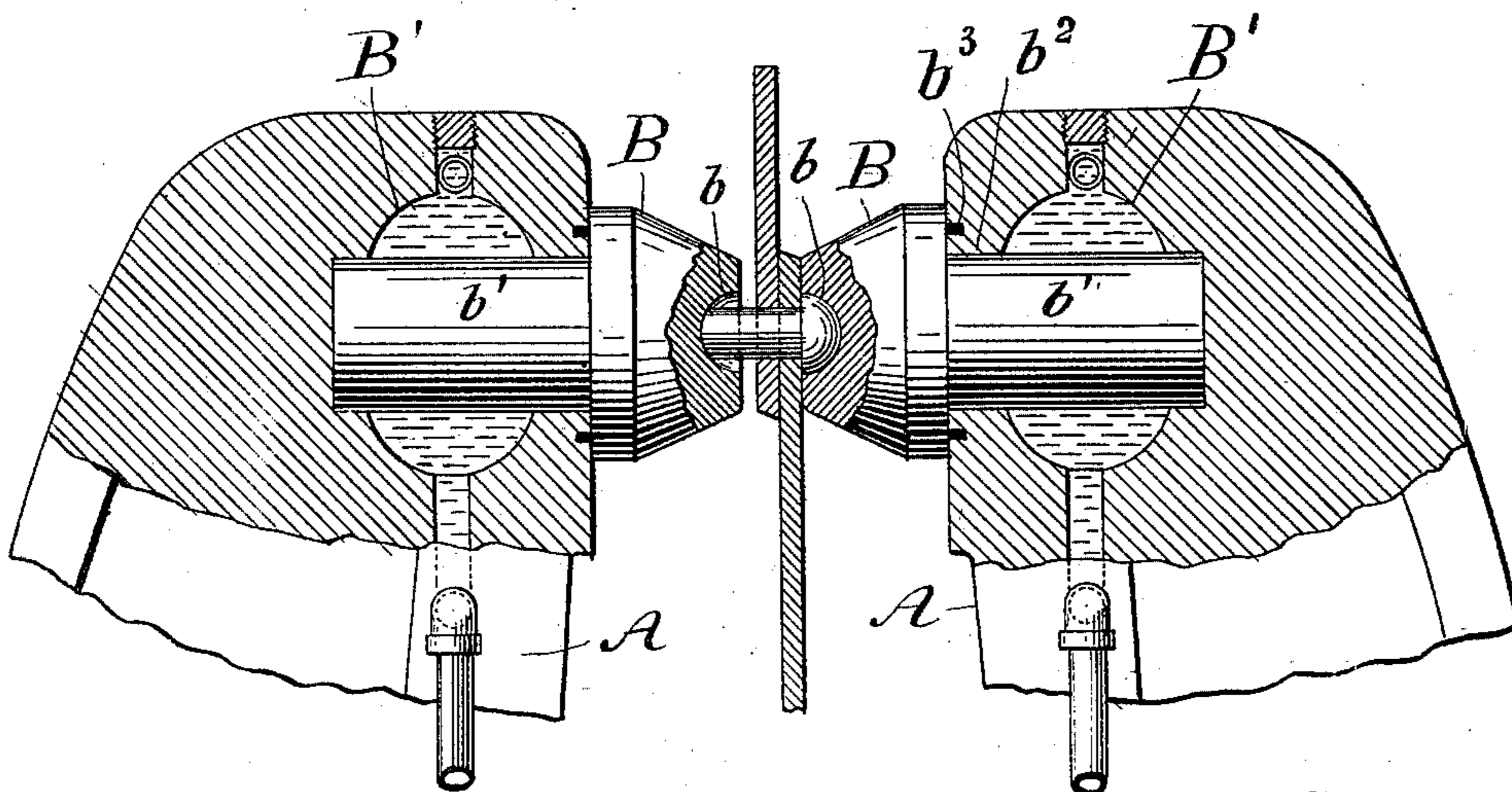


Fig. 2.



Witnesses
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RIVETING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 561,606, dated June 9, 1896.

Application filed March 31, 1894. Serial No. 505,907. (No model.)

To all whom it may concern:

Be it known that I, NAT W. PRATT, a citizen of the United States, residing at Brooklyn, in the county of Kings and State of New York, have invented a new and useful Improvement in Riveting-Machines, of which the following is a specification.

The object of the invention is to produce a riveted plate with a series or row of heated rivets applied thereto and acted upon in such manner as to accomplish a greater amount of riveting in a given time than is possible by any known method.

The invention consists in applying a cooling medium to the dies for heading the heated rivets and heading, cooling, and contracting each successive rivet of the series or row before the succeeding rivet is headed.

In the accompanying drawings, Figure 1 is a side elevation of riveting-jaws, partly in section, showing the improvement as operating on a rivet. Fig. 2 is a sectional view on an enlarged scale.

Referring by letter to the drawings, A A designate riveting-jaws fulcrumed between their ends in bearings a , supported on girders a' . As here shown, the lower portions of the jaws A A are extended downward into a pit a^2 , and the operating power for the jaws is located in this pit. In this instance the operating power consists of a hydraulic cylinder A^2 , having the usual oppositely-operating pistons and piston-rods a^3 , engaging with and acting on the jaws A A.

B designates the riveting-dies, each having a depression b , conforming to the desired shape of the rivet-heads. The dies B are removably engaged with the jaws. For this purpose the dies have a shank portion b' extended into openings b^2 in the jaws A A'.

Having described the general construction of the device, I will now describe means for cooling the dies and rivets.

Each jaw A has a chamber B' for receiving a cooling liquid, such as water, for cooling the

dies and rivets. The chambers B' are here shown as surrounding the shanks b' of the dies. It is designed to keep the cooling liquid in constant circulation through the chambers B'.

C shows a main supply-pipe leading from any desired source of supply, and c shows branch supply-pipes leading from the main pipe C and communicating with the chambers B'. Branch discharge-pipes c' lead from the chambers B' to a main discharge-pipe C'. This discharge may empty into the tank or other source from which the supply is taken, and the supply-pipe C may also be connected with the exhaust of the hydraulic cylinder. The resiliency of the pipes $c' c'$ will allow for the slight movement of the jaws.

A constant flow of water through the chambers B' will absorb the heat of the riveting-dies and also from the rivet acted upon, causing the rivet to contract and obtain a permanent set before the succeeding heated rivet is brought under the action of the dies.

To prevent a possible leakage of liquid from the chambers B', the jaws A may have annular grooves around the openings b^2 to receive rubber or similar gaskets b^3 . The rear sides of the dies pressing against these gaskets will form a tight joint and prevent leakage.

Having described my invention, what I claim is—

In a riveting-machine, the combination of a pair of jaws each having a closed chamber for receiving a cooling liquid and provided with inlet and discharge ducts; dies secured to the respective jaws and each having a portion extended into the liquid-chamber of its jaw; and means for causing a circulation of cooling liquid through said chambers, substantially as and for the purposes specified.

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Witnesses:

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