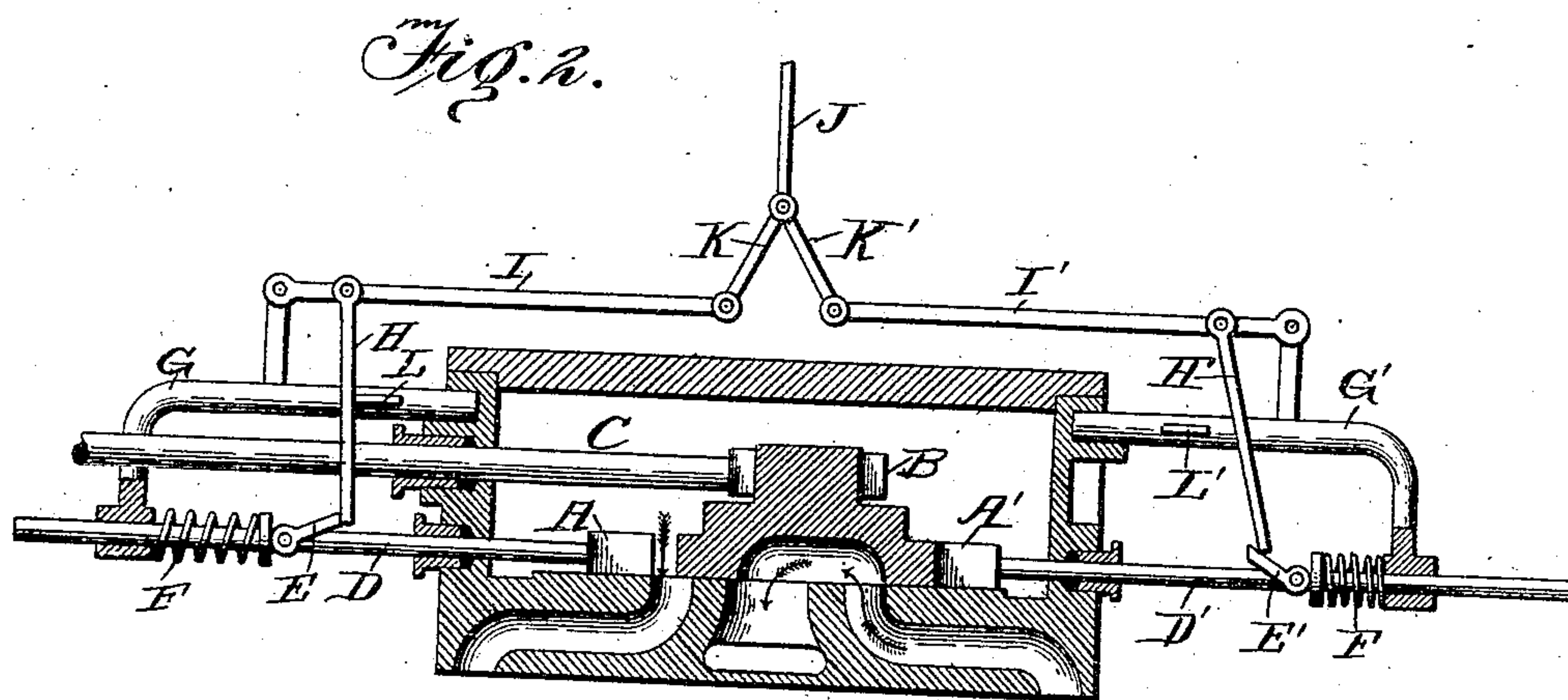
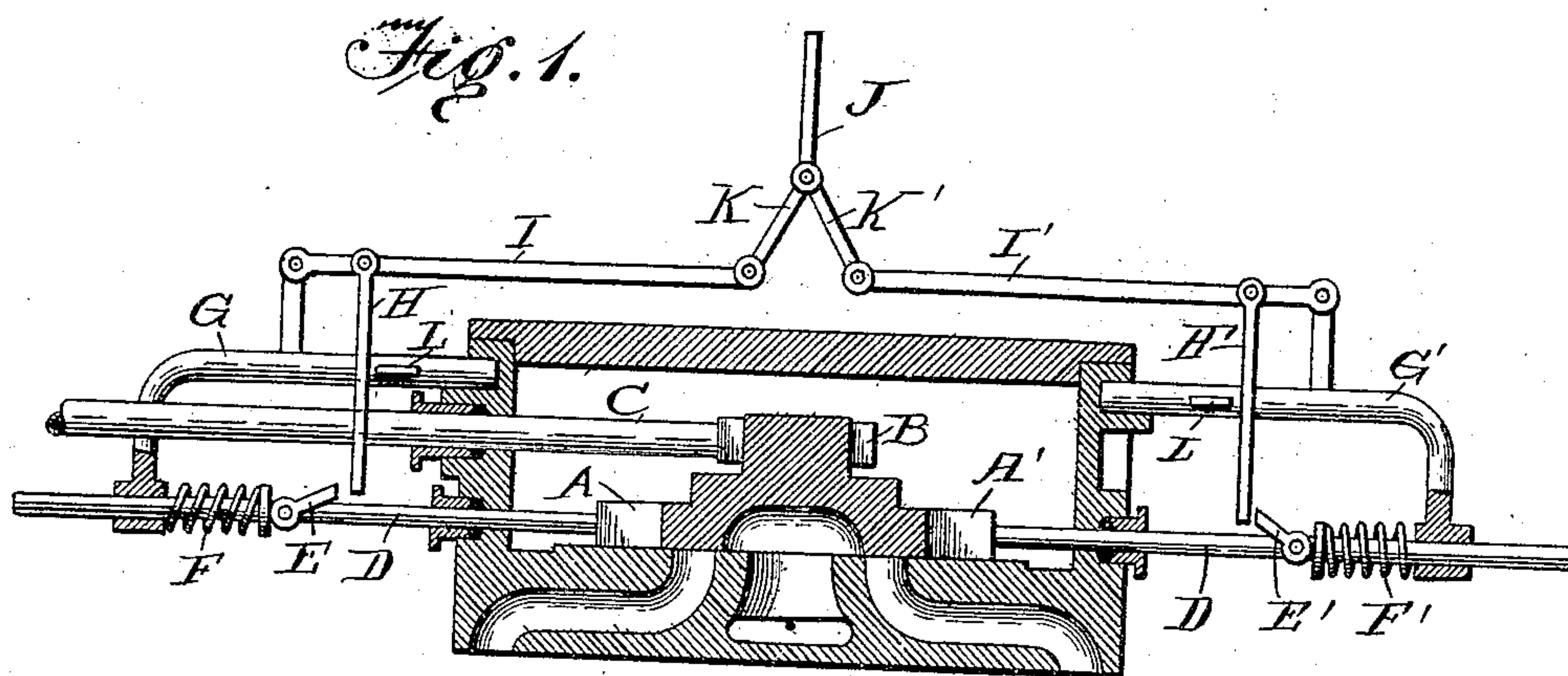


No. 841,422.

PATENTED JAN. 15, 1907.

S. MUCSI.
CUT-OFF VALVE.
APPLICATION FILED SEPT. 10, 1906.



Witnesses:

C. A. Cahill.
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UNITED STATES PATENT OFFICE.

STEPHEN MUCSI, OF DOUGLAS, ARIZONA TERRITORY.

CUT-OFF VALVE.

No. 841,422.

Specification of Letters Patent.

Patented Jan. 15, 1907.

Application filed September 10, 1906. Serial No. 333,903.

To all whom it may concern:

Be it known that I, STEPHEN MUCSI, a citizen of Austria-Hungary, residing at Douglas, in the county of Cochise and Territory of Arizona, have invented a new and useful Cut-Off Valve for Steam-Engines, of which the following is a specification.

My invention relates to improvements in expansion slide-valves for steam-engines in which expansion slide-valves are released and put in motion promptly and effectively by a governor with which they are connected cutting off the steam independently in conjunction with the main slide-valve; and the object of my improvement is to provide automatic action of the expansion slide-valve with a motion different from that of the main shaft without being geared to it and to be controlled directly by a governor which will secure a steam cut-off at any required position of the piston, thereby procuring quick and satisfactory results. I attain this object by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a view of the entire combination, showing two expansion slide-valves, a plain slide-valve, and a device connecting the expansion-valves with a governor. Fig. 2 is a view of the entire combination, showing lead-opening, the expansion-valve A caught, and the course it would pursue at this point if released; also, expansion-valve A' at a point disengaged from its locked position.

Similar letters refer to similar parts throughout the views.

The valves B and A A', sliding rods D D', springs F F', catches E E', H H', supporting-arms G G', and governor connections I I', K K', and J constitute the parts.

Catches E E' are placed on the expansion-valve stems D D', pushed by springs F F', and come in contact with governor connections H H', as frequently as use and necessity require it.

The expansion slide-valves A A' and their sliding rods D D' act independently of the main valve-stem C, but not altogether independently of the main valve itself, and when valve B is moving from its middle position it pushes one or the other of the expansion slide-valves A A' to the extremity of its travel and permits its return on coming back.

When the three valves are in their central

positions of travel, the areas of the expansion slide-valves A A' appear as laps. When valve B moves from its central position, as illustrated by the drawings, admitting steam from the steam-chest into the cylinder, the expansion-valve A on this side is forced tightly to valve B by spring F until it is caught by rod H at catch E and held by block L, in which position it will stay until the engine attains its high speed and the governor its strongest force, which will release the contact between rod H and catch E, permitting the spring to force valve A against valve B, the governor reducing the speed, thus cutting off the steam and using the admitted steam in the cylinder for further work and giving a governed steam cut-off to the engine at any position of the piston on its travel.

It is my purpose to provide for using the ordinary plain slide-valve, as B, except with smaller overlap and wider valve-seat and as near as possible be in harmony with fixed rules governing construction for port-openings and travel, &c., and combine this feature with the construction of expansion-valves whose area will depend largely on the area of the steam-ports and free from the eccentric-rod and main shaft, so that in any position the steam-port is completely closed at the proper time.

I claim—

The combination of sliding expansion-valves A A' for steam which are alike in form and placed on opposite sides of a main slide-valve, a main sliding valve B, a sliding rod C, sliding rods D D' alike in form and placed on opposite sides, springs F F' alike in form placed on opposite sides, catches E E' alike in form placed on opposite sides, catches H H' alike in form placed on opposite sides, supporting-arms G G' alike in form and placed opposite each other and fastened to the ends of steam-chest, and governor connections I I', K K', and J, whereby the holding and actuating device causes the springs F, F', to impart the proper movement to the cut-off valves as and for the purposes set forth.

STEPHEN MUCSI.

Witnesses:

ALBERT M. SAMES,
BILL BODMER.