

(No Model.)

E. J. LITTLE.
Casing for Oil Wells.

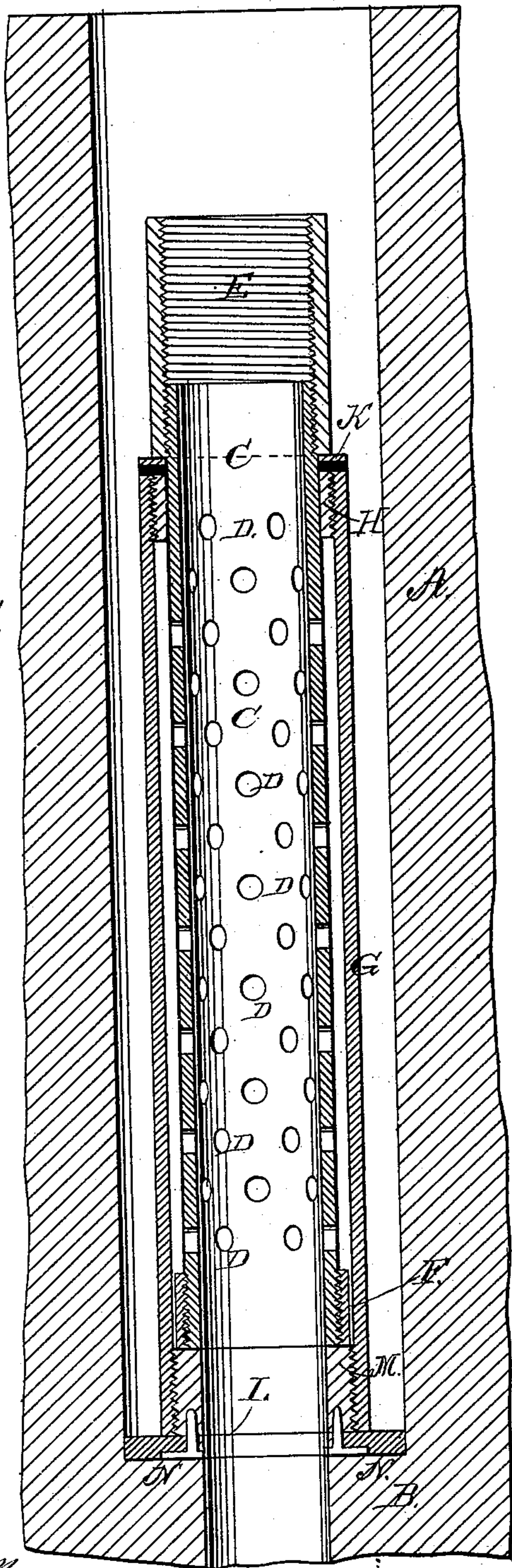
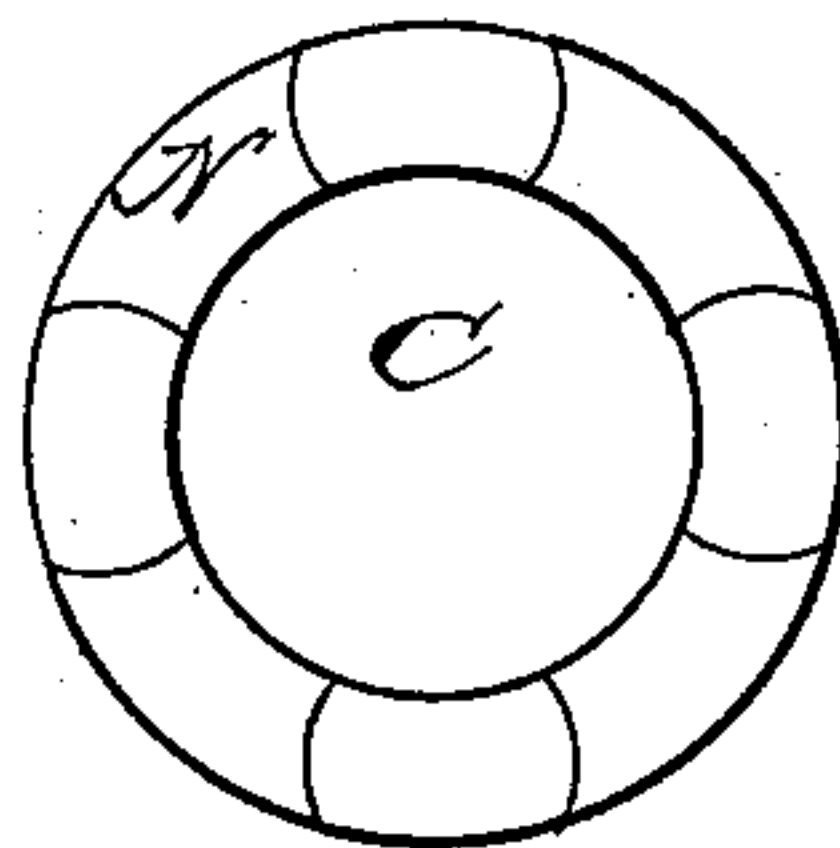
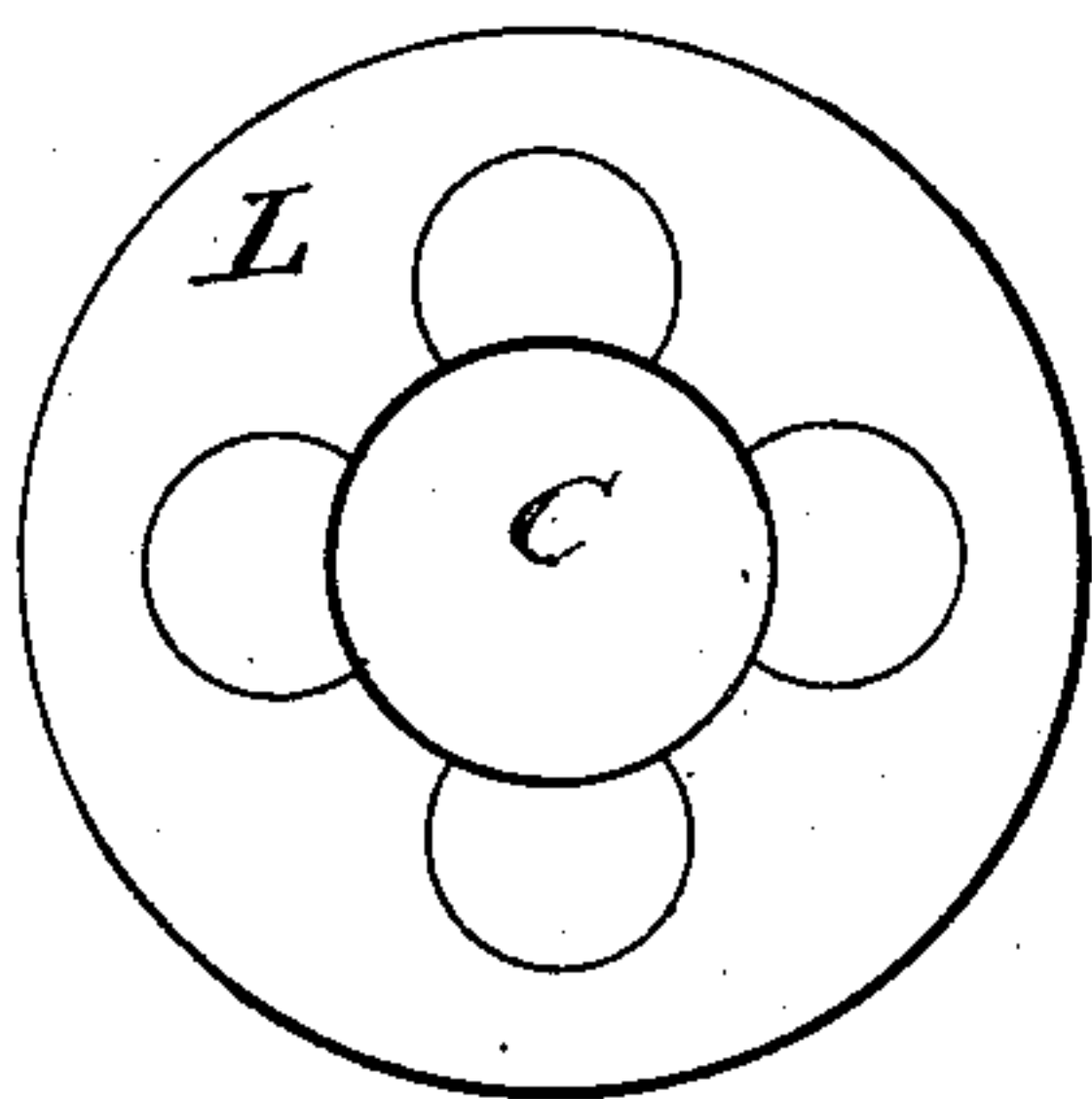
No. 234,995.

Patented Nov. 30, 1880.

Fig. 1.

Fig. 2.

Fig. 3.



WITNESSES
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UNITED STATES PATENT OFFICE.

EUGENE J. LITTLE, OF EDENBURG, PENNSYLVANIA.

CASING FOR OIL-WELLS.

SPECIFICATION forming part of Letters Patent No. 234,995, dated November 30, 1880.

Application filed April 24, 1880. (No model.)

To all whom it may concern:

Be it known that I, EUGENE J. LITTLE, of Edensburg, in the county of Clarion and State of Pennsylvania, have invented a new and valuable Improvement in Casings for Oil-Wells; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawings is a representation of a vertical central section of my casing for oil-wells, and Figs. 2 and 3 are, respectively, bottom and top views thereof.

This invention has relation to improvements in the casings of oil-wells; and it consists in the construction and novel arrangement of the perforated lower section of the casing, the inclosing-sleeve in which it slides, the packings at the ends of the sleeve, and the bearing-collars or projections of the sleeve and sliding section, forming jarring devices, all as hereinafter fully shown and described.

In the accompanying drawings, the letter A designates the upper portion of the well-wall, in which the casing is placed before boring into the oil-bearing rock below, (indicated at B.) C represents the lower casing-section, having openings or perforations D in its sides, and connected to the casing above it by means of a coupling, E. At its lower lower end this casing-section C is provided with an exterior collar, F. G indicates an outer sleeve-casing, which is designed to surround the section C, above mentioned, inclosing the same in an air-tight manner. In order to accomplish this the upper end of the sleeve G is provided with an internal collar or lining piece, H, and with a packing-ring, K, of copper and rubber or other suitable material, which is secured to the end of said sleeve, and extends to the wall of the casing-section C, forming a close joint therewith.

The lining-collar H forms a support for the packing against the weight of the casing above, and at the same time serves as a connecting-

shoulder for engagement with the external collar, F, of the section C, when it is desired to remove the casing out of the well. The lower end of the sleeve G is also provided with a stout packing, L, and with an interior collar or rim lining, M, to which it is secured, and which serves as a lower bearing, pressing the packing against the ledge N, on which the casing rests, and thereby forming a close joint.

When the casing is in place the sliding section C is entirely within the sleeve-section G, and by the packings K and L close joints are made, so that no water or sediment can enter from the space between the well-wall and the casing. Therefore the boring and other operations which are carried on after the casing has been placed will not be interfered with by such an inflow. But when it is desired to remove the casing—usually a very difficult operation, owing to the packing of the sediment or “drillings” around its lower section and the weight of the water-column above—the sliding section C is raised, and its openings allow the water and sediment to flow down into the well-boring below.

In order to dislodge the sleeve from the hardened sediment the casing is alternately raised and lowered, and the jars or blows of the bearing-collars F and H serve effectively in loosening the sediment around the sleeve, so that it can be withdrawn with the casing.

Having described this invention, what I claim, and desire to secure by Letters Patent, is—

The combination, with the perforated casing-section C, of the inclosing-sleeve G, the packing-rings K and L at the ends of said sleeve, and the inner and outer bearing-collars, H and F, respectively, of the sleeve and casing section, forming jarring projections, substantially as specified.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

EUGENE J. LITTLE.

Witnesses:

ANSELL O. BENJAMIN,
WM. HILL.