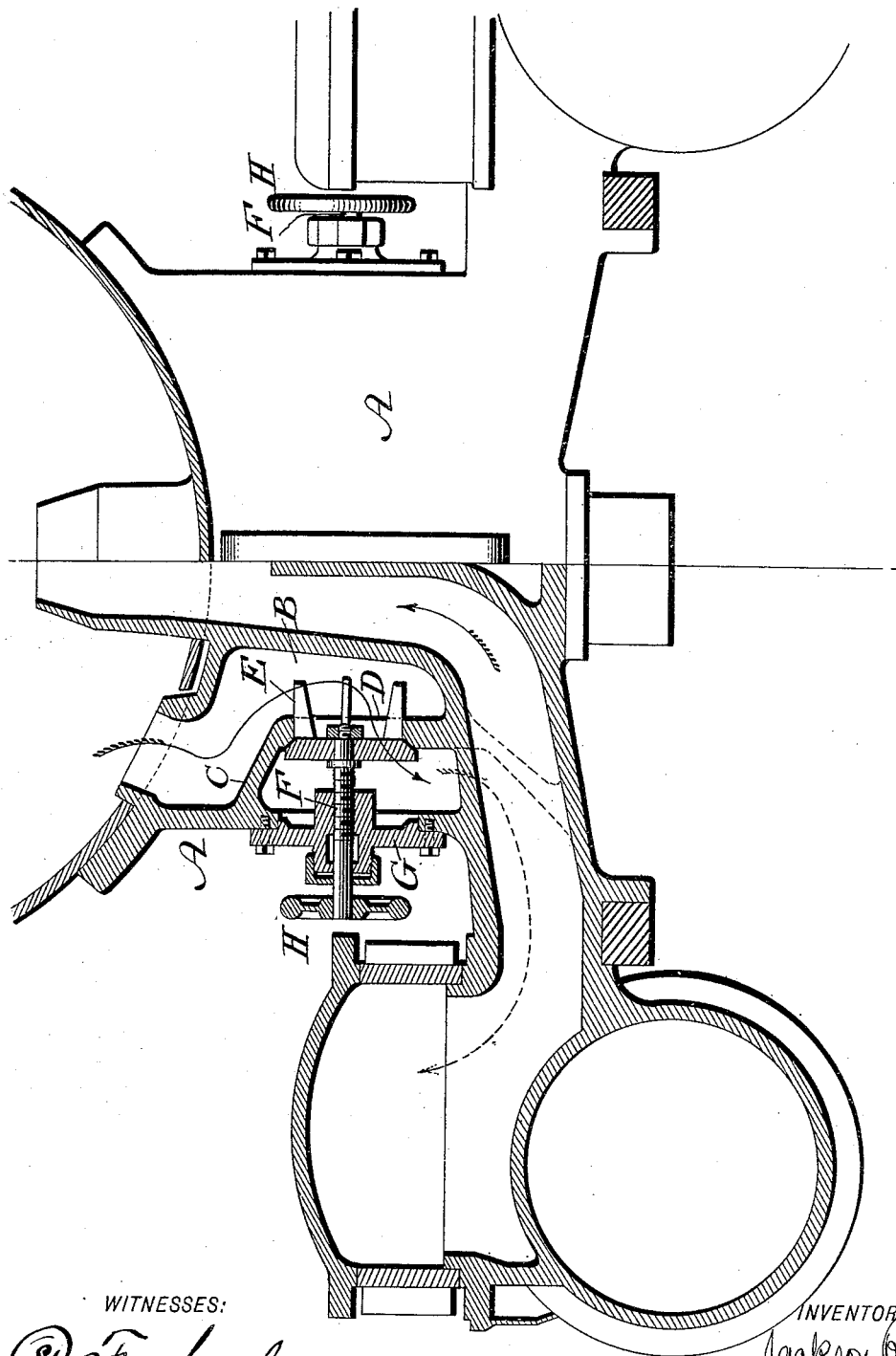


(No Model.)

J. RICHARDS.
LOCOMOTIVE ENGINE.

No. 493,599.

Patented Mar. 14, 1893.



WITNESSES:

W. F. Nagle.
L. Douville.

INVENTOR

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UNITED STATES PATENT OFFICE.

JACKSON RICHARDS, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR TO THE
RICHARDS BALANCED ENGINE COMPANY, OF MAINE.

LOCOMOTIVE-ENGINE.

SPECIFICATION forming part of Letters Patent No. 493,599, dated March 14, 1893.

Application filed September 13, 1892. Serial No. 445,741. (No model.)

To all whom it may concern:

Be it known that I, JACKSON RICHARDS, a citizen of the United States, residing in the city and county of Philadelphia, State of Pennsylvania, have invented a new and useful Improvement in Locomotive-Engines, which improvement is fully set forth in the following specification and accompanying drawing.

My invention consists in providing the live steam passages in the saddle of a locomotive engine with stop cocks or valves for the purpose of cutting off steam when either side of the engine is disabled, the walls of said saddle being utilized to seat said cocks or valves, thereby saving time and trouble in the event of a break-down, and making a neat and compact construction, avoiding the use of additional pipes from the dome, as well as valves thereon.

The figure represents a partial vertical section and partial front view of a portion of a locomotive engine embodying my invention.

Referring to the drawing:—A designates the saddle or saddle-casting of a locomotive engine, and B designates one of the live steam passages. In the wall C of said passage is a port D, leading to the steam chest of the engine, the same forming a seat for the valve E, whose stem F is screw-threaded and fitted in the cap G, which is secured to the side of the saddle, said stem being provided with a hand wheel H, or in lieu thereof a lever or other means for readily rotating the same, and consequently opening and closing the valve E.

It will be seen that each side of the engine is provided with a valve, such as E, and the

other parts hereinbefore described. Consequently, should either engine be disabled, it may be run without interfering with the other engine or part, or causing dead centers in the remaining engine. In such case, steam may be entirely cut off from the chest of the disabled side by means of valve E, thereby saving time and trouble in the event of disabling or breaking down of the engine, and providing a neat and compact construction, and avoiding the use of additional pipes from the dome, as well as valves on the latter.

When access to the valve or valve seat is required, the cap G is removed from the saddle, the effect of which is evident.

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

1. In a locomotive engine, a saddle having one of its walls forming a wall of a live steam passage, a port in said wall having a valve covering the same, a cap secured to the side of the saddle, and an operating stem on said valve working in said cap, said parts being combined substantially as described.

2. A locomotive engine having the saddle A with a wall C having the port D therein, the cap G secured to the side of the saddle, and the stem F working in said cap and provided with the handle, said wall C forming a wall of the steam passage B, said parts being combined substantially as described.

JACKSON RICHARDS.

Witnesses:

JOHN A. WIEDERSHEIM,
R. H. GRAESER.