

W. ENGLISH.
 STEAM ENGINE.
 APPLICATION FILED SEPT. 27, 1910.
 1,025,385.
 Patented May 7, 1912.
 2 SHEETS-SHEET 1.

Fig. 1.

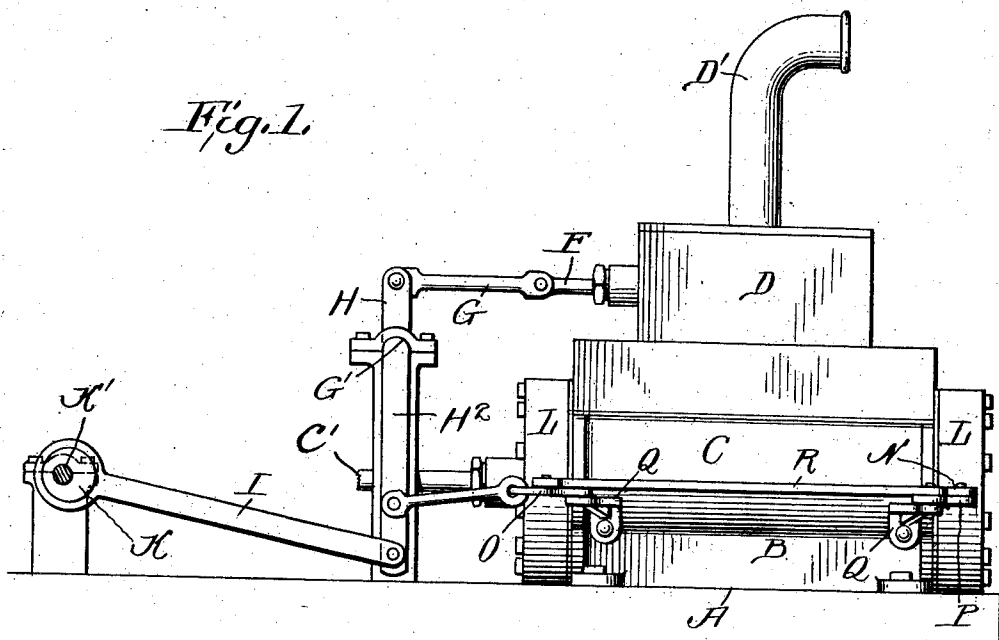
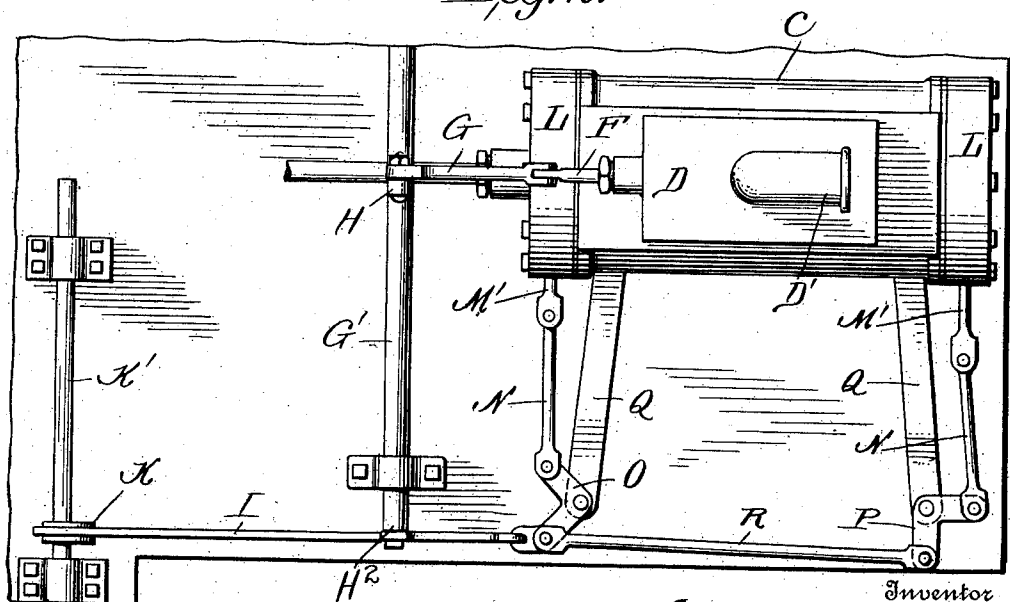


Fig. 2.



Witnesses

Chas. H. Holmes
 A. Albright.

Inventor
 William English

By Chas. E. Brock
 Attorney

Fig. 3.

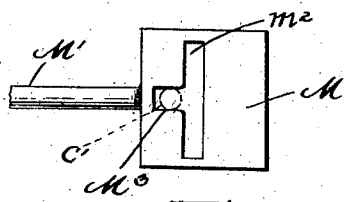
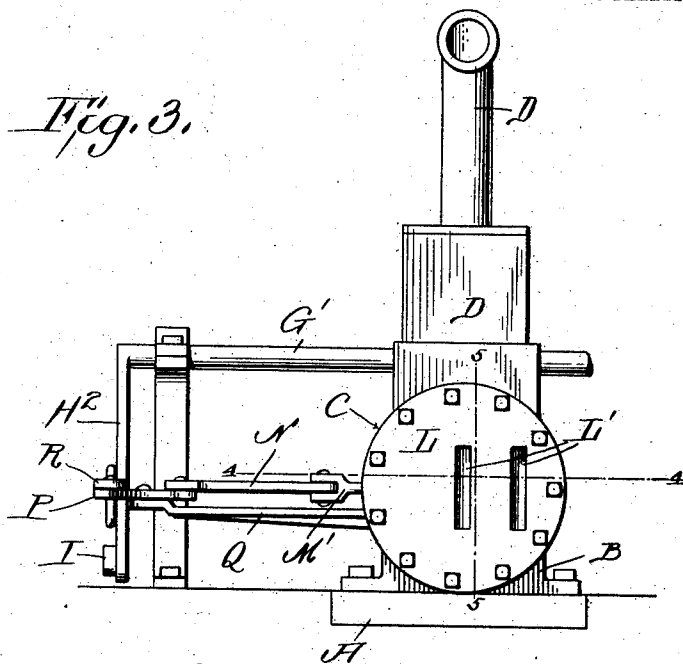


Fig. 6.

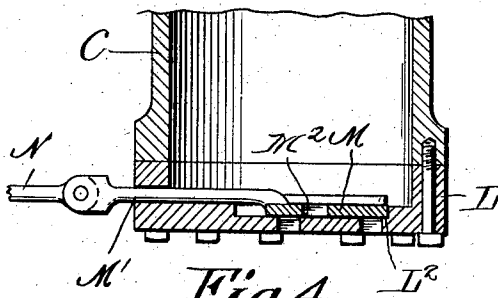


Fig. 4.

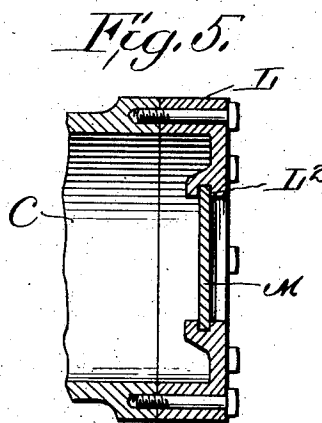


Fig. 5.

Witnesses

Oliver H. Holmes
 Geo. H. Wright

Inventor

William English
 By Chas. E. Brock
 Attorney

UNITED STATES PATENT OFFICE.

WILLIAM ENGLISH, OF SUMNER, ILLINOIS.

STEAM-ENGINE.

1,025,385.

Specification of Letters Patent.

Patented May 7, 1912.

Application filed September 27, 1910. Serial No. 584,103.

To all whom it may concern:

Be it known that I, WILLIAM ENGLISH, a citizen of the United States, residing at Sumner, in the county of Lawrence and State of Illinois, have invented a new and useful Improvement in Steam-Engines, of which the following is a specification.

This invention relates to steam engines, the object being to provide the heads of the cylinder with exhaust valves whereby back pressure will be reduced.

With this object in view, the invention consists in the novel features of construction, combination and arrangement of parts, hereinafter fully described and pointed out in the claim.

In the drawing forming a part of this specification: Figure 1 is a side elevation of a steam engine showing the application of my improved invention. Fig. 2 is a top plan view of the same. Fig. 3 is an end view. Fig. 4 is a section taken on line 4—4 of Fig. 3. Fig. 5 is a section taken on line 5—5 of Fig. 3. Fig. 6 is a face view of a front end valve, the position of the piston rod being indicated in dotted lines.

Referring to the drawing A indicates a suitable base having a cradle B bolted thereon carrying a cylinder C, provided with a steam chest D which communicates with the cylinder by ports not shown, through which the live steam is adapted to enter the cylinder, which is fed into the steam chest through an in-take pipe D'.

The steam chest D is provided with an ordinary slide valve not shown carrying a valve stem F, to which is connected a link G carried by a crank arm H of a rock shaft G' which is provided with an arm H², to which is connected an eccentric link I which is carried by an eccentric strap K carried by a shaft K' mounted in suitable bearings which is operated by the piston of the engine in the ordinary manner.

The cylinder C is provided with cylinder heads L having spaced slots L' in their ends, and guide ways L² in which are mounted the valves M and having vertical slots M² adapted to register with the slots of the cylinder head so as to open and close the same in order to allow the steam to be exhausted through the cylinder heads, whereby back pressure will be reduced to a minimum. The valves M are provided with stems M' to which are connected links N carried by cranks O and P, which are mounted on arms Q extending outwardly from the cylinder. The cranks are connected together by a link B so that when one of the cranks is operated so as to open one of the exhaust valves, the other will be closed, the valve M at the front end of the cylinder provided with a short longitudinal slot M³ which connects with the vertical slot M² and through which the piston rod C' passes.

From a foregoing description, it will be seen that I have provided a steam engine having a cylinder with heads provided with exhaust ports, closed by slide valves which are operated in such a manner that when steam enters the cylinder from the steam chest upon one side of the piston, the valve upon that side will be closed until the piston has reached the end of its stroke, when said exhaust valve will be opened so as to allow the steam to escape therefrom.

What I claim is:—

A valve of the slide type provided with a vertical slot, and having a horizontal slot extending into the vertical slot midway the ends of the said vertical slot, as and for the purpose set forth.

WILLIAM ENGLISH.

Witnesses:

O. A. FYFFE,
J. L. BARNES.