

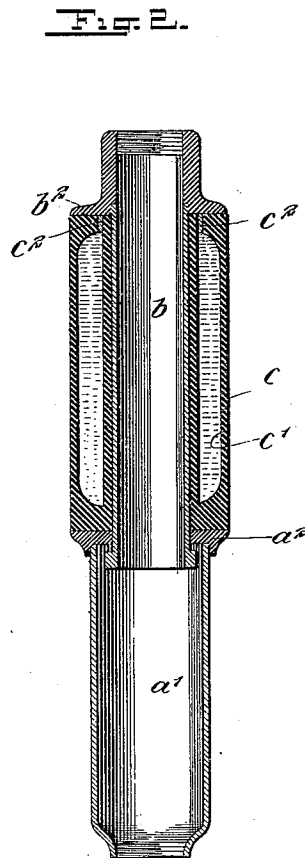
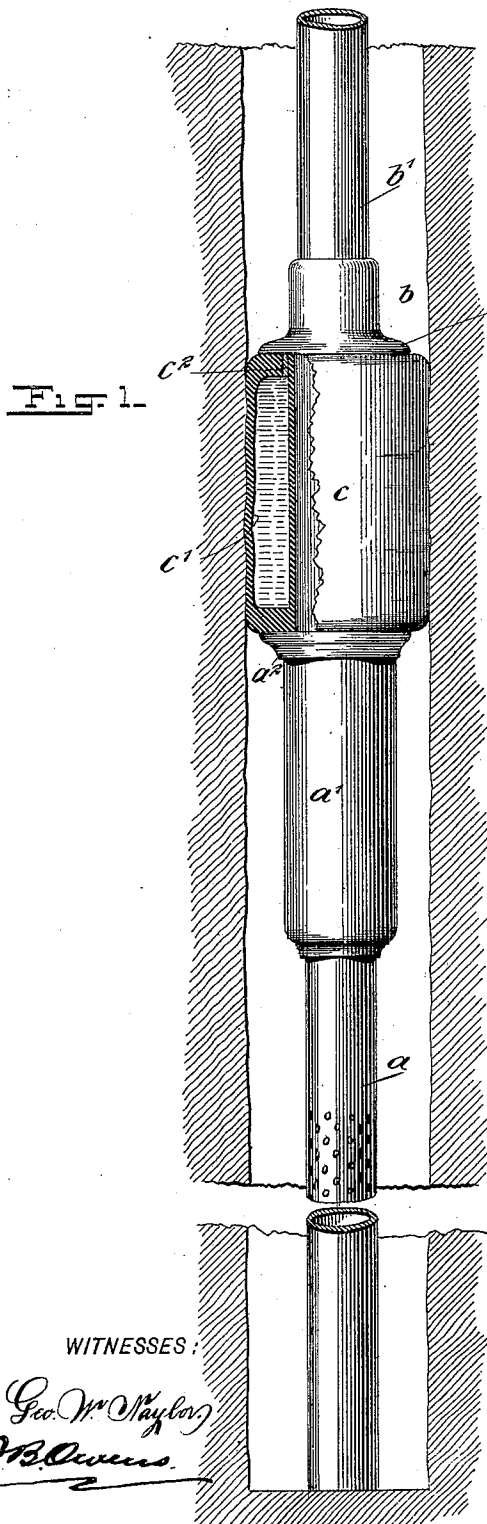
No. 666,541.

Patented Jan. 22, 1901.

F. J. MOSER.
WELL PACKER.

(Application filed Feb. 23, 1900.)

(No Model.)



WITNESSES:

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UNITED STATES PATENT OFFICE.

FRED JOSEPH MOSER, OF KANE, PENNSYLVANIA.

WELL-PACKER.

SPECIFICATION forming part of Letters Patent No. 666,541, dated January 22, 1901.

Application filed February 23, 1900. Serial No. 6,268. (No model.)

To all whom it may concern:

Be it known that I, FRED JOSEPH MOSER, a citizen of the United States, and a resident of Kane, in the county of McKean and State of Pennsylvania, have invented a new and Improved Well-Packer, of which the following is a full, clear, and exact description.

The purpose of this invention is to provide a packer for oil, gas, and other drilled wells, which may be applied to a well effectively to close the same. Heretofore, owing to the great pressure of the product of the well and the unevenness of the walls of wells, a great disadvantage has been experienced in packing them. According to my invention an annular packing-tube of rubber or other flexible material is employed and formed with a chamber therein extending completely around it. When this chamber is filled with a fluid, pressure on the end of the tube will be evenly distributed around all the sides of the tube and the tube caused to expand against the walls of the well, adapting itself to the inequalities therein and effectively sealing it.

This specification is the disclosure of one form of my invention, while the claim defines the actual scope thereof.

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

Figure 1 is a view of the invention in use, showing the packer partly in section; and Fig. 2 is a detail sectional view of the device.

According to the usual method the tube *a*, Fig. 1, is placed in the well and rested on the bottom thereof and carries at its upper end an extension *a'* of increased diameter, with a flat ring *a²* at its top. Into this extension *a'* of the tube *a* a tube *b* slides, such tube having connection with the main tube *b'*, Fig. 1, which carries off the product of the well, such product passing through the tubes *a*, *a'*, and *b*, as will be understood. A packing-tube *c* is carried removably on the tube *b*, and when in place the tube *c* is engaged by a collar *b²*, formed on the tube *b*, so as to press downward the packing-tube. The packing-tube is formed, preferably, of rubber and has an annular chamber *c'* produced therein, such chamber occupying the major portion of the length of the tube and extending com-

pletely around it. The tube *c* is formed in its upper end with one or more orifices *c²*, permitting the chamber *c'* to be filled with a fluid of any sort. Water is preferable; but it is clear that other fluids, not excepting air, may be used instead.

When the several parts are let down into the well, as shown in Fig. 1, the weight of the tubes *b* and *b'* will be communicated to the packing-tube *c* through the medium of the collar *b²*, and this tube will be caused to bulge outward, pressing it flexibly against the walls of the well to effectively close the space between the tube *b* and the side walls of the well. This forces the product of the well to pass into the tube *a* and out through the tubes *b* and *b'*. The effectiveness of the packer is due to the formation of the chamber *c'* therein, which enables the packer to be filled with a fluid, so that the pressure on the tube is evenly distributed at points around the circumference thereof, such pressure being transmitted by the fluid, as will be understood. This construction also facilitates the adaptation of the tube to the irregular form of the wall of the well, which is essential to the effective packing thereof. When the packing-tube is filled with the fluid used, the orifices *c²* should be plugged or closed in any desired manner, so as to prevent the escape of the fluid.

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

As a new article of manufacture, a well-packing, consisting of an elastic tube having inner and outer concentric and spaced walls forming an annular fluid-chamber within the tube, and provided with thickened ends, through one of which leads a filling-opening adapted to be closed after the chamber has been filled, the inner wall of the tube being adapted to fit snugly throughout its length upon a pipe, as set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

FRED JOSEPH MOSER.

Witnesses:

E. C. ANDERSEN,
A. P. HUEY.