

No. 683,523.

Patented Oct. 1, 1901.

H. THOMSON.
MOTOR.

(Application filed May 29, 1900.)

(No Model.)

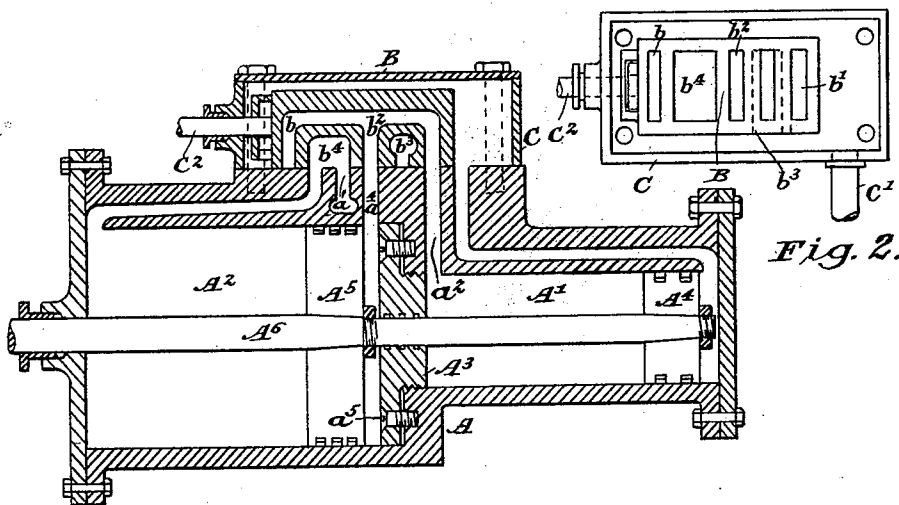


Fig. 1.

Witnesses:

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UNITED STATES PATENT OFFICE.

HERBERT THOMSON, OF ARMADALE, VICTORIA.

MOTOR.

SPECIFICATION forming part of Letters Patent No. 683,523, dated October 1, 1901.

Application filed May 29, 1900. Serial No. 18,446. (No model.)

To all whom it may concern:

Be it known that I, HERBERT THOMSON, engineer, a subject of the Queen of Great Britain and Ireland, residing at No. 869 High street, Armadale, in the British Colony of Victoria, have invented certain new and useful Improvements in Motors, of which the following is a specification.

This invention relates to an improved single slide-valve and arrangement of ports in a tandem high and low pressure cylinder or motor.

These improvements are applicable to motors and to vehicles designed for use as carriages, buggies, or the like.

The invention will now be described, aided by a reference to the attached sheets of drawings, in which—

Figure 1 is a longitudinal section through the compound cylinder and single slide-valve, and Fig. 2 a face plan of such slide-valve within its chest.

The motor A is of the compound type, the improvement consisting in a novel form of single slide-valve B, which controls the ports of both the high and low pressure cylinders A' and A², respectively. Said slide-valve B is made with five face openings or ports, the two outer ones, b and b', and the central one, b², being in communication with each other and are provided for the exhaust of high-pressure and feed of low-pressure cylinders, while the other two valve-openings stand independent, the one marked b³ being the steam-inlet way through valve to high-pressure cylinder and the other and larger opening b⁴ the exhaust-way from the low-pressure cylinder through the ports a and a'. The ports or passages a² and a³ of the high-pressure cylinders and the ports or passages a and a' and

exhaust a' of the low-pressure cylinder lie adjacent to each other under a valve-chest C, while the exhaust a' leads to the atmospheric condenser D. The cylinders are flanged at their ends and have a metal partition A³ 45 screwed into position and further secured by set-screws a⁵. The slide-valve B is inclosed in said steam-chest C, which is provided with steam-inlet C', the chest being held in position by screw-bolts, while the valve is operated by its rod C² being connected to an eccentric-rod worked from an eccentric fitted on the motor-shaft. (Not shown.) A⁴ is the high-pressure and A⁵ the low-pressure piston, secured on piston-rod A⁶, which is attached, 55 as usual, by a connecting-rod with a crank of the engine-shaft.

Having now particularly described and ascertained the nature of my said invention and in what manner the same is to be performed, 60 I declare that what I claim is—

In combination, high and low pressure chambers or cylinders, a steam-chest, each of said cylinders having a port or passage leading from each of its ends into the same, and 65 said low-pressure cylinder having an exhaust-port a', and a slide-valve having a central port b², a passage b connecting with the central port b² and having its openings at the extreme ends of the valve, a port b⁴ to connect the ends of the low-pressure cylinder with the exhaust-port a' and a port a³ in said slide-valve to feed one end of the high-pressure cylinder, substantially as described. 70

In witness whereof I have hereunto set my hand in presence of two witnesses. 75

HERBERT THOMSON.

Witnesses:

W. STOKES,
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