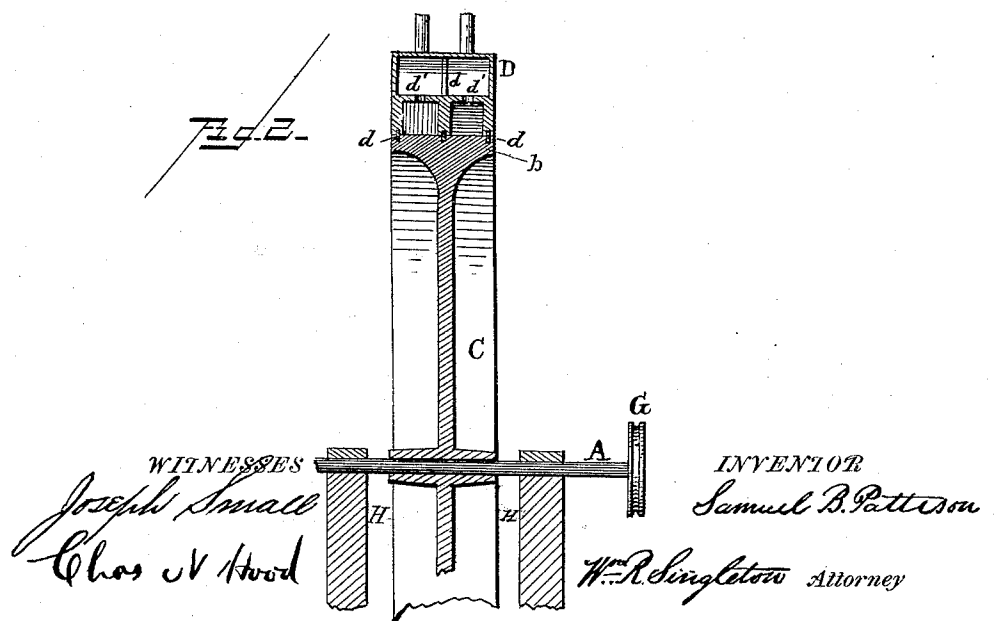
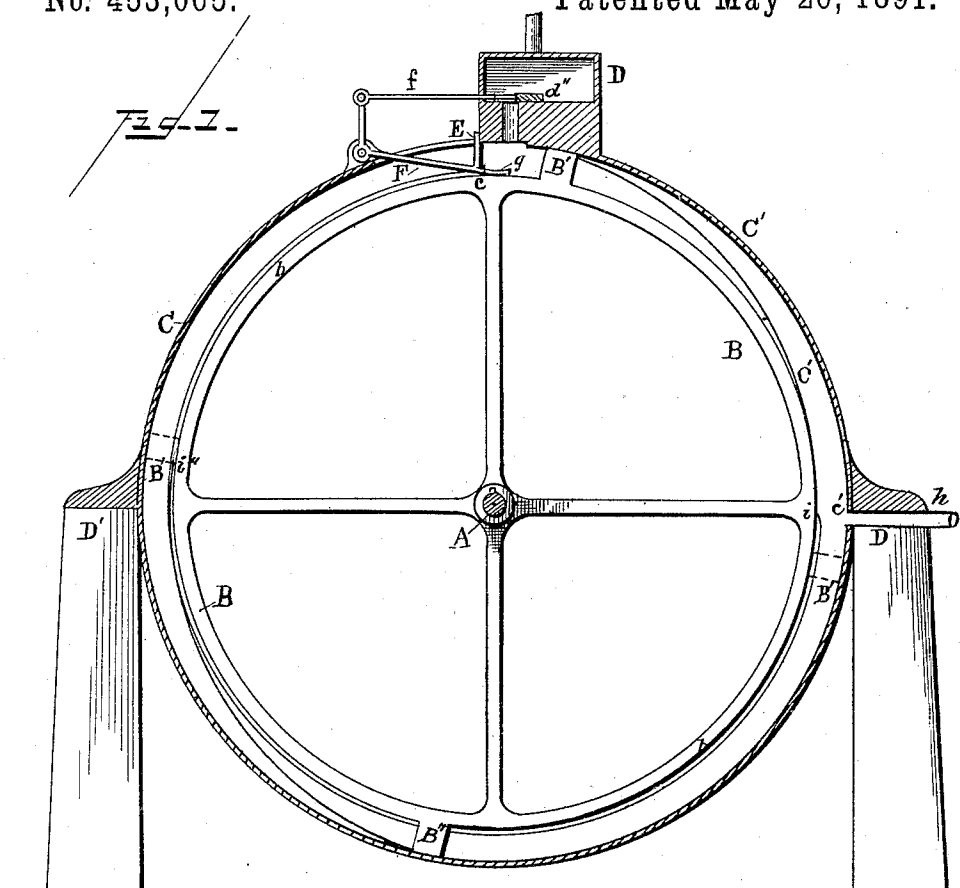


(No Model.)

S. B. PATTESON.
ROTARY STEAM ENGINE.

No. 453,065.

Patented May 26, 1891.



WITNESSES

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SAMUEL B. PATTESON, OF ST. JOSEPH, LOUISIANA.

ROTARY STEAM-ENGINE.

SPECIFICATION forming part of Letters Patent No. 453,065, dated May 26, 1891.

Application filed February 5, 1891. Serial No. 380,234. (No model.)

To all whom it may concern:

Be it known that I, SAMUEL B. PATTESON, a citizen of the United States, residing at St. Joseph, in the parish of Tensas and State of Louisiana, have invented certain new and useful Improvements in Rotary Steam-Engines; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to improvements in rotary steam-engines, which will be hereinafter more particularly described and pointed out.

In the accompanying drawings, forming part of this specification, Figure 1 is a side elevation, partly in section. Fig. 2 is a transverse vertical section.

A is the main shaft, on which is properly secured the wheel B.

The periphery of B is covered by a rectangular cap C, which is supported in any suitable frame D' D'. The cap is made steam-tight for about one-fourth of the circumference from *c* at the top to *c'* on the right of Fig. 1. This may be accomplished by various methods; but I use steel packing-rings *d d'*, as shown in Fig. 2. The periphery *b* of the wheel B is wide enough to have two series of heads B' B'' arranged alternately thereon, as shown in Fig. 1, so that when the steam is not acting on one the other will be acted upon.

On top of the cap C is the steam-chest D, which is divided by a partition *d*. *d' d'* are the inlet-ports, and *d''* the slide-valve.

E is a sliding head to each division of the steam-chest D, which moves vertically by the heads B' as they pass under them. To the sliding heads E are attached the crank-levers F, to which are pivoted the valve-rods *f* and valves *d''*. The heads have a cam shape, extending from the outside at B' to the circumference of the wheel-rim at *i* and from B'' to the rim *i''*. The purpose of this cam-sur-

face is to gradually raise the sliding head E until the head has finally passed from under it.

The cam-surface is so arranged in each engine, when constructed, that the sliding head E will be raised at the proper time to cut off the steam, according to the travel of each head, in connection with the lead of the valve in the steam-chest. Whenever the heads B' pass under the sliding heads E, which have been elevated, the crank-levers F move the sliding valve-rods *f* and close the ports *d* and shut off the steam from the chamber C' of the cap C. On the side of the sliding heads E are projecting plates *g*, the object of which is to cover the under side of the ports *d'*, so that as soon as a head B' has passed from under this plate *g* the steam from the port will immediately force the head down to its normal position. At *h* is the exhaust-pipe for the outlet of the steam from the chamber C'. From *i* around three-quarters of the cap C around to the top at *c* the sides of the cap C do not touch the wheel B to avoid friction.

The cam-surfaces of the heads B' and B'' are narrower than the heads and do not touch the sides of the cap C.

The shaft A can be supported in any suitable frame H, as shown in Fig. 2, and the driving wheels or gears G can be secured.

I claim—

In a rotary steam-engine, the sliding heads E, provided with the projecting plates *g*, in combination with the crank-levers F, sliding valve-rods *f*, valves *d''* of the steam-chest D, and the wheel B, having series of cam-surfaced heads B' B'' alternately arranged on the periphery of steam-chest C, all substantially as and for the purpose described.

In testimony whereof I affix my signature in presence of two witnesses.

S. B. PATTESON.

Witnesses:

THOS. H. YOUNG,
THOS. H. SMITH.