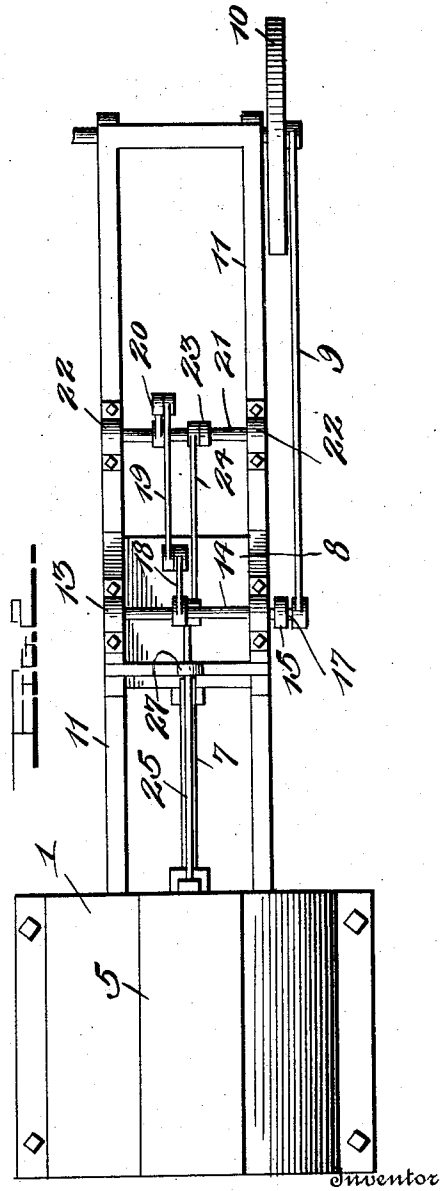
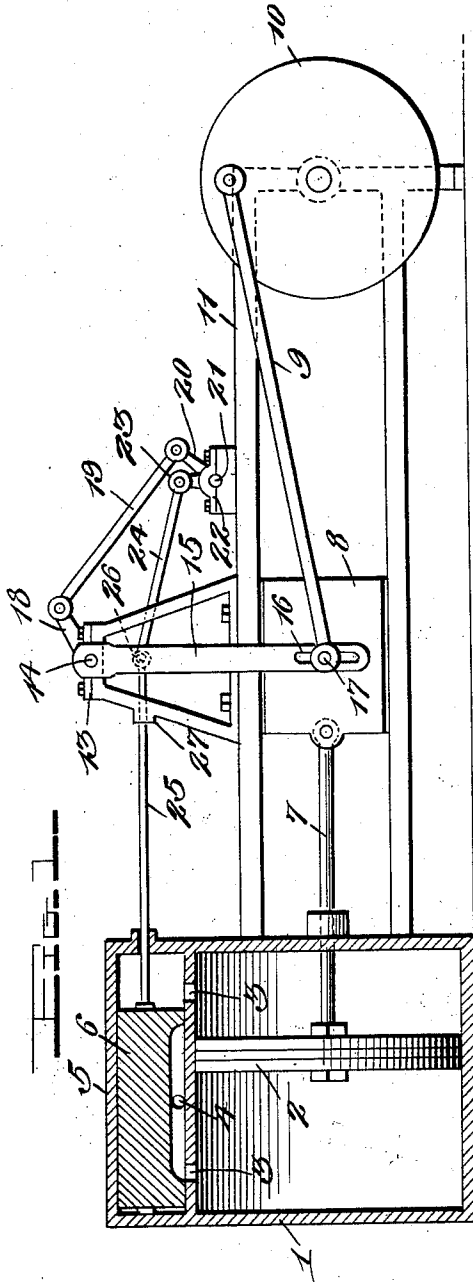


H. J. GLISSMAN.
VALVE GEAR.
APPLICATION FILED MAR. 21, 1912.

1,047,906.

Patented Dec. 17, 1912.



Witnesses

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UNITED STATES PATENT OFFICE.

HARRY J. GLISSMAN, OF KENNEDY, INDIANA.

VALVE-GEAR.

1,047,906.

Specification of Letters Patent.

Patented Dec. 17, 1912.

Application filed March 21, 1912. Serial No. 685,249.

To all whom it may concern:

Be it known that I, HARRY J. GLISSMAN, a citizen of the United States, residing at Kennedy, in the county of Dearborn and State of Indiana, have invented certain new and useful Improvements in Valve-Gears, of which the following is a specification, reference being had to the accompanying drawings.

This invention relates to an improved valve gear and has for its object the provision of a simplified and efficient connection between the moving parts of the engine and the cut-off valve whereby the usual eccentric is dispensed with.

The invention, as hereinafter particularly claimed will be readily understood from the following detailed description based upon the accompanying schematic drawings wherein is illustrated a preferred embodiment of the invention in a conventional showing of a reciprocating steam engine.

In these drawings Figure 1 is a side elevation partly in section; and Fig. 2 is a top plan view.

Corresponding and like parts are referred to in the following description and designated in the accompanying drawings by like reference characters.

The reference numeral 1 designates the cylinder within which the piston 2 reciprocates, the supply of live steam to the cylinder being through the inlet ports 3 while the exhaust therefrom is through the port 4 of the steam chest 5 which is supplied from the boiler by connections not shown, and contains a cut-off slide valve 6 arranged to control said ports in the usual manner.

The piston rod 7, the cross head 8, the connecting rod 9, and the drive crank pulley 10 are of the usual type and of themselves form no part of the present invention. Upon the engine frame 11 is mounted a suitable support 12 carrying a boxing 13 within which is journaled a rock shaft 14 carrying at one end a rocker arm 15 which has in its opposite end a slot 16 engaging a pin 17 fixed in the cross head. The rock shaft 14 has upon its opposite end a second rocker arm 18 which is connected by means of a link 19 with an arm 20 fixed upon a second rock shaft 21 mounted in a boxing 22 also carried by the engine frame. The rock shaft 21 has upon its opposite end an arm 23 con-

nected by a link 24 with the valve rod 25 at 26.

The operation of the device is as follows: During the reciprocation of the cross head 8, the shaft 14 is rocked by means of the arm 15 and said rocking motion is transmitted by means of the arm 18, the link 19 and the arm 20 to the rock shaft 21 and by it in turn transmitted by means of the arm 23 and the link 24 to the valve rod 25, whereby the cut-off valve 6 is reciprocated to place the two ends of the cylinder, alternately, in communication with the inlet and exhaust ports.

It will thus be seen that I have devised a simple and efficient valve gear which is certain in its action and not liable to get out of adjustment.

Having thus described my invention, I claim:

1. In combination with a cylinder, of a piston mounted for reciprocation therein, a frame connected to said cylinder, a cross head mounted within said frame, means connecting said cross head with said piston, a cut off valve mounted within said cylinder, a valve stem extending from said valve, a support mounted upon said frame, a rock shaft mounted within said support, an arm extending from one extremity of said rock shaft and having a vertically extending slot formed in its opposite end, a pin extending from one of the lateral sides of said cross head and adapted to operate within said slot, a boxing carried by said frame, a rock shaft mounted in said boxing below the first mentioned rock shaft, a link connecting said rock shafts, an arm extending from said second mentioned rock shaft and a link connecting said arm with said valve stem substantially as described.

2. In combination with the cylinder, of the piston mounted for reciprocation therein, a frame connected with said cylinder, a cross head mounted within said frame, a piston rod connecting said piston with said cross head, a pin extending laterally from said cross head and drive-shaft mounted in one extremity of said frame, a rod connecting said pin with said drive-shaft, a support mounted upon said frame, a rock shaft journaled therein, an arm depending from said rock shaft, a lower extremity of said arm being provided with an elongated slot for

receiving said pin mounted on the cross
head, a second rock shaft mounted upon said
frame, a link connecting both of the said
rock shafts, a valve mounted within said
5 cylinder, a stem extending from said valve,
a bearing mounted upon said support for
receiving the inner end of said stem, and a
link connecting one end of said valve stem

with the last mentioned rock shaft, substan- 10
tially as and for the purpose described.

In testimony whereof I hereunto affix my
signature in the presence of two witnesses.

HARRY J. GLISSMAN.

Witnesses:

THOMAS VAUGHAN,
JOHN GLISSMAN.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents,
Washington, D. C."
