J. C. THOMSON.

Vacuum Packer for Oil-Wells.

No. 204,512. Patented June 4, 1878.

Fig. 1.

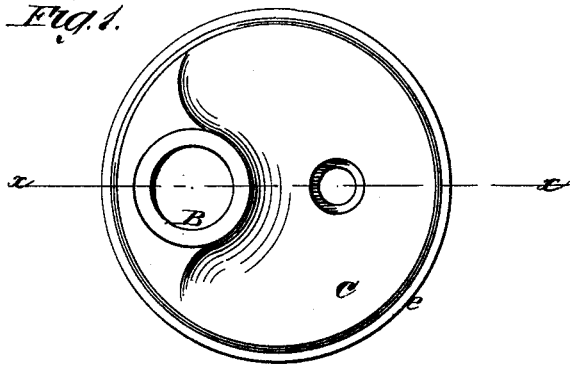
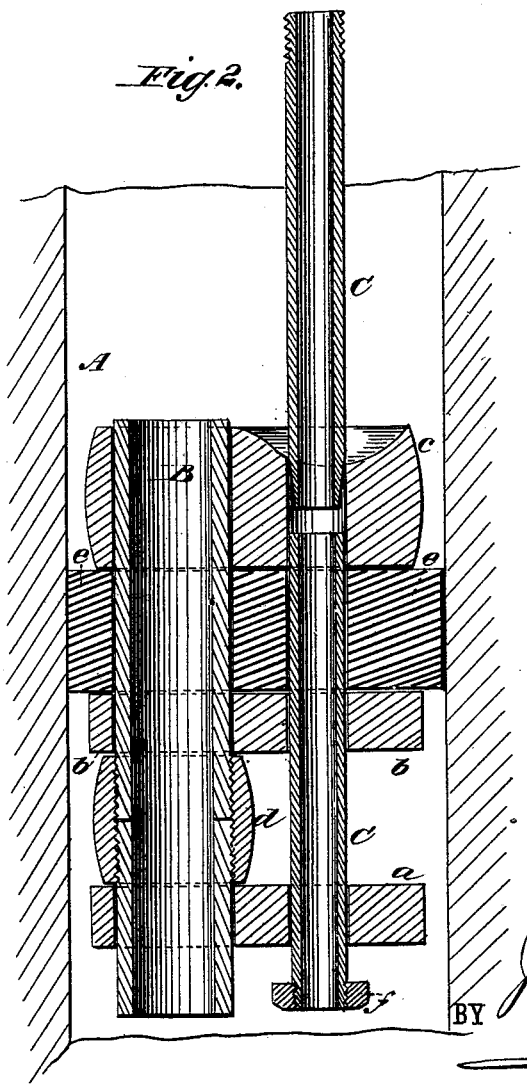


Fig. 2.



WITNESSES:

F. McArdle.

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INVENTOR:

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UNITED STATES PATENT OFFICE.

JAMES C. THOMSON, OF BARNHART'S MILLS, PENNSYLVANIA.

IMPROVEMENT IN VACUUM-PACKERS FOR OIL-WELLS.

Specification forming part of Letters Patent No. **204,512**, dated June 4, 1878; application filed March 15, 1878.

To all whom it may concern:

Be it known that I, JAMES C. THOMSON, of Barnhart's Mills, in the county of Butler and State of Pennsylvania, have invented a new and Improved Vacuum-Packer for Oil-Wells, of which the following is a specification:

Figure 1 is a plan view. Fig. 2 is a vertical section.

Similar letters of reference indicate corresponding parts.

The object of my invention is to provide an easily-operated and reliable packing device for shutting off communication between the upper strata of rock and the oil-bearing rock; and it consists of three apertured metallic disks placed on the well-tubing, and arranged to receive the vacuum-tube, which, by its weight, compresses a rubber packing-disk vertically, so as to expand it laterally to fill the bore of the well.

Referring to the drawing, A represents the well. B is the well-tube, which is suspended from the casing-head in the usual way. Upon the tube are placed three apertured metallic disks, *a b c*, which are smaller in diameter than the well.

The lower disk *a* is placed below the pipe-coupling *d*. The middle disk *b* is placed just above the coupling, and between the upper disk *c* and the middle disk *b* there is a thick rubber packing-disk, *e*. This disk and the three metallic disks *a b c* are apertured to receive the vacuum-tube C, which is made in two parts, the lower part passing upward through the lower disk *a*, middle disk *b*, and rubber packing-disk *e* into the upper disk *c*.

The upper surface of the upper disk *c* is concaved or countersunk around the vacuum-tube aperture, to guide the upper section of the vacuum-tube to its seat in the disk. The lower end of the upper section of the vacuum-tube C is made conical, and is ground into the aperture in the upper disk *c*.

Upon the lower end of the lower section of the tube C there is a collar, *f*, which prevents the tube from being drawn upward through the lower disk *a*, and, being screwed into the upper disk, it prevents the packing device from being drawn up with the vacuum-tube, and also insures the lifting of the whole of the packing device when the well-tube is removed from the well. The weight of the vacuum-tube is sufficient to compress the rubber packing-disk *e*, so as to expand it laterally against the sides of the well.

When the well-tube is to be taken up, the vacuum-pipe is first taken from the well. This releases the packing-disk *e*, and the packing device may be drawn up together with the tube.

The vacuum-tube C may be employed to convey benzine to the bottom of the well.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. The combination of the apertured disks *a b c*, the elastic packing-disk *e*, and the vacuum-tube C, substantially as herein shown and described.

2. The combination, with tubes B C, of the disk *a*, placed above collar *f* and below the coupling *d*, as and for the purpose set forth.

JAMES C. THOMSON.

Witnesses:

W. G. DUFFIELD,

GEO. B. MORGAN.