

H. PERRY.
THROTTLE VALVE LEVER FOR LOCOMOTIVES.
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1,060,625.

Patented May 6, 1913.

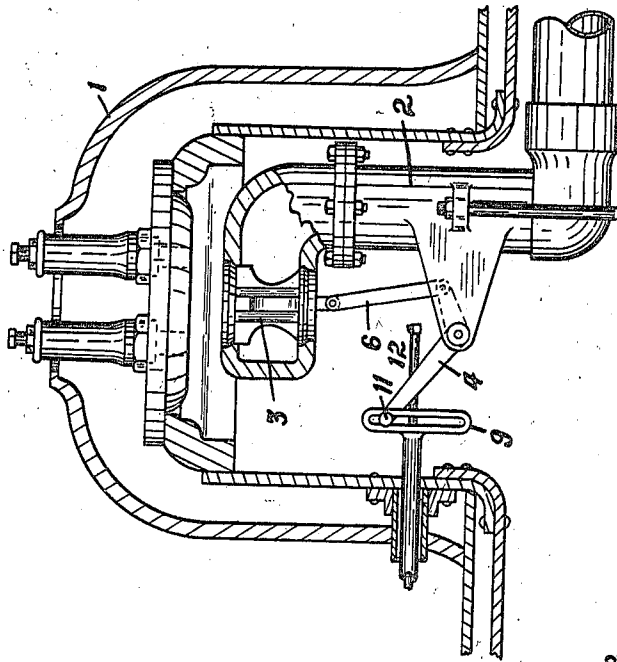


Fig. 1.

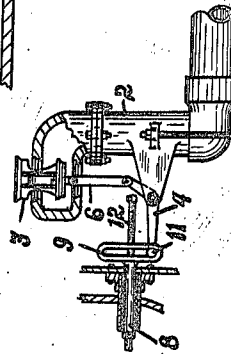
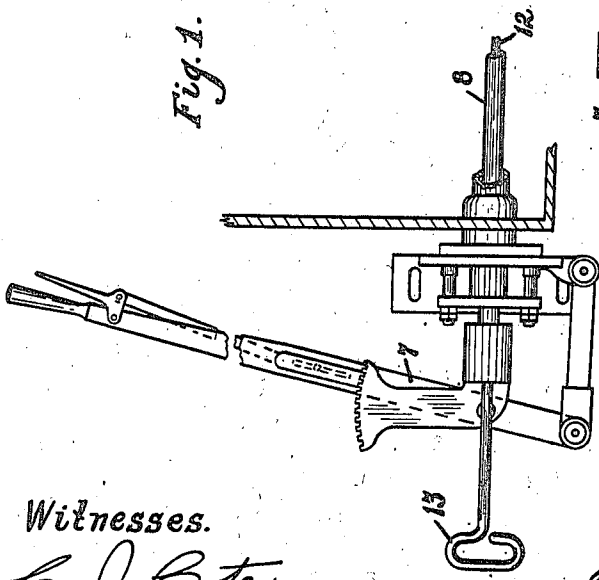


Fig. 2.



Witnesses.

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UNITED STATES PATENT OFFICE.

HILLYARD PERRY, OF OAK RIDGE, ONTARIO, CANADA.

THROTTLE-VALVE LEVER FOR LOCOMOTIVES.

1,060,625.

Specification of Letters Patent.

Patented May 6, 1913.

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To all whom it may concern:

Be it known that I, HILLYARD PERRY, a subject of the King of Great Britain, and resident of Oak Ridge, in the Province of Ontario, in the Dominion of Canada, have invented new and useful Improvements in Throttle-Valve Levers for Locomotives, of which the following is a full specification.

The invention relates to improvements in throttle valve levers for locomotives, as described in the present specification, and illustrated in the accompanying drawings that form part of the same.

The invention consists essentially of the novel arrangement and construction of parts whereby the throttle lever in the cab of the locomotive, and the bell crank which governs the action of the puppet valve in the dome of the said locomotive are connected by a tube, said tube having a safety control rod slidably arranged therethrough for the purpose hereinafter described.

The object of the invention is to give the engineer of a locomotive adequate control over his throttle levers and the connections thereof, thereby preventing inconvenience, delay and accidents.

Referring to the drawings Figure 1 is a sectional elevation view of the dome and part of the cab of the locomotive, showing the arrangement of the throttle levers and valve therein. Fig. 2 is a sectional elevation detail view of the throttle valve and a throttle valve lever showing the safety control rod in operative relation thereto.

Like numerals of reference indicate corresponding parts in the drawing.

In the drawing 1 is the dome of the locomotive.

2 is the steam pipe leading from the dome to the steam chests of the cylinders.

3 is the balanced puppet valve commonly used in locomotives of modern type.

4 is a bell crank pivotally secured at its elbowed portion to a flange projecting laterally from the aforementioned steam pipe 2.

6 is a link connecting the short arm of the bell crank to the puppet valve, by which means the valve is opened and closed.

7 is the throttle lever in the cab of the locomotive operated by the engineer.

The connection now used in locomotives between the throttle 7 and the bell crank lever 4 is a solid rod. The inventor substitutes for this rod, a tubular connection 8.

9 is a crosshead formed on the end of the tube 8 toward one side thereof and has a vertical slot therethrough. The end of the long arm of the bell crank is slidably secured in said slot by means of a pin 11.

12 is a rod slidably arranged in the tube 8, and projects out at either end of said tube. 13 is a handle formed on said rod 12 where it projects out of the tube in the cab of the locomotive within easy reach of the engineer. The other end of the rod projecting from the tube in the dome is fork shaped, for the purpose hereinafter described.

In actual practice it sometimes occurs, that when the engineer pulls his throttle wide open the bell crank and connection therefrom to the throttle lever become locked, and the engineer is unable therefore, to close the puppet valve which admits live steam to the steam chests of the cylinders, and the engineer is forced to apply his emergency brakes in order to ease up or stop his train, which is very difficult when the rails are in a slippery condition, and the engine is running under full steam pressure. Very often when this inconvenience arises, the dome of the locomotive is removed and the bell crank 4 and the link 6 are forced back into their normal positions. This necessitates considerable delay at times. The invention described herein overcomes this difficulty as the forked end of the rod 12 can be forced against the link 6, by the engineer pressing forward on the handle 13 in the cab, thereby forcing the end of the long arm of the bell crank upwardly. This enables the engineer to close the throttle valve without any further opposition.

The simplicity of the invention renders it inexpensive to manufacture, as it does not interfere with the present construction and arrangement of the throttle levers and their connections.

What I claim as my invention is:

1. In a device of the class described, a hollow puppet valve rod, operating mechanism for the puppet valve and a safety control rod extending through said hollow rod and adapted to engage with said mechanism.

2. In a device of the class described, a puppet valve, a bell crank pivotally supported adjacent to the puppet valve, a link pivotally connecting one arm of said bell crank to the puppet valve, a tubular rod

having a slotted cross head formed at one
end thereof and operatively connected to
said bell crank and a control rod extending
through said tubular rod and having a
5 forked end adapted to engage with the link
connecting the puppet valve with said bell
crank.

Signed at city of Toronto in the Province
of Ontario, in the Dominion of Canada, this
24th day of January 1911.

HILLYARD PERRY.

Witnesses:

W. A. PLANT,
C. J. COTE.