

(No Model.)

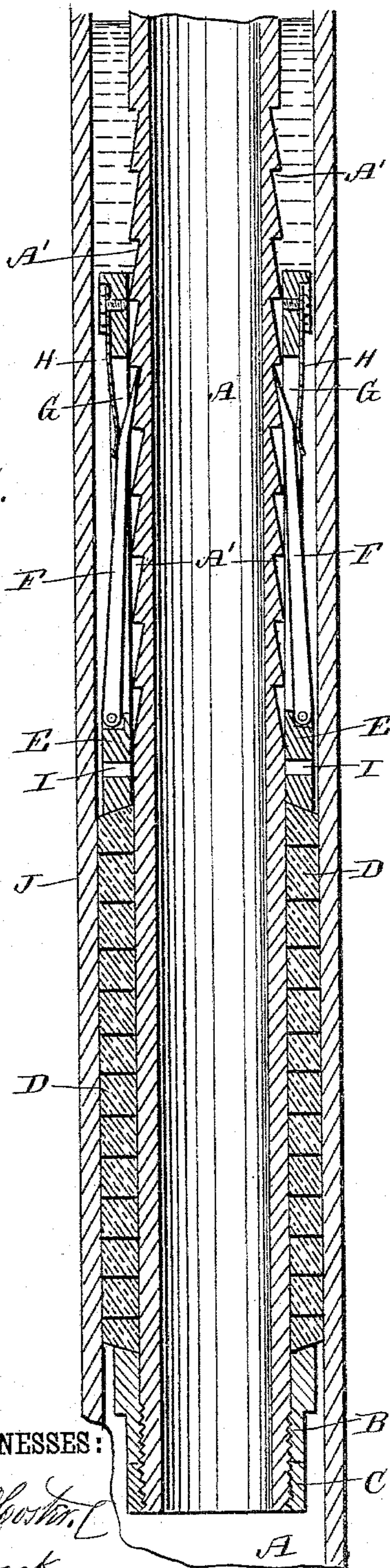
E. P. LANDAS.

PLUNGER FOR OIL WELL PUMPS.

No. 356,946.

Patented Feb. 1, 1887.

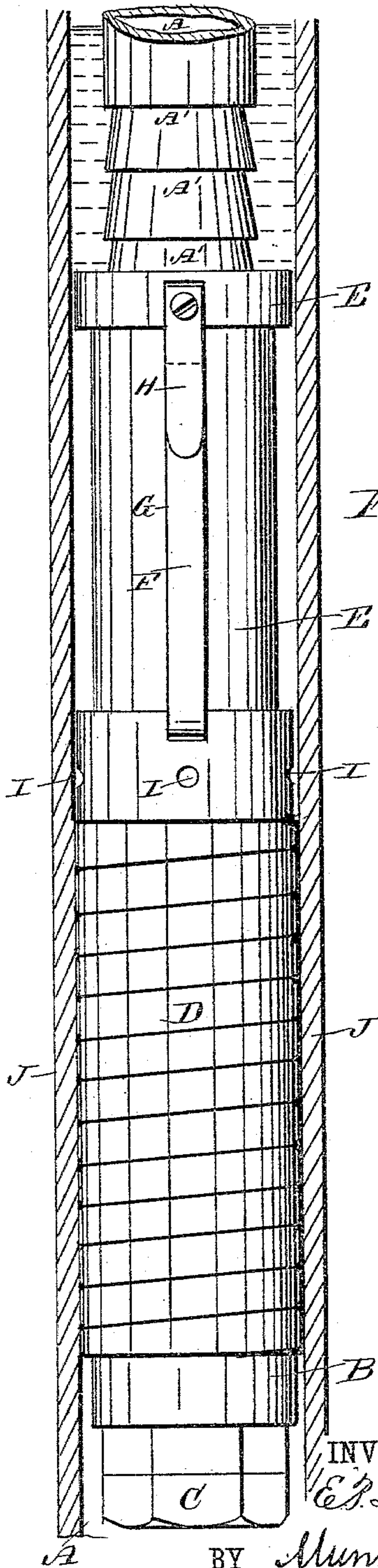
Fig. 1.



WITNESSES:

Thos. H. Foster,
C. Sedgwick

Fig. 2.



INVENTOR:

E. P. Landas

BY *Munn & Co*

ATTORNEYS.

UNITED STATES PATENT OFFICE.

EDWARD P. LANDAS, OF TITUSVILLE, PENNSYLVANIA, ASSIGNOR TO
CLARENCE L. LANDAS, OF SAME PLACE.

PLUNGER FOR OIL-WELL PUMPS.

SPECIFICATION forming part of Letters Patent No. 356,946, dated February 1, 1887.

Application filed May 15, 1886. Serial No. 202,272. (No model.)

To all whom it may concern:

Be it known that I, EDWARD P. LANDAS, of Titusville, in the county of Crawford, and the State of Pennsylvania, have invented a new and Improved Plunger for Oil-Well Pumps, of which the following is a full, clear, and exact description.

The object of my invention is to provide a new and improved plunger for oil-well pumps, which is an improvement on the invention set forth in my application for Letters Patent filed of even date herewith, Serial No. 202,271, and marked "Case B."

The invention consists of a central tube having annular recesses, of a packing placed around the central tube and held in place at the bottom by a screw-cap, of a sleeve adapted to slide on the central tube, and of a spring-pawl pivoted to the sleeve and engaging with the annular recesses in the central tube.

The invention also consists of various parts and details and combinations of the same, as hereinafter more fully described, and pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in both the figures.

Figure 1 is a central sectional elevation of my improvement, and Fig. 2 is a side elevation of the same with the well-pipe in section.

In the invention above referred to I employ a sleeve which slides freely on the central tube and rests with its lower end on the packing coiled on the central tube.

In my present invention I provide means to prevent an upward motion of the sliding sleeve on the central tube.

The central tube, A, is provided on its lower end with the screw-cap B, held in place by the jam-nut C. Around the tube A is coiled or wound the packing D, of suitable material, preferably soapstone, resting with its lower end on the upper edge of the screw-cap B. The soapstone packing is purchasable in the market. It consists of a tube of cotton or other suitable fabric filled with pulverized soapstone. The tubes are made of any required length, and the soapstone is so packed in them as to impart any desired cross-section. Instead of using a screw-cap, any other

device may be used for the same purpose—such as a collar or pin fastened to the lower end of the central tube, A.

On the upper end of the packing D rests the sleeve or follower E, fitted to slide on the central tube, A, which is provided with a number of annular exterior recesses, A', which engage with the pawls F, pivoted on the sleeve E, and operating in recesses G, formed on the sleeve E. Each of the pawls F engages with its free end an annular recess, A', in the tube A by a spring, H, secured to the sleeve E. The lower end of the sleeve E is provided with a number of apertures, I. The sleeve or follower E is a trifle less in diameter than the inside of the well tube or pipe J in which the plunger operates.

The upper end of the central tube, A, is provided with the usual valve.

It will be seen that the weight of the fluid in the pipe J has the tendency to press the sleeve E downward and onto the packing D, so that the wear on the latter is constantly taken up by the downward movement of the sleeve E. The sleeve E is prevented from moving upward by the pawls F engaging the annular recesses A' in the tube A; but it can slide downward on the tube A, according to the wear on the packing D, the pawls F always engaging the next annular recess A' and thereby preventing the upward movement of the sleeve E.

The grit which penetrates between the tube A and the sleeve E passes out through the apertures I, near the lower end of the sleeve E.

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

1. In a plunger for oil-well pumps, a central tube and a packing coiled on the said tube and held in place on its lower end by a screw cap or collar, in combination with a sleeve having a free downward motion on the said central tube, and a pawl adapted to engage with said tube, substantially as described, to prevent an upward motion of the said sleeve on the central tube, as set forth.

2. In a plunger for oil-well pumps, a central tube having annular recesses and a packing coiled on the said tube and held in place on its lower end by a screw cap or collar, in

combination with a sleeve sliding on the central tube, and a spring-pawl pivoted to the sleeve and engaging the annular recesses in the central tube, substantially as shown and described.

3. In a plunger for oil-well pumps, the central tube, A, having the annular recesses A', the cap B, and the packing D, in combination, with the sleeve E and the spring-pawls F, engaging the annular recesses A' of the tube A, substantially as shown and described.

4. In a plunger for oil-well pumps, the cen-

tral tube, A, having the annular recesses A', the cap B, and the packing D, in combination with the sleeve E, having the apertures I and the recesses G, the pawls F, pivoted on the sleeve E, and the springs H, fastened to the sleeve E and holding the pawls F in contact with the annular recesses A' of the central tube, A, substantially as shown and described.

EDWARD P. LANDAS.

Witnesses:

THEO. G. HOSTER,
EDGAR TATE.