

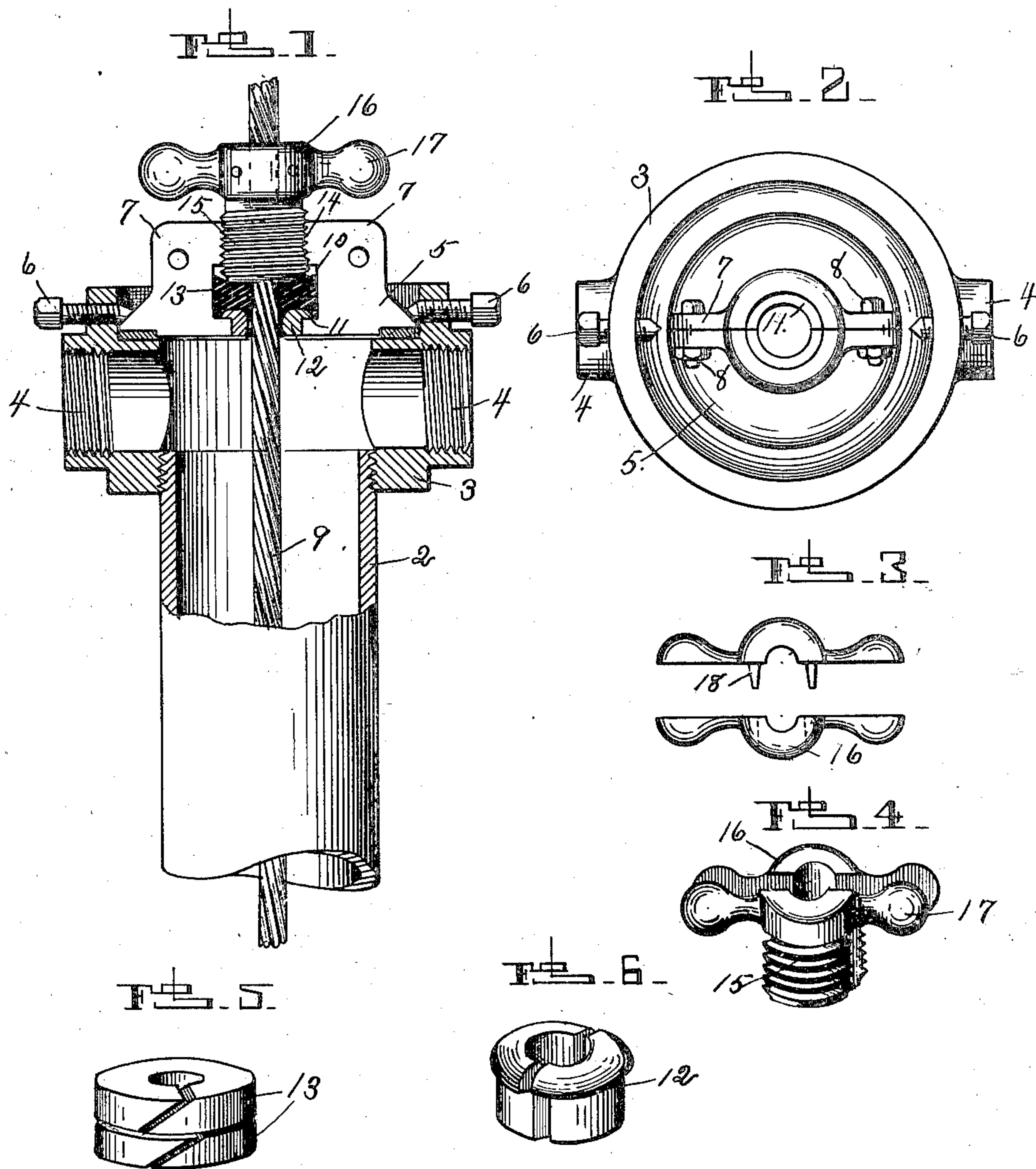
No. 696,747.

Patented Apr. 1, 1902.

C. F. RIGBY.  
OIL SAVER.

(Application filed Mar. 16, 1901.)

(No Model.)



WITNESSES.

J. R. Keller.  
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# UNITED STATES PATENT OFFICE.

CLARK F. RIGBY, OF MANNINGTON, WEST VIRGINIA.

## OIL-SAVER.

SPECIFICATION forming part of Letters Patent No. 696,747, dated April 1, 1902.

Application filed March 16, 1901. Serial No. 51,511. (No model.)

*To all whom it may concern:*

Be it known that I, CLARK F. RIGBY, a citizen of the United States, residing at Mannington, in the county of Marion and State of West Virginia, have invented new and useful Improvements in Oil-Savers, of which the following is a specification.

This invention relates to devices for saving oil which may begin to flow from a well before the drilling has been completed.

Oil-savers as now constructed consist in part of a tube or barrel through which the drilling-cable works, the tube extending through a stuffing-box carried by the casing-head. As soon as oil begins to flow the cable is secured by packing or by other means to the tube or barrel, causing the latter to reciprocate with the cable and preventing the escape of oil. The tube is objectionable for the reason that the cable must be cut in order to apply or remove the saver and for the further reason that it adds cost and weight to the appliance.

The primary object of the present invention is to dispense with the tube or barrel and to provide a saver which may be applied to or removed from a cable without manipulation of the latter.

The invention consists in the novel structural features and combination of parts hereinafter fully described and claimed, and illustrated by the accompanying drawings, wherein—

Figure 1 is a view, partly in elevation and partly in vertical section, of my improvement in operative position on a casing-head. Fig. 2 is a plan view of the same with the compression-screw removed. Figs. 3 and 4 are detail views of the screw. Fig. 5 is a similar view of one of the packing-rings, while Fig. 6 is a like view of the bushing.

Referring to the drawings, 2 is the casing, and 3 the casing-head, having the usual discharge-pipe connections 4. The cap 5, which is confined in the head 3 by screws 6, is made in two like parts, having apertured flanges 7 at the top to receive securing-bolts 8. This two-part cap is centrally apertured to pass the drilling-cable 9, and this aperture is countersunk at 10 to form a seat 11 for the two-part steel bushing 12. Adapted to rest on this bushing are the split rubber washers 13, two

or more of which may be used, countersunk depression 10 being of sufficient length to receive the washers or rings. Above said depression the rope or cable passage is threaded at 14 to receive the lower threaded portion 15 of the vertically-divided screw 16, formed with operating-handles 17.

To position the oil-saver, the two-part cap 5 is first secured in position in the casing-head and its parts united by bolts 8. The two-part bushing 12 is then dropped to position on seat 11 and the split rubber rings are sprung onto the cable and forced into the cap depression immediately over said bushing. The two-part screw 16 is then put together around the cable, dowel-pins 18 holding the parts in proper relation, and screwed into threaded aperture 14 of the cap. Normally the cable reciprocates freely through the bushing, the rubber rings, and the screw-head. When, however, it is desired to prevent the flow of oil, the screw is run down onto the rubber rings, expanding them transversely by the vertical pressure and causing them to fill countersunk depression 10 and close tightly around the cable, so that while the latter reciprocates therethrough oil is prevented from flowing out around the cable. The oil forms a lubricant and prevents wearing of the rings.

When the oil-saver is placed in position on the casing-head before the flow begins, screw 16 is relaxed, so that the cable reciprocates therethrough unimpeded, the steel bushing saving the parts above from wear. The operation of drilling may proceed, however, up to the time the flow begins without attaching the saver, as the latter, being in sections, may be quickly placed in position.

While my improvement is designed with special reference to the requirements attending the use of wire drilling-cables, it may be used with equally good results on the Manila cables.

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

1. The combination of a vertically-divided casing-closure formed with a vertical passage contracted below its upper end to form a packing-abutment, and a vertically-divided packing-compressing device vertically ad-



justable in the upper portion of the closure-passage, said device being formed with a cableway, substantially as shown and described.

2. The combination of a vertically-divided casing-closure having a central cable-passage, said passage being contracted at its lower end and threaded at its upper end, compressible material surrounding the cable immediately above the contracted lower portion of said cable-passage, and a vertically-divided screw operative in the threaded upper end of the passage for compressing said material and expanding it laterally, substantially as shown and described.

3. The combination of a casing-head, the vertically-divided casing-cap having a cable-passage, said passage being threaded at its

upper end, a vertically-divided bushing in the lower end of the passage, compressible material surrounding the cable and resting on the bushing, and the vertically-divided and vertically-apertured screw operative in the threaded upper portion of the cable-passage for compressing said material and causing it to expand laterally, substantially as shown and described.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

CLARK F. RIGBY.

Witnesses:

JAMES M. TETRICK,  
HERSCHEL H. RAY.