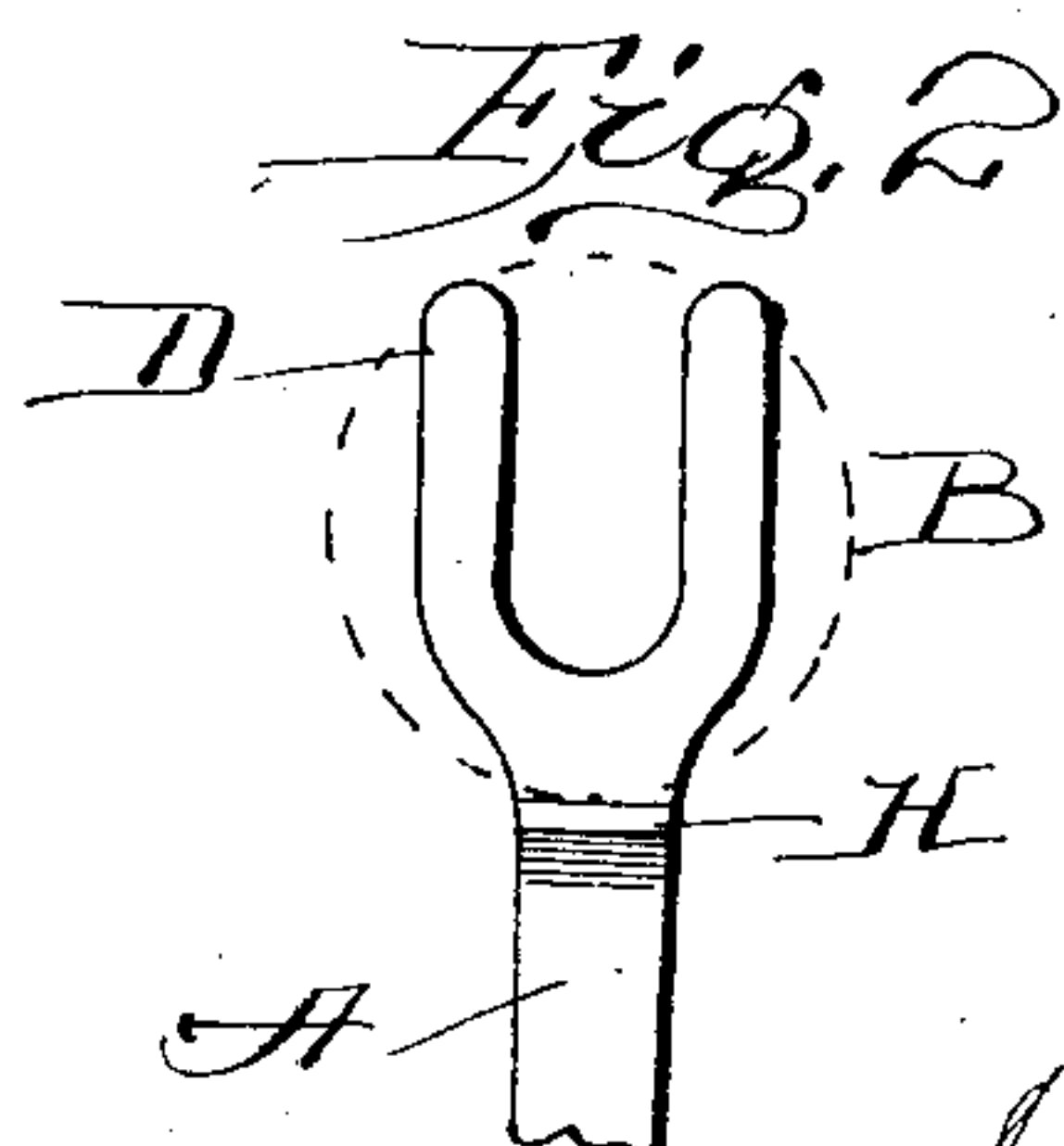
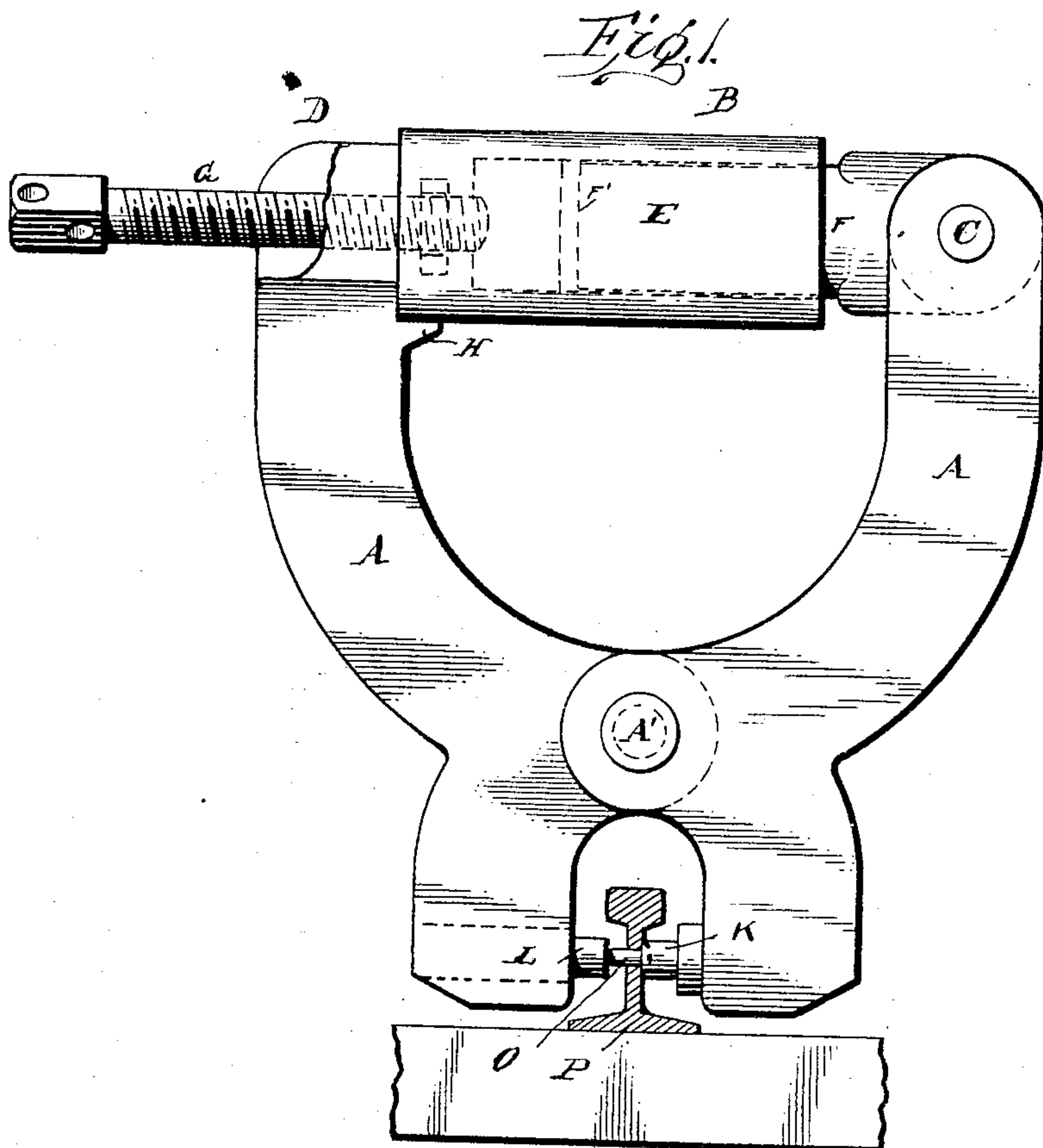


No. 779,662.

PATENTED JAN. 10, 1905.

J. W. NELSON.
RIVETING MACHINE.
APPLICATION FILED MAR. 22, 1904.



Witnesses
E. Mitchell
T. W. Ashley

J. W. Nelson Inventor
By *his Attorney Oscar F. Gunn*

UNITED STATES PATENT OFFICE.

JAMES W. NELSON, OF NEW YORK, N. Y., ASSIGNOR TO WILLIAM M. DUDGEON, OF NEW YORK, N. Y., EXECUTOR OF RICHARD DUDGEON, DECEASED.

RIVETING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 779,662, dated January 10, 1905.

Application filed March 22, 1904. Serial No. 199,497.

To all whom it may concern:

Be it known that I, JAMES W. NELSON, a citizen of the United States, residing in the city of New York, in the borough of Brooklyn, county of Kings, and State of New York, 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 new and improved riveting-machine which is simple in construction, can be readily transported from place to place, can easily be applied, and is especially adapted for riveting bonds on conductor-rails of electric railways.

In the accompanying drawings, Figure 1 is a side view of my improved riveting-tool as applied on a conductor-rail of an electric railway for securing the bond, and Fig. 2 is a detail view looking at the inner edge of one of the levers.

The tool is constructed with two curved substantially V-shaped levers A, which are pivoted to each other by the pivot A', so that the upper larger arm and the shorter lower arm of one and the same lever are at the same side of the pivot A' and so that when the free ends of the longer arms are forced apart the free ends of the shorter arms are pressed together. A spreading-piece B for spreading the free upper ends of the longer arms of the pivoted levers apart is pivoted at one end to the upper end of one of the levers, as at C, and the upper end of the other lever is forked, as at D, Fig. 2, so as to permit swinging the spreading-piece down into it. The spreading-piece B is composed of a cylinder E, into the open end of which a plunger F projects, the outer end of said plunger being pivoted to the upper end of one of the levers A. The plunger is provided with a suitable packing F'. A screw G is screwed through a suitable opening in the closed end of the cylinder. When the spreading-piece B is swung down so as to rest upon a lug H on the upper end of the other lever, said closed end of the cylinder abuts against the inner edge of said forked end.

On the inner surface of one lever A, at the lower end, a suitable die K is secured, which is placed against the head of the bond-rivet O, and from the inner surface of the other

lever A, at the lower end thereof, a punch L or rivet set projects. By turning the screw G so that the same passes farther into the cylinder E a pressure of water in said cylinder E is created or increased, and as the only yielding part on which the pressure of water can act is the plunger F said plunger is forced outward, and thereby the upper ends of the lever A are spread apart with great power. As the proportion of the upper shanks to the lower is as two to one, or thereabout, this power is doubled at the die K and punch L, and thus sufficient pressure can be generated by turning in the screw G far enough to completely spread the bond-rivet in the hole in the rail P, on which the device is applied in the manner shown in Fig. 1.

Having described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a riveting-tool, the combination with two substantially V-shaped levers, pivoted to each other, the shanks above the pivot being longer than the shanks below, of a die on the inner surface of one lower shank at the lower end thereof, and a punch on the inner surface of the lower shank of the other lever at the lower end thereof, and a hydraulic spreading-piece complete in itself pivoted to the upper end of one of the V-shaped pivoted levers and adapted to temporarily engage the upper end of the other lever, substantially as set forth.

2. In a riveting-tool, the combination with two substantially V-shaped levers pivoted to each other, the shanks above the pivot being longer than the shanks below, a die on the inner surface of one lower shank at the lower end thereof, and a punch on the inner surface of the lower shank of the other lever, at the lower end thereof, and an extensible spreading-piece pivoted to one of said levers, the upper end of the other lever being forked for receiving part of said spreading-piece, said spreading-piece being adapted to abut against the forked end of the forked lever, substantially as set forth.

3. In a riveting-tool, the combination of two substantially V-shaped levers pivoted to each other, the shanks above the pivot being longer than the shanks below, of a die on the

inner surface of one lower shank at the lower
end thereof, and a punch on the inner surface
of the lower shank of the other lever at the
lower end thereof, an extensible spreading-
5 piece composed of a plunger pivoted to the
upper end of one of said levers, a cylinder
having a closed and open end, into the open
end of which cylinder the plunger projects,
and a screw screwed into the closed end of
10 said cylinder, the upper end of that lever op-

posite the one to which the plunger is pivoted
being forked and having a rest for the cylin-
der, substantially as set forth.

In testimony whereof I have signed my name
to this specification in the presence of two sub- 15
scribing witnesses.

JAMES W. NELSON.

Witnesses:

OSCAR F. GUNZ,

SOPHIE M. BAEDER.