

No. 833,973.

PATENTED OCT. 23. 1906.

G. B. PETSCHÉ.
THROTTLE VALVE.

APPLICATION FILED OCT. 20, 1905.

FIG. 1.

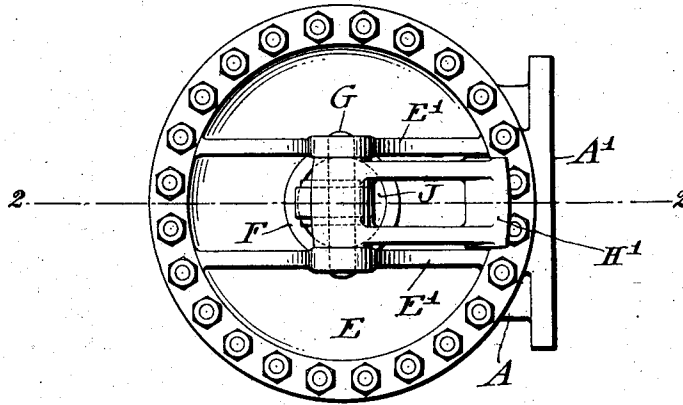


FIG. 2.

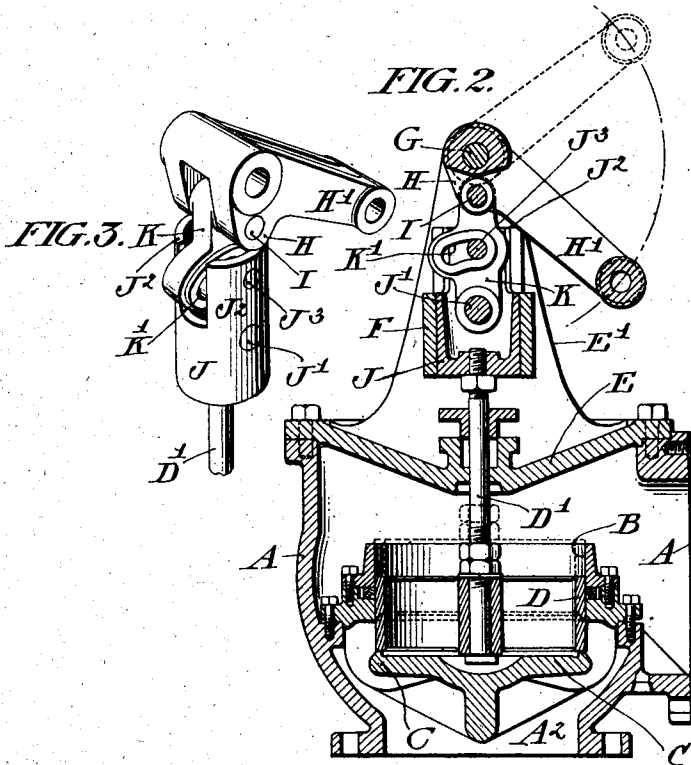
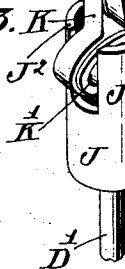


FIG. 3. K-



WITNESSES:

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UNITED STATES PATENT OFFICE.

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THROTTLE-VALVE.

No. 833,973.

Specification of Letters Patent.

Patented Oct. 23, 1906.

Application filed October 20, 1905. Serial No. 283,581.

To all whom it may concern:

Be it known that I, GUSTAV BERNHARD PETSCHÉ, a subject of the German Emperor, residing in the city and county of Philadelphia, in the State of Pennsylvania, have invented a certain new and useful Improvement in Throttle-Valves, of which the following is a true and exact description, reference being had to the accompanying drawings, which form a part thereof.

My invention relates to throttle - valves such as are used in connection with the supply-mains of steam-engines, and has for its object to provide throttle - valve mechanism adapted for frequent use—as, for instance, in connection with a reversing-engine—and in which the valve can be closed and opened powerfully and positively and automatically held in closed position.

The nature of my improvements will be best understood as described in connection with the drawings, in which they are illustrated, and in which—

Figure 1 is a plan view of the valve and actuating mechanism; Fig. 2, a vertical section on the line 2 2 of Fig. 1, and Fig. 3 a perspective view of the toggle-joint-actuating mechanism.

A indicates the valve-casing, having the chambers A and A² connected with each other through a cylindrical valve-guide B, which is placed in alinement with a valve-seat, (indicated at C,) said seat being formed on the edge of a disk head C', lying beyond the end of the cylinder.

D is the throttle-valve, consisting of a hollow cylinder moving in the cylindrical guideway B and adapted to contact with the seat C, as shown in Fig. 2.

D' indicates the valve-actuating spindle, which, as usual, passes through a stuffing-box in the cap E of the casing, said cap being provided with upwardly - extending standards E' E', to which are secured the guideway indicated at F, and above it the pivot indicated at G.

H H' represent a bell-crank lever pivoted at G, its shorter arm H being bifurcated and provided with a pivot-pin I.

J is a head secured to the valve-spindle and working in the guideway F. This head supports the pivot - pin indicated at J' and through upwardly-extending arms J² J² a lock-pin, (indicated at J³.)

K is a link pivotally connecting the pivot-pins I and J' and, as shown, formed with a radial slot K', through which extends the pin J³.

It will be seen that the lever-arm H and link K form a toggle-joint arranged in such a way that when its members are in alinement the valve D will be pressed down against the valve-seat C, while the shifting of the lever-arm H' will cause the links of the toggle-joint to move out of alinement and open the valve. It will also be seen that the pin J³ by coming in contact with the end of the slot K' forms a stop and lock for arresting and holding the toggle-levers in alinement and the valve closed.

Obviously other locking devices may be provided in place of the one illustrated, and except so far as the specific mechanism is called for in the claims I do not wish to be understood as limiting myself to the details illustrated.

My throttle-valve mechanism in somewhat modified form is also illustrated and described in my copending application for Letters Patent, filed October 20, 1905, Serial No. 283,580.

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

1. A throttle-valve having in combination a casing provided with a valve-guide cylinder B, a disk head C' lying beyond the end of said cylinder and having a valve-seat C, situated in line with said cylinder, a hollow cylindrical valve D, working in the guide B, a toggle-joint valve-actuating device arranged to seat the valve when its jointed links are in alinement and a lock-stop for holding the links in alinement and the valve closed.

2. A throttle-valve having in combination a casing provided with a valve-guide cylinder B and valve-seat C, situated in line with said cylinder, standards E', E', secured to the cas-

ing, a guideway F, and pivot G, supported on
the standards, a hollow cylindrical valve D,
working in the guide-cylinder B, a valve-
stem D', having a head J, working in guide-
5 way F, a bell-crank lever H, H', working on
pivot G, a link pivotally connecting lever-
arm H, with head J, and forming a toggle-

joint therewith, and means for holding the
toggle in position to close the valve.

GUSTAV BERNHARD PETSCHÉ.

Witnesses:

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