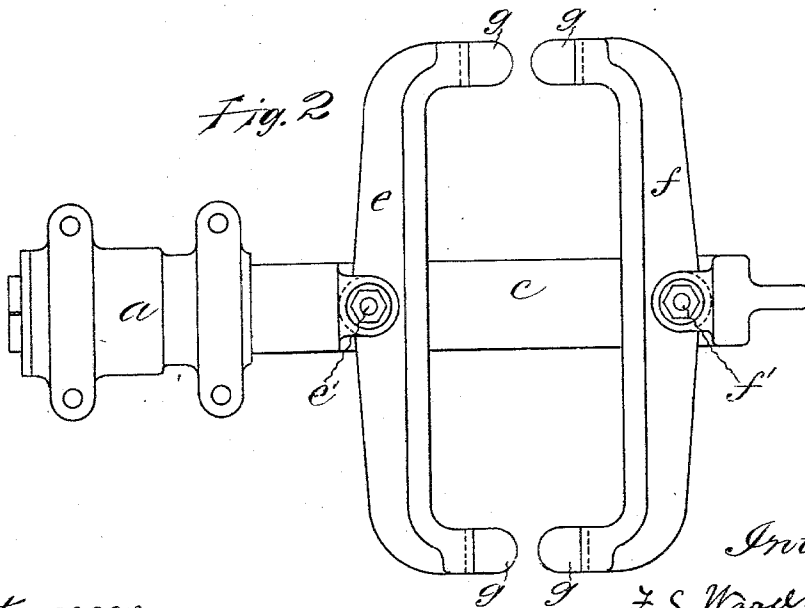
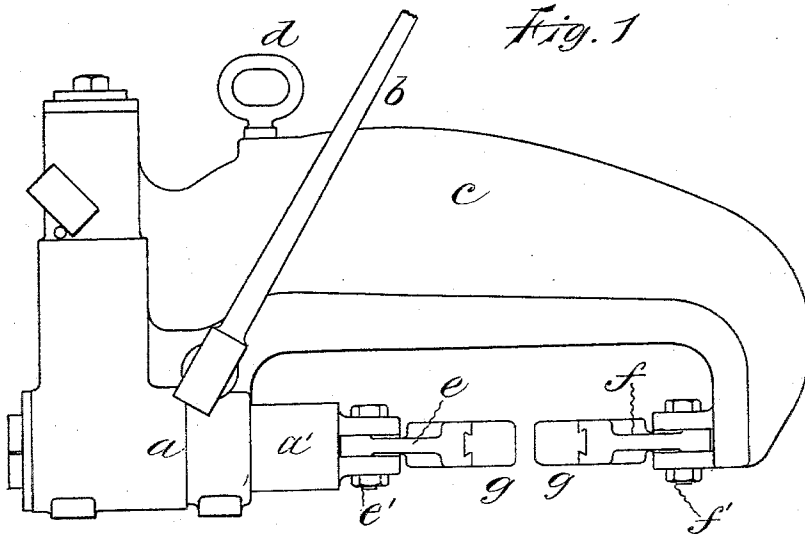


(No Model.)

F. S. WARDWELL.
PRESS.

No. 566,827.

Patented Sept. 1, 1896.



Witnesses:

C. E. Buckland.

Andrew Ferguson

Inventor:

F. S. Wardwell

By

W. S. Simonds

Att'y

UNITED STATES PATENT OFFICE.

FRED SCHUYLER WARDWELL, OF DANBURY, CONNECTICUT.

PRESS.

SPECIFICATION forming part of Letters Patent No. 566,827, dated September 1, 1896.

Application filed November 23, 1895. Serial No. 569,903. (No model.)

To all whom it may concern:

Be it known that I, FRED SCHUYLER WARDWELL, a citizen of the United States of America, residing at Danbury, in the county of Fairfield and State of Connecticut, have invented a certain new and useful Improvement in Presses, of which the following is a description, reference being had to the accompanying drawings, wherein—

Figure 1 is a side view of a press embodying said improvement. Fig. 2 is a front view of the same.

The press is specially applicable to forcing plates for uniting the meeting ends of railway-rails, (commonly called "fish-plates,") against the side of the rails, while in place, with a degree of force which changes the shape of the plates and fits them to and against the sides of the rails.

In the accompanying drawings the letter *a* denotes a hydraulic press as a whole, and *b* denotes the lever for operating the same. To this press is attached the reach *c*.

The letter *d* denotes an eye for the attachment of a chain, pendent from a crane carried on a car, by which, in actual work, the whole device may be suspended, leaving what is called the "front" of the machine, in describing Fig. 2, facing downward toward the earth, that being the proper position of the machine in doing its work upon the fish-plates, with the rails in place, as part of a track.

The letters *e* and *f* denote two jaws, which, in action, exert pressure in opposite directions, wherefore they may well be called "opposing jaws." There are two fish-plates at each joint, one upon each side of the rail. The jaw *e* is a medium of bringing pressure to bear upon one of these plates, and the jaw *f* is a medium of bringing pressure to bear, in the opposite direction, upon the other fish-plate. In the operation the two fish-plates are forced toward each other with such force that they are changed in shape and more or less fitted to and against the respective sides of the rails. The jaw *e* is attached to the piston-rod of the hydraulic press and the jaw *f* is attached to the reach. By operating the lever *b* the two jaws *e* and *f* are made to approach each other with great—the requisite—force. The attachment of the jaws *e* and *f* to their supports is pivotal. The letter *e'* denotes such pivot for jaw *e*, and *f'* denotes such pivot for jaw *f*. Preferably these pivotal supports are central of the length of the

jaws. They should at least be midway of the ends.

The letters *g* denote "contacts" or "bearing-points," by which is meant surfaces borne by the jaws and in contact with the fish-plates in action. These contacts have curved surfaces, preferably (in section) half-round or half-oval. Such shape is found to have practical advantages in actual work. The fish-plates may be hot or cold at the time they are operated on by the machine.

I claim as my improvement—

1. An apparatus for assembling the fish-plates and the meeting ends of railway-rails, consisting of the press *a*, having movable piston *a'*, operating-lever *b*, reach *c*, and jaws *e f*, said jaws pivoted midway of their length to the reach and the movable element respectively, and having at their extremities incurved and rounded bending-faces *g g'*, substantially as and for the purposes specified.

2. In an apparatus for assembling railway-rail joints the combination of the hydraulic press *a*, with movable piston *a'* and actuating-lever *b*, reach *c*, fixed and movable jaws pivoted midway of their length to the fixed and movable elements respectively, having incurved extremities bearing rounded bending-faces *g g'*, and a suspensory ring *d*, located over the center of gravity of the machine when its lower face is horizontal whereby the same may be portably suspended and carried face downward in a position adapted for use, substantially as and for the purpose specified.

3. In an apparatus for assembling railway-rail joints, the laterally-extended jaws pivoted midway of their length to the fixed and movable portions of the machine respectively, said jaws having at their extremities incurved and rounded bending-faces, substantially as and for the purpose specified.

4. In an apparatus for assembling railway-rail joints the combination of the hydraulic press *a* having movable piston *a'*, operating-lever *b*, reach *c*, fixed pivoted jaw *f*, and movable pivoted jaw *e*, said jaws having at their extremities the incurved and rounded bending-faces *g g'*, all substantially as and for the purpose specified.

FRED SCHUYLER WARDWELL.

Witnesses:

GRANVILLE WHITTLESEY,
FRED R. ROE.