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J. S. PAYNE

THROTTLE CONTROL MECHANISM

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FIG. 2.

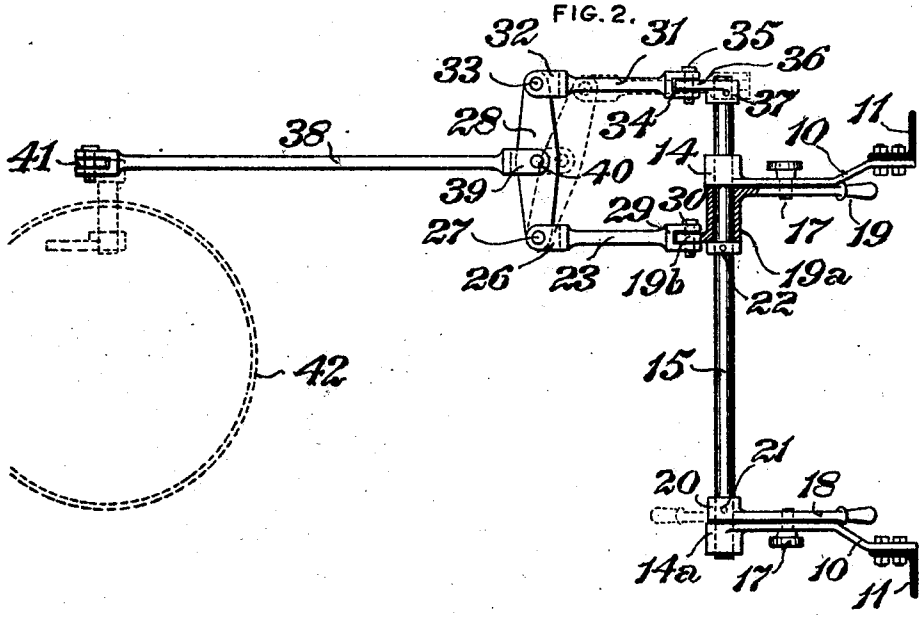


FIG. 1.

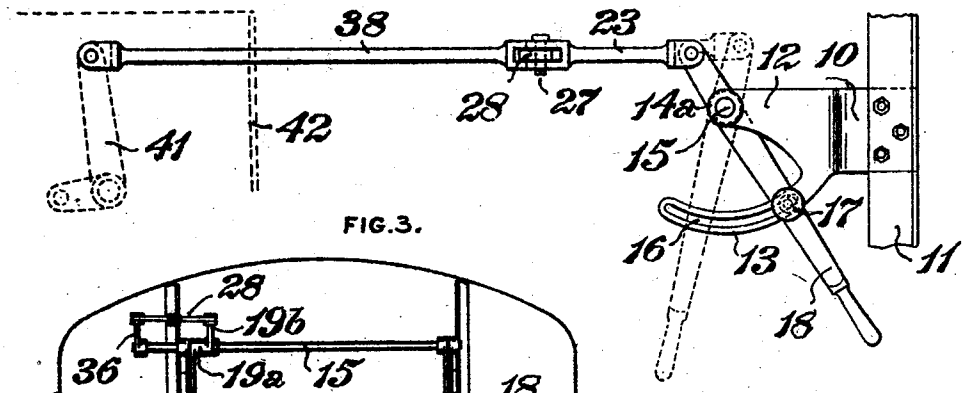


FIG. 3.

WITNESSES

A. S. Vanderbilt

S. R. Bell

INVENTOR

John S. Payne

by Snowden Bell

Atty.

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JOHN S. PAYNE, OF MIDLAND PARK, NEW JERSEY.

THROTTLE-CONTROL MECHANISM.

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My invention relates to means for controlling the operation of throttle valves, and its object is to provide a mechanism of such character, which will be of simple construction, and which will enable the operator to conveniently operate the throttle from either side of the cab of a railroad vehicle in which it is installed.

In the operation of railroad snow plows, the presence of the operator is required, sometimes, on one side of the cab of the plow, and sometimes on the other, and it is particularly important that he should have convenient control of the throttle valve at all times. Accordingly, my invention is directed to the provision of means enabling the operator to conveniently control the throttle valve from either side of the cab.

The improvement claimed is hereinafter fully set forth.

In the accompanying drawing: Figure 1 is a side view, in elevation, of my improved throttle control mechanism; Fig. 2, a top or plan view of the construction shown in Fig. 1; and, Fig. 3, a diagrammatic transverse section, through the cab of a railroad vehicle, showing my invention applied therein.

In the practice of my invention referring descriptively to the specific embodiment thereof whch is herein exemplified, I provide two brackets, 10, 10, each one of which is bolted to one of the vertical cab braces, 11, 11, disposed one on each side of the cab, 11^a. The brackets, 10, 10, are similarly formed, and each is provided with two arms, 12 and 13. The arm, 12, carries, on its outer end, a boss, 14^a, in which is journalled the shaft, 15. The arm, 13, is arcuate in shape, and is provided with an arcuate slot, 16, which receives the shank of a thumb screw, 17, for locking the hand lever, 18, for operating the throttle.

For controlling the throttle, two hand levers, 18 and 19, respectively, are provided, one on each side of the cab, and closely adjacent to the inside face of a bracket, 10. The lever, 18, carries, at one end, a boss, 20, through which passes the shaft, 15. A pin, 21, passes through the boss and shaft, securing the lever rigidly to the shaft.

The lever, 19, is formed preferably integral with a sleeve, 19^a, which surrounds the shaft, 15, and is free to turn thereon. To one end of the sleeve, the handle arm, 19, is joined, and to the other end, is joined the short arm, 19^b. The sleeve is held against longitudinal movement on the shaft between the inside face of the bracket, 10, and a collar, 22, rigidly secured to the shaft by a pin. A link, 23, is pivotally connected at one end, by a knuckle, 26, and pin, 27, to one end of the floating lever, 28. The other end of the link is pivotally connected, by a knuckle, 29, and pin, 30, to the end of the short arm, 19^b, of the hand lever, 19. By referring to the drawing, it will be apparent that when the hand lever is moved, motion will be imparted to the floating lever.

A link, 31, is pivotally connected, at one end, by a knuckle, 32, and pin, 33, to the other end of the floating lever. The opposite end of the link is pivotally connected, by a knuckle, 34, and pin, 35, to one end of the short arm, 36. The other end of the arm, 36, is formed with a boss, through which passes the shaft, 15. A pin, 37, passing through the boss and shaft, locks the arm rigidly to the shaft.

A reach rod, 38, is pivotally connected at one end, by the knuckle, 39, and pin, 40, to the middle of the floating lever, 28. The opposite end of the reach rod is connected to the usual valve operating lever, 41, which is connected to a throttle valve, (not shown), in the steam dome, 42.

The operation of the control mechanism is as follows: Assuming that the operator is on the lever, 18, side of the cab, and that the lever, 19, is locked against movement by the set screw, 17, movement of the lever, 18, will turn the shaft, 15, moving the arm, 36, which, in turn, will move the link, 31, imparting movement to the connected end of the floating lever. As the other end of the floating lever is locked against movement, by the locking of the lever, 19, movement of the end connected to the link, 23, will impart the proper movement to the reach rod, to operate the throttle lever in the steam dome. When the operator is on the lever, 19, side of the cab, the lever, 18, is locked, locking the end of the floating lever connected to the link, 23, against movement. With the parts in this condition, movement of the lever, 19, will impart movement to the end of the floating lever connected to the link, 23, which, in turn, will

impart the proper movement to the reach rod to operate the throttle lever in the steam dome.

From the foregoing description, it will be apparent that I have provided a throttle control mechanism, having a minimum number of parts, and which can be conveniently and efficiently operated by the operator from either side of the cab.

I claim as my invention and desire to secure by Letters Patent:

1. In a throttle control mechanism for railroad vehicles, the combination of a throttle operating lever; a reach rod, connected thereto; a floating lever, connected intermediate its ends, to the reach rod; a shaft; means for rotatably supporting said shaft; a hand lever, rigidly secured to the shaft; an arm, rigidly secured to the shaft; a link, connecting the arm and floating lever; a hand lever, rotatably mounted on the shaft, and comprising a hand arm and a link arm; and a link, connecting the link arm and the floating lever.

2. In a throttle control mechanism for railroad vehicles, the combination of a throttle operating lever; a reach rod, connected thereto; a floating lever, connected, intermediate its ends, to the reach rod; a shaft; means for rotatably supporting said shaft; a hand lever, rigidly secured to the shaft; an arm, rigidly secured to the shaft; a link, for connecting the arm and floating lever; a sleeve, rotatably mounted on the shaft; a hand arm, rigidly secured to the sleeve; a link arm, rigidly secured to the sleeve; and a link, connecting the link arm and floating lever.

3. In a throttle control mechanism for railroad vehicles the combination of a throttle operating lever; a reach rod, connected thereto; a floating lever, connected, intermediate its ends, to the reach rod; a shaft; means for rotatably supporting said shaft; a hand lever, rigidly secured to the shaft; means for locking the hand lever in adjusted positions; an arm, rigidly secured to the shaft; a link, connecting the arm and floating lever; a hand lever, rotatably mounted on the shaft, and comprising a hand arm and a link arm; a link, connecting the link arm and floating lever; and means for locking the hand arm in adjusted positions.

4. In a railroad vehicle, the combination of a cab; a throttle operating lever; a reach rod, connected thereto; a floating lever, connected, intermediate its ends, to the reach rod; a shaft, disposed within, and extending transversely in, the cab; means for rotatably supporting said shaft; a hand lever, rigidly secured to one end of the shaft; an arm, rigidly secured to the other end of the shaft; a link, connecting the arm and floating lever; a hand lever, rotatably mounted on the shaft, adjacent the other end thereof, and comprising a hand arm and a link arm; and a link, connecting the link arm and floating lever.

JOHN S. PAYNE.