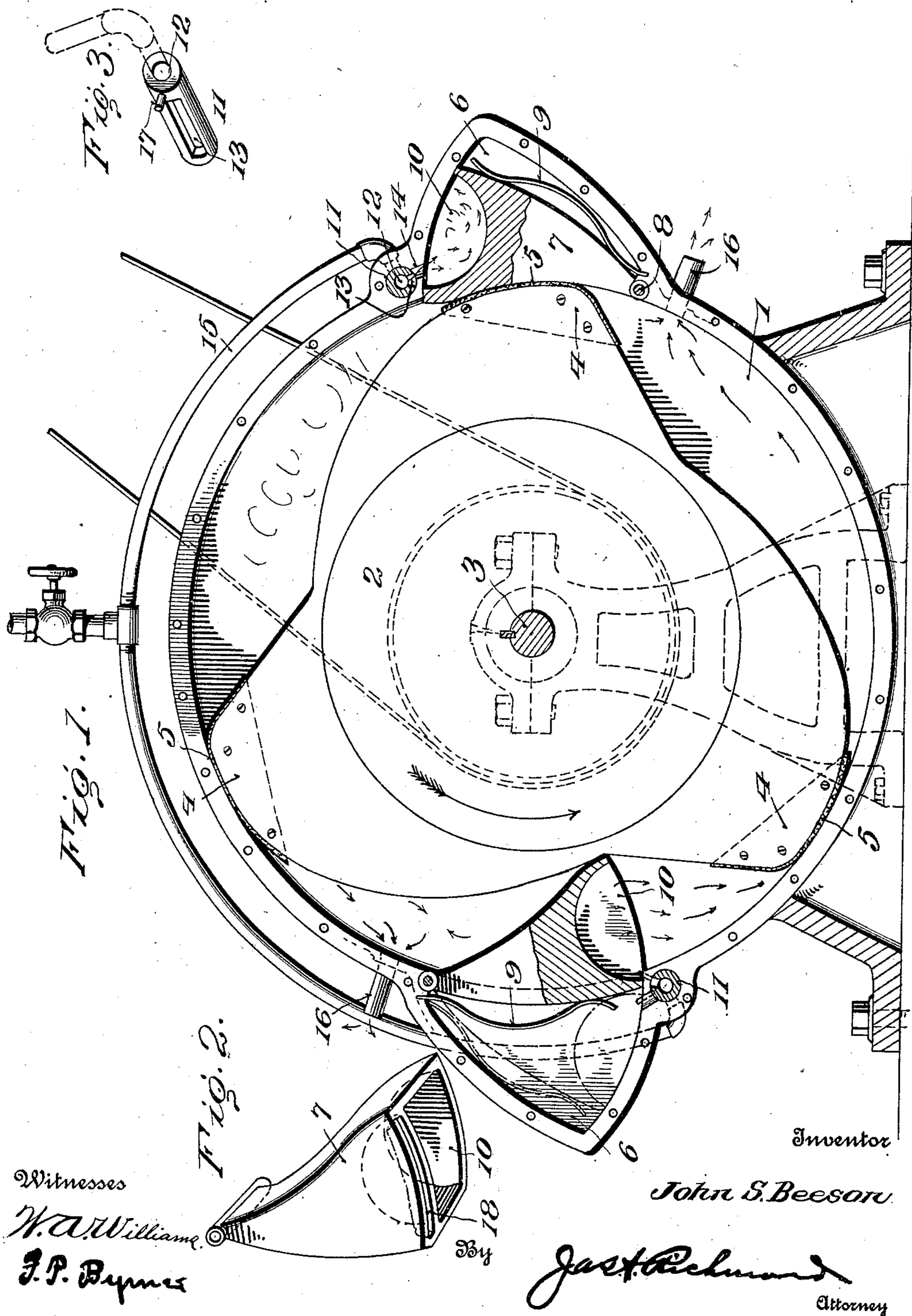


J. S. BEESON.
 ROTARY ENGINE.
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997,895.

Patented July 11, 1911.



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UNITED STATES PATENT OFFICE.

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ROTARY ENGINE.

997,895.

Specification of Letters Patent.

Patented July 11, 1911.

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To all whom it may concern:

Be it known that I, JOHN SCHOOLEY BEESON, a citizen of the United States, and a resident of Iowa City, Johnson county, and State of Iowa, have invented a certain new and useful Rotary Engine, of which the following is a specification.

This invention relates to steam engines of the rotary impact type and the principal object is to provide a comparatively simple and inexpensive construction which will utilize the steam expansively on an efficient and economical basis. With this and other objects in view the nature, characteristic features and scope of the invention will be more readily understood from the following description taken in connection with the accompanying drawing, forming a part hereof, and wherein—

Figure 1, is a view principally in elevation with one of the cylinder heads removed to disclose the motor or piston and the steam admission. Figs. 2 and 3, are details, and are respectively, perspective views of the steam guides and cut-offs.

Referring to the drawings, 1, is a drum or casing, which constitutes the cylinder of the engine, and 2, indicates the rotor or piston, which is mounted on a shaft 3, carried in suitable journals. The piston has three points or heads 4, formed by intermediate depressions and these heads bear against the cylindrical wall of the casing and if desired they may be capped, as at 5, with Babbitt or other antifriction metal.

At diametrically opposed points the cylindrical wall of the casing is formed or provided with chambered offsets or pockets 6, which house or contain what may be termed guides 7. These are of a general wedge form as shown in detail, Fig. 2, and are hinged as at 8, and there are springs 9, back of them which tend to force them toward the piston. The guides or elements 7, may be hollow or provided with a recess or chamber 10, which constitutes a steam space. At 11, are indicated suitable steam admission or cut-off devices. As shown in Fig. 3, they are of general tube-like form with an axial chamber or passage 12, and a side port 13. Said cut-off devices are mounted in the wall of the casing for partial rotation contiguous

the guides 7. There is a duct or passage 14, intermediate the guide and cut-off and when the port 13, is in register with said duct steam will pass into the steam space or chamber 10. Steam enters the cut-off from a valved supply pipe 15, which communicates with the axial bore or passage 12.

At 16, are indicated suitable exhausts, and they are disposed at diametrical points of the casing.

The operation will be largely understood from the foregoing description, but it may be stated that the steam or other motive fluid is admitted and cut-off by the rise and fall of the guides 7. The cut-offs 11, are provided with pins or projections 17, and when the guides reach their highest point they press upon said pin or projection which may work in a slot 18, and shift the cut-off sufficiently to open the port 13. As the guide falls the expansive force of the steam is thrown upon the adjacent head of the piston and utilized to the full.

It will be obvious that various changes may be made without departing from the spirit and scope of the invention. Hence the same is not limited other than required by the prior state of the art.

Having described the nature and objects of my invention, what I claim as new and desire to secure by Letters Patent is:—

The combination of a rotary three-point piston, a drum or casing having oppositely disposed chambered offsets, steam guides hingedly mounted in said offsets and operated in one direction by the piston and in the other direction by springs and whereof each is provided with a slot, steam supply connections, oscillating cut-offs intermediate said connections and guides and having pins which work in said slots whereby the cut-offs are positively operated by the guides, and suitable exhaust connections, substantially as described.

In testimony whereof I have hereunto signed my name in the presence of two subscribing witnesses.

JOHN SCHOOLEY BEESON.

Witnesses:

I. N. BRANT,
W. R. HART.