

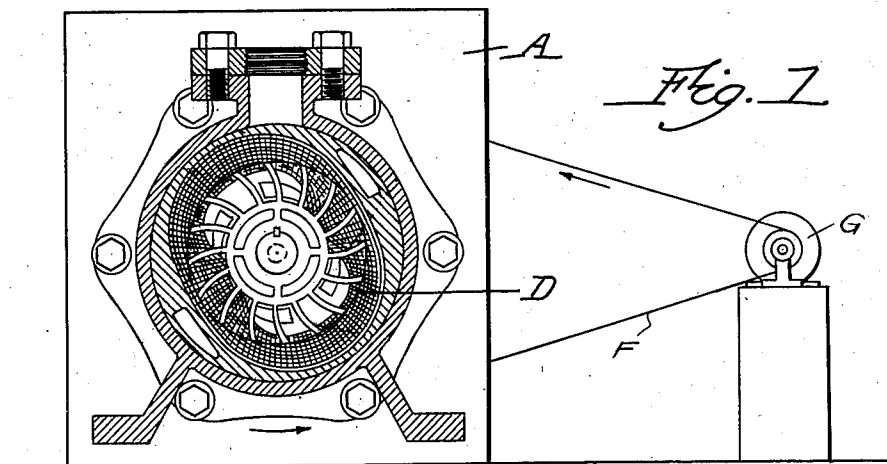
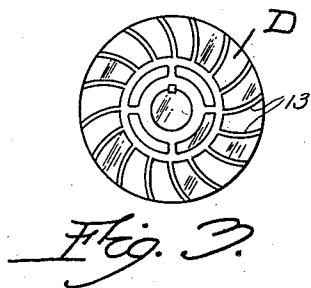
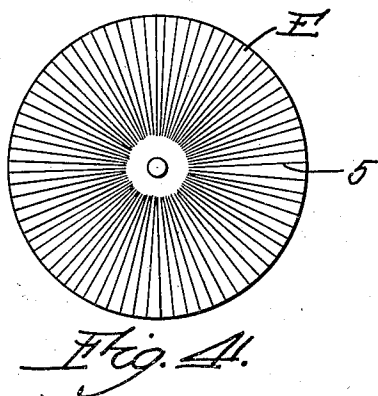
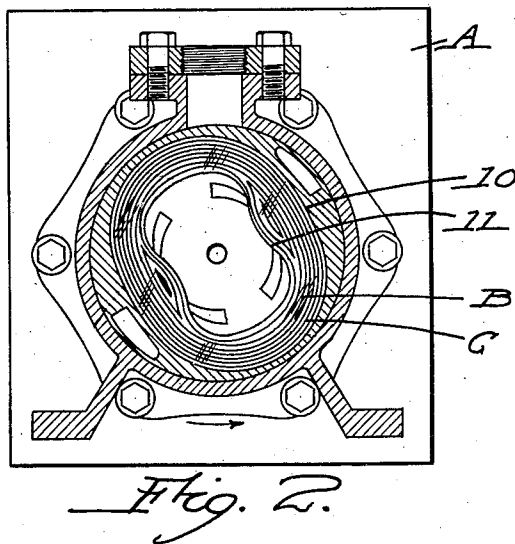
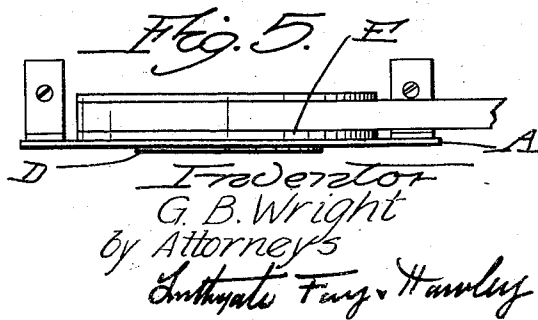
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G. B. WRIGHT

1,639,918

DEVICE FOR ILLUSTRATING THE OPERATION OF ROTARY PUMPS

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UNITED STATES PATENT OFFICE.

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DEVICE FOR ILLUSTRATING THE OPERATION OF ROTARY PUMPS.

Application filed November 19, 1925. Serial No. 70,040.

The object of this invention is to provide an apparatus for graphically representing the action of a rotary pump, particularly the so-called Hytor pump shown in the patent to Irving C. Jennings, March 8, 1919, No. 1,297,692. This pump consists of an elliptical casing provided with suitable ports running in which is a rotor provided with a series of displacement chambers. An operating liquid is placed in this pump. The operation is such that as the rotor turns the liquid will revolve with the rotor and will move in and out in the displacement chambers and act as pistons therein and effect the pumping action.

It has been found difficult to describe the operation of this pump. The especial object of this invention is to illustrate the operation of this particular pump graphically.

The apparatus which I have invented for doing this is illustrated in the accompanying drawing, in which

Fig. 1 is an elevation of an apparatus constructed to embody my invention;

Fig. 2 is an elevation of the back thereof;

Fig. 3 is an elevation of the front rotor;

Fig. 4 is an elevation of the back rotor; and

Fig. 5 is a plan of the device.

Referring to the drawing and in detail, A designates a back plate or board on which is printed or painted the representation of a section of the pump casing. This back is cut away along the lines 10 and 11 so that there will be a slot therein which shows practically the path in which the liquid in the pump travels. This slot or cut away portion is covered by a piece of transparent material B, such as glass or mica, which piece holds the sections together. Lines C parallel to the inside of the casing are preferably drawn on this transparent section to indicate the travel of the water. A rotor D is pivoted on the back A concentrically with the representation of the pump casing. This rotor preferably is made of transparent material such as glass or mica and has the representation of the pump rotor with vanes 10 printed or painted therein. A rear rotor E is connected to the front rotor D so that

the parts D and E can turn together. This back rotor E is made in the form of a pulley which can be driven by a suitable string or belt F from a motor or other driving mechanism G. The back rotor preferably has radial lines 5 thereon. In operation the two rotors are revolved at a slow speed, say less than six to eight turns a minute. As the rotors turn together an optical effect will be produced which will illustrate the entrance and egress of the operating liquid into and out of the displacement chamber which will clearly illustrate the pumping action and the co-operation of the water pistons with the ports. The radial lines 5 on the back rotor E will serve to fix the eye on a particular displacement chamber and in conjunction with the lines C will give a startling graphic representation of the pumping action.

The details and arrangements herein shown and described may be greatly varied by a skilled mechanic without departing from the scope of the invention as expressed in the claims.

Having thus fully described my invention, what I claim and desire to secure by Letters Patent is:—

1. A device for the purpose stated, consisting of a back representing a section of a rotary pump, said back having a cut away portion, a front rotor representing a section of the pump rotor, and a rotor on the rear of the back connected to turn with the front rotor, and having markings to indicate the action of the liquid in a pump.

2. A device for the purpose stated consisting of a back representing a section of a pump and having a cut-away portion covered with a transparency having lines indicating the course of the liquid in the pump, a front rotor representing a section of the pump rotor, and a rotor on the rear of the back connected to turn with the front rotor and visible through said transparency and said cut away portion, and having radial lines co-operating with said transparency and with said front rotor to indicate the action of the liquid in the pump.

3. A device for the purpose stated, con-

sisting of a back representing a section of a rotary pump and having a cut away portion covered with a transparency having lines indicating the course of the liquid in the pump, a transparent front rotor representing a section of the pump rotor, and a rotor on the rear of the back connected to turn with the front rotor and having radial lines which show through said cut away portion of the back and through the pump rotor. 10
In testimony whereof I have hereunto affixed my signature.

GEORGE B. WRIGHT.