(No Model.)

H. PEAVEY.

ROTARY ENGINE.

No. 263,718. Patented Sept. 5, 1882.

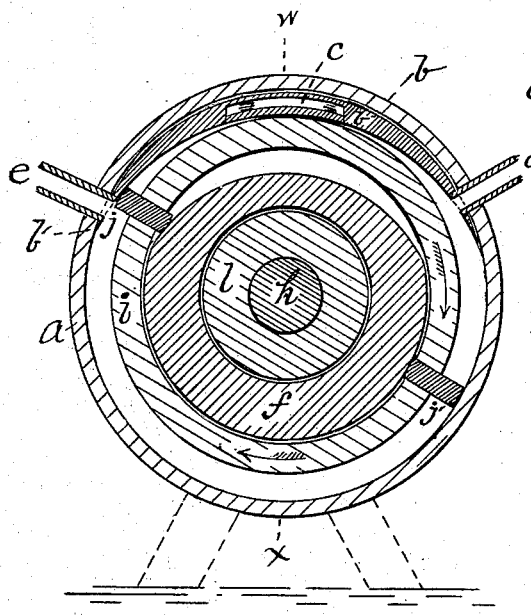

Fig. 1.

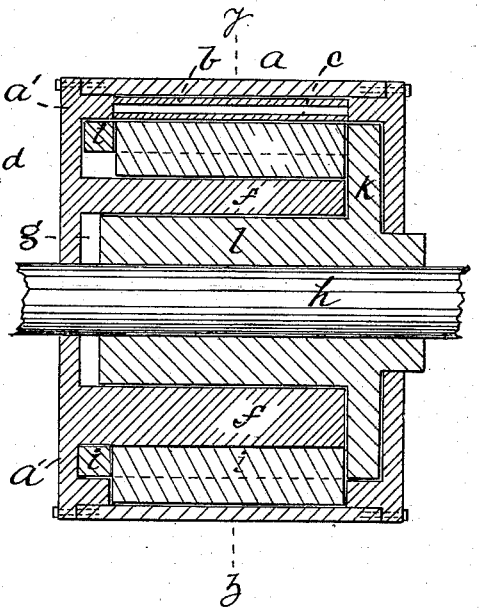

Fig. 2.

Witness

Inventor
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UNITED STATES PATENT OFFICE.

HIRAM PEAVEY, OF BANGOR, MAINE, ASSIGNOR OF ONE-HALF TO FREDERICK F. FRENCH, OF SAME PLACE.

ROTARY ENGINE.

SPECIFICATION forming part of Letters Patent No. 263,718, dated September 5, 1882.

Application filed June 23, 1882. (No model.)

To all whom it may concern:

Be it known that I, HIRAM PEAVEY, of Bangor, in the county of Penobscot and State of Maine, have invented certain new and useful Improvements in Rotary Engines, &c.; and I do hereby declare that the following is a full, clear, and exact description thereof, that will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, forming a part of this specification, in which—

Figure 1 shows a section of my invention through line *w x;* Fig. 2, section through line *y z.*

Same letters show like parts.

My invention consists of an improved rotary engine capable of use with either steam or water power. It will be readily understood by reference to the accompanying drawings, in which at *a* is shown a stationary casing supported upon proper standards. Secured to one of the heads *a'* of this casing, and forming a part thereof, is an abutment, *b*, provided with packing *c* and supply and exhaust ports *d e*, passing through the casing proper, and an eccentric, *f*, as shown, having the circular cavity *g* therein. At *h* is the shaft, having rigidly secured thereto the annular casing *i*, carrying in sockets extending through it the valves *j j'*, and within it, and secured to its head *k*, the hub *l*, forming a part of said casing and the medium by which it is secured to the shaft. This hub *l* fits into the circular cavity *g* in the eccentric *f*, and forms in effect a supplemental journal for said shaft within the body of the casing, having a bearing larger than that of the shaft proper in the heads of the casing, and relieving the latter from wear.

The operation of my engine is as follows: The shaft and attachments rotating in the direction shown by the arrows, as the valve *j* strikes the end of the abutment *b'* the exhaust *e* begins to carry off the steam behind it, the inlet *d* having already begun to supply steam behind the valve *j'*, forcing it forward, and continuing so to do until it in its turn arrives at the point *b'* and exhausts, as before, the valves working by the direct action of the eccentric without the use of steam or springs.

My engine, if desired, may be provided with two abutments *b*, each provided with inlet and exhaust pipes, and with a double eccentric; but I should consider this simply a duplication of parts, and the device shown amply illustrates the principle upon which my invention operates.

It will of course be understood that the various parts of my engine requiring tight joints are to be packed as usual, this being a matter within the knowledge of any mechanic.

My engine may also be used as a pump by applying power to the shaft and utilizing the inlet and exhaust ports to supply and expel the water.

I do not claim the devices shown in the patent of Sickels, No. 18,063, of 1857, which is simply a device for packing, showing none of the peculiar features of my invention; nor do I claim the devices shown in Bennett's patent, No. 135,311, of 1873, in which the pistons or valves are operated by means of a spring without the use of a cam. One of the purposes of my invention is to avoid the use of steam or springs as the actuating-power for the valves or pistons; nor do I claim operating the valves by a cam secured to the side casings of the engine and fitting into notches in the sides of the pistons. My cam forms an integral part of the engine itself, and acts upon the rear edges of the pistons or valves throughout their whole extent, insuring in connection with the abutment their certain and regular action. In addition to this, my cam, through its cavity, secures the enlarged hub on the shaft, contributing greatly to the steadiness and durability of the engine.

What I claim as my invention is—

1. In a rotary engine, the combination, with valves *j j'* and abutment *b*, of an eccentric, *f*, acting on said valves throughout their whole length, and having a cavity, *g*, receiving a hub, *l*, upon the shaft *h*, and serving as a supplemental journal for said shaft within the body of the casing *a*, substantially as described.

2. In a rotary engine, the combination of the casing *a*, having the abutment *b*, provided with the ports *d e*, and the eccentric *f*, with its cavity *g*, forming a part thereof, with the shaft *h*, casing *i*, with its valves *j j'*, and hub *l*, fitting said cavity *g*, rigidly attached to said shaft, substantially as described and shown.

In testimony that I claim the foregoing I have hereunto set my hand this 20th day of June, 1882.

HIRAM PEAVEY.

Witnesses:
F. F. FRENCH,
WM. FRANKLIN SEAVEY.