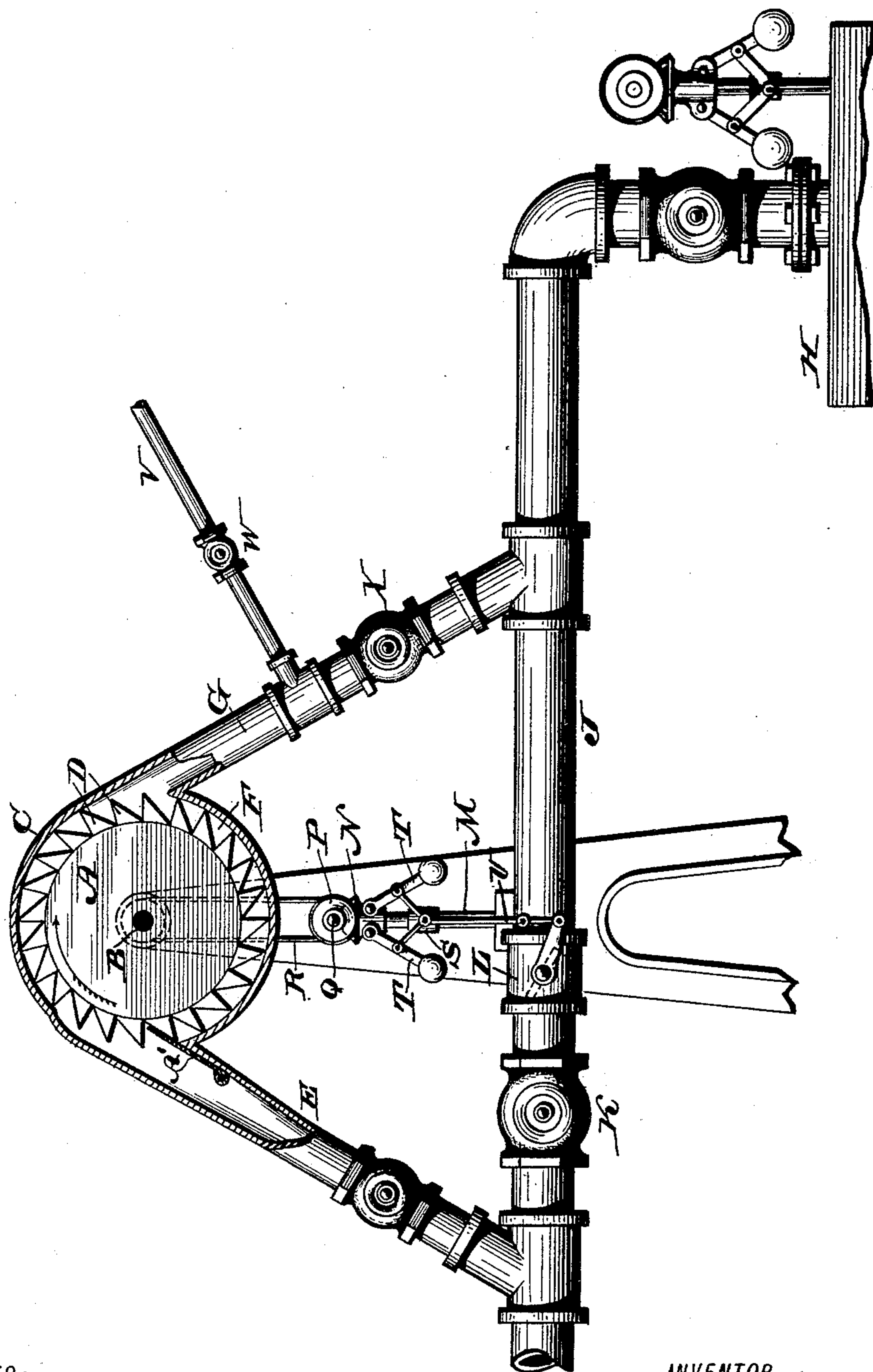


(No Model.)

J. J. HANLON.
AUXILIARY ENGINE.

No. 462,925.

Patented Nov. 10, 1891.



WITNESSES:

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JOHN J. HANLON, OF PHILADELPHIA, PENNSYLVANIA.

AUXILIARY ENGINE.

SPECIFICATION forming part of Letters Patent No. 462,925, dated November 10, 1891.

Application filed October 13, 1890. Serial No. 367,893. (No model.)

To all whom it may concern:

Be it known that I, JOHN J. HANLON, a citizen of the United States, residing in the city and county of Philadelphia, State of Pennsylvania, have invented a new and useful Improvement in Engine-Governors, which improvement is fully set forth in the following specification and accompanying drawing.

My invention relates to improvements in engine-governors, and has for its object a device which will automatically cause a uniform pressure of steam to be maintained in a main engine and at the same time supply motive power for other mechanisms; and for this purpose it consists of the combination of parts hereinafter described.

The figure of the accompanying drawing represents a sectional side elevation of a governor embodying my invention.

Referring to the drawing, A designates a wheel or cylinder, which is mounted on the shaft B and inclosed in a casing C, the periphery of said wheel having pockets D, which are of such form as to present the greatest surface to the impact of live steam, said parts A B C D forming a rotary engine. A pipe E leads from a boiler or other suitable source of steam-supply to the steam-space F, and a pipe G leads from the same to an engine H for supplying it with the reduced steam which has passed through the rotary engine.

A pipe J leads directly from the steam-supply to the engine H, and is provided with a cock K for opening and closing the same and a valve L, the latter being so connected with the shaft B of the rotary engine as to be operated thereby. For this purpose the following mechanism is employed: A shaft M, having suitable journal-bearings, is provided with a bevel-wheel N, gearing with a bevel-wheel P on a shaft Q, the latter receiving motion, by means of a belt R, from the shaft B. Secured to the shaft M and to a collar S, loosely mounted on said shaft, are the weighted arms T, to which is loosely secured the rising and falling annulus of the rod U, which annulus is fastened to the valve L, the mechanism thus described forming a governor for controlling the said valve.

V designates an exhaust-pipe leading from the pipe G to the atmosphere and provided with a cock W. The pipe G is also provided with a cock X for closing the same.

In the pipe E is an automatically-operating valve A', which enters the steam-chamber

space in the rotary engine and prevents action on the rear of the pockets before the same receives the impact of the live steam on their front face.

The operation of the device is as follows: The live steam from the supply-pipe J passes into the pipe E at the same pressure as in the said supply-pipe J, and thence into what forms the rotary engine, the shaft B of which may be used as a motor for such mechanisms as may be desired. The steam which passes from the rotary engine into the pipe G is so reduced by the same as to be of the required pressure for operating the engine H, the said reduction of pressure being according to the speed of the wheel A. When the steam-pressure in the pipe G is sufficient to ordinarily operate the engine H, the valve L is nearly closed, so that little or no steam passes through the pipe J into the said engine; but when an increased steam-pressure is desired in the same the speed of the shaft B is somewhat increased, and the valve L is thereby opened to permit a greater inflow, and consequently pressure, of the steam through the pipe J into the said engine H for operating the same.

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

1. An engine with a main steam-supply pipe leading thereto, a second engine with a steam-supply pipe leading from the main supply-pipe, and an exhaust-pipe leading to said first engine, and a valve in said main steam-pipe with controlling mechanism connected with a rotary shaft of the second engine, said exhaust-pipe of the said second engine having a valve opening to the atmosphere, said parts being combined substantially as described.

2. An engine having the steam-supply pipe J, with a cock K and valve L, a second engine with a rotary shaft B, mechanism connecting valve L and shaft B for controlling said valve L, the pipe E, leading from said pipe J to the second engine, and the exhaust-pipe G, leading from the second engine to the main engine and having a pipe with cock opening to the atmosphere, said parts being combined substantially as described.

JOHN J. HANLON.

Witnesses:

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