

Sweet & Hicks,

Rotary Pump,

No. 37,015.

Patented Nov. 25, 1862.

Fig. 2.

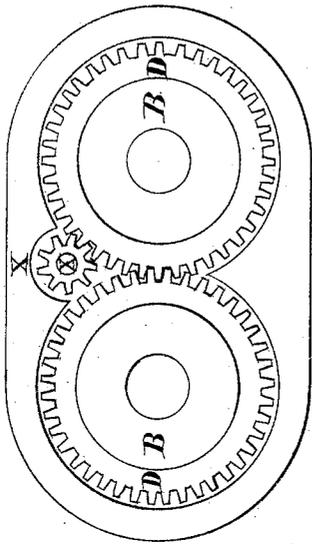


Fig. 4.

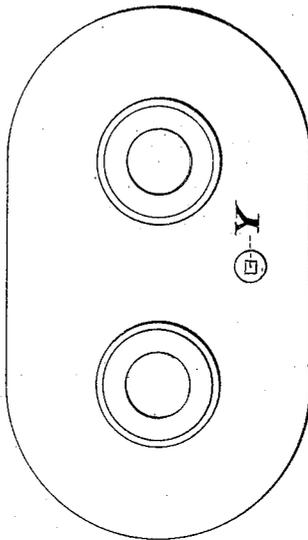


Fig. 1.

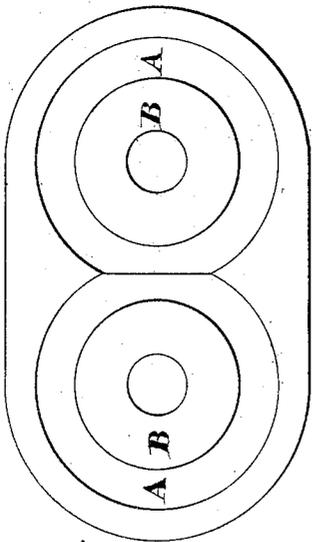
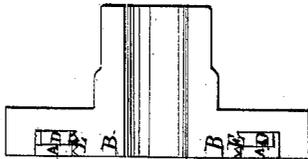


Fig. 3.



Lysander Bennett
James Cook

Witnesses.

Orin Sweet

Merrill C. Hicks

UNITED STATES PATENT OFFICE.

ORIN SWEET AND MERRILL E. HICKS, OF PROVIDENCE, RHODE ISLAND.

IMPROVEMENT IN PACKING FOR ROTARY PUMPS.

Specification forming part of Letters Patent No. **37,015**, dated November 25, 1892.

To all whom it may concern:

Be it known that we, ORIN SWEET and MERRILL E. HICKS, of Providence, county of Providence, and State of Rhode Island, have invented anew and improved packing for engines and pumps and a novel mode of adjusting said packing to keep the engines and pumps water-tight; and we do hereby declare that the following is a full and exact description of the said packing and of the mode of adjusting the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

In the accompanying drawings, Figure 1 is a longitudinal view of the inner surface of the head of an engine, showing the packing-rings. Fig. 2 is a longitudinal view, with the packing-rings removed, showing the arrangement for adjusting the rings. Fig. 3 is a transverse section showing the threads cut upon the hubs upon which work the cog-wheels. Fig. 4 is a reversed longitudinal view showing the shaft which works the small cog.

The nature of our invention consists in inserting two rings of bronze metal into the head of the engine, which has been prepared to receive them, and the arrangement for adjusting the packing. These rings (marked A A in Figs. 1 and 3 of the accompanying drawings) are of bronze metal, ground to fit tightly into the head, and present a smooth surface of harder metal to the surface of the pumps. These rings or packing is adjusted in the following manner: They are fitted upon two cog-wheels, (marked in Figs. 2 and 3 D D,) which

cogs are made to work upon threads E E, in Fig. 3, cut upon the hubs, (marked B B.) Of the threads marked E E in Fig. 3, one is right hand and the other is left hand, thus causing the cog-wheels to move in opposite directions. These cogs (marked in Figs. 2 and 3 D D) are made to revolve by means of a small cog-wheel (marked in Fig. 2 X) which works into one of the large cogs, as is shown in Fig. 2. This small cog is made to move by applying a wrench to a shaft (marked in Fig. 4 Y) running through the small cog and projecting from the outside of the head of the engine or pump, as is shown in Fig. 4. Thus by applying power to the wrench placed upon the shaft Y the small cog X is made to revolve, which causes the large cogs D D to revolve, by means of which the bronze-metal rings are pressed out and forced against the opposing surface of the pump, making them water-tight.

What we claim as our invention, and desire to secure by Letters Patent, is—

The insertion of the bronze-metal rings into the engine-head, and the peculiar mode, by means of the cog-wheels, of adjusting the said rings, which serve as a packing for the pumps or engines, producing the effect of keeping the pumps or engines water-tight.

ORIN SWEET.
MERRILL E. HICKS.

Witnesses:

LYSANDER BENNETT,
JAMES COOK.