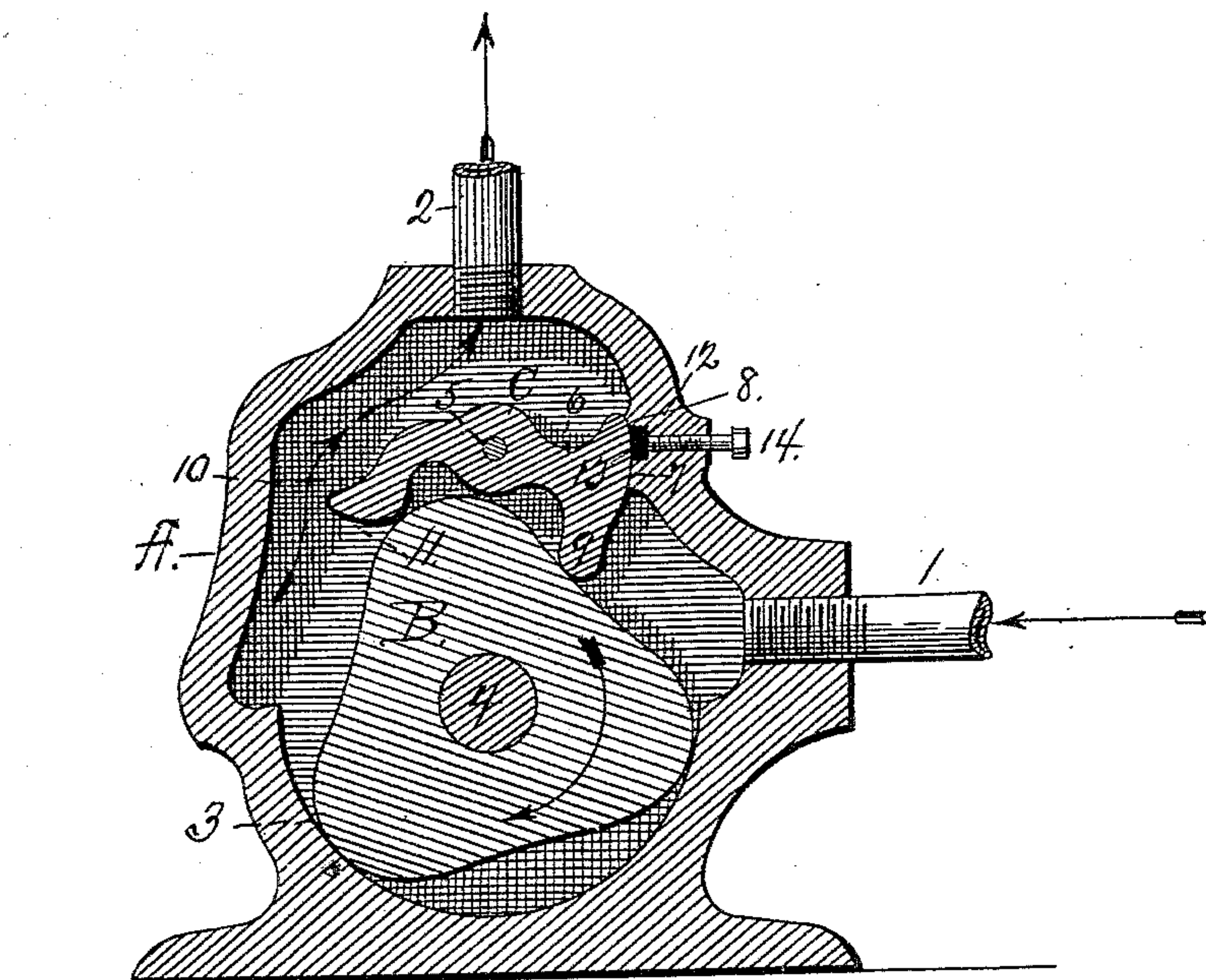


(No Model.)

J. H. PARKER.
ROTARY PUMP.

No. 401,203.

Patented Apr. 9, 1889.



WITNESSES,
F. L. Ourand
S. C. Dallas

INVENTOR
James H. Parker
by *A. G. Heylman*
Attorney

UNITED STATES PATENT OFFICE.

JAMES HENRY PARKER, OF UTICA, NEW YORK.

ROTARY PUMP.

SPECIFICATION forming part of Letters Patent No. 401,203, dated April 9, 1889.

Application filed October 24, 1888. Serial No. 289,056. (No model.)

To all whom it may concern:

Be it known that I, JAMES HENRY PARKER, a citizen of the United States of America, residing at Utica, in the county of Oneida and State of New York, have invented new and useful Improvements in Rotary Pumps, of which the following is a specification.

My invention has relation to improvements in single-piston rotary pumps, and the object is to provide an improved abutment which will be held in position by the movements of the piston and positively adapt itself to the varying contour thereof.

I attain the objects of my invention by means of the mechanism illustrated in the accompanying drawing, wherein is shown a central vertical section of a rotary pump provided with my improved abutment.

Reference being had to the drawing, A designates the casing of the pump, having inlet-port 1 and outlet-port 2. The lower part of the casing is formed a true circle, as at 3, over which the points of the piston traverse, and at the upper portion of the casing is formed the water-chamber, which is divided by the partition formed by the abutment, substantially as shown.

B designates the piston, here shown of a common form, having three bearing-surfaces or sweeping-points. Other forms of pistons well known to the trade may be substituted, and pistons with less than three sweeping-points may be with equal utility used with the abutment. The piston is mounted on a shaft, 4, having the usual bearings in the casing, and to this shaft the power is applied. Neither the bearings nor the power pulley or wheel are shown in the drawing, because they are so common and well-known as to be properly supplied by any one skilled in the trade, and the constructions described are in other respects not new with me.

C designates my improved abutment. This consists of a metal form having the width of the casing and pivotally supported in the casing over the piston, as at 5. The support may be a shaft let through the abutment, or it may be bearing-lugs cast on its side edges. I have shown the shaft as the supporting medium. This abutment is formed with an abutment-head, 6, having its end face or bear-

ing-surface, 7, formed to constitute a section of a circle having the pivotal point of the abutment as its center, and arranged to bear with its end face against a correspondingly-curved surface, 8, formed in the interior of the casing. The lower arm of the head 6 is carried downward and formed to rest on the surface of the piston, as shown at 9. The other part of the abutment constitutes an arm, 10, which is curved downward and formed to rest on the surface of the piston, substantially as shown. This arm has the end extended outward a distance into the water-course, as at 11, which affords a pressure-surface and aids to keep the abutment end tight against the casing and on the piston. This conjunction of the abutment-head with the casing and the piston is, however, positively insured by the action of the piston on the balance-arm 10 and extension 9 of the abutment-head, since the arrangement of the arms of the abutment is such that under any position of the piston in revolution the circumferential line of the surface of the piston bears upward either on the arm or on the extension of the abutment-head, and thus one arm of the abutment compensates for any movement of the other arm or head, which might under other arrangement or form throw the lower part of the abutment-head above the piston-face, and thus permit the escape of water in that direction. From the foregoing it will be seen that the piston cannot be rotated without moving the abutment, so that one of the arms is in contact with the face of the piston and a water-tight joint made and maintained.

In the casing, within the curved surface 8, is formed a packing-seat, 12, in which is packed a suitable bearing material, 13, which is made adjustable by means of adjusting-screws 14, let through the casing to bear with their ends against the packing, as shown. The direction of the rotation of the piston and the course of the water are shown by arrows.

Having thus described the machine, I now proceed to particularly point out and distinctly claim the parts, improvements, and combinations constituting my invention, as follows:

1. The combination, with the casing and pis-

ton of a rotary pump, of the abutment C, pivotally mounted in the casing over the piston, and formed with an arm terminating in a head to set with its end face against the casing, and a downward-extending part to rest on the piston, and an arm, 10, formed to rest on the piston opposite to the abutment-head, substantially as described, and for the purpose specified.

2. The combination, with the casing formed with an abutment bearing-surface having a packing-seat and provided with an adjustable packing arranged in said seat, and the rotary piston, of an abutment, C, pivotally mounted in the casing over the piston, and formed with a head arranged to set with its face end against the abutment bearing-surface of the casing, and said head having a downward-extending arm, 9, and having an arm, 10, to rest on the surface of the piston,

substantially as described, and for the purpose specified.

3. In a rotary pump, an abutment pivotally mounted in the casing over the piston, and formed with an arm terminating in a head arranged to bear with its end surface against the surface of the casing and to rest with its lower end on the surface of the piston, and an arm formed to bear on the piston, said arm having its end extended to project partly across the water-course, substantially as described, and for the purpose set forth.

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

JAMES HENRY PARKER.

Attest:

WILLIAM H. BRIGHT,
JOHN F. REAGAN.