No. 871,258. PATENTED NOV. 19, 1907.

J. M. CRISWELL.

WELL TUBING.

APPLICATION FILED APR. 30, 1907.

Fig. 1.

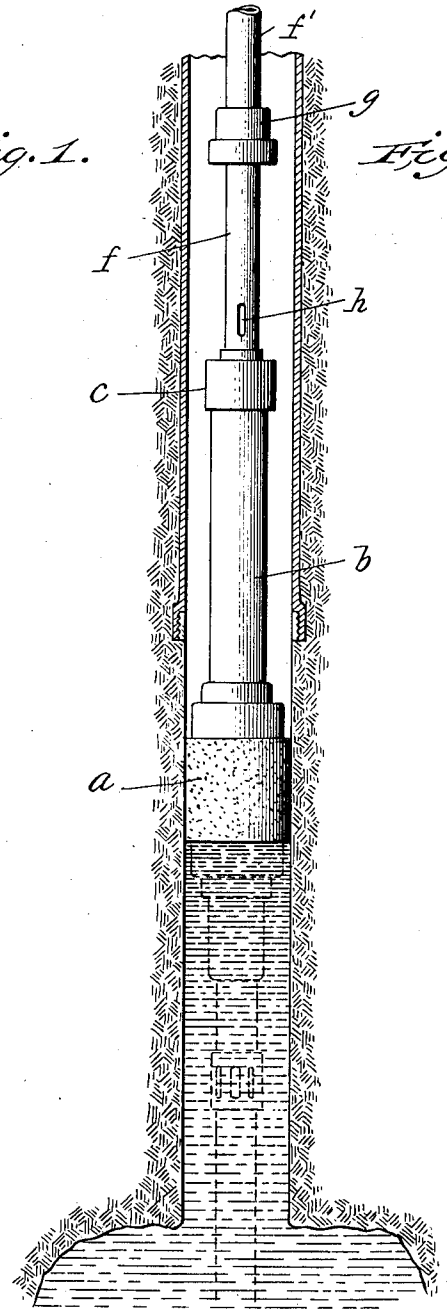
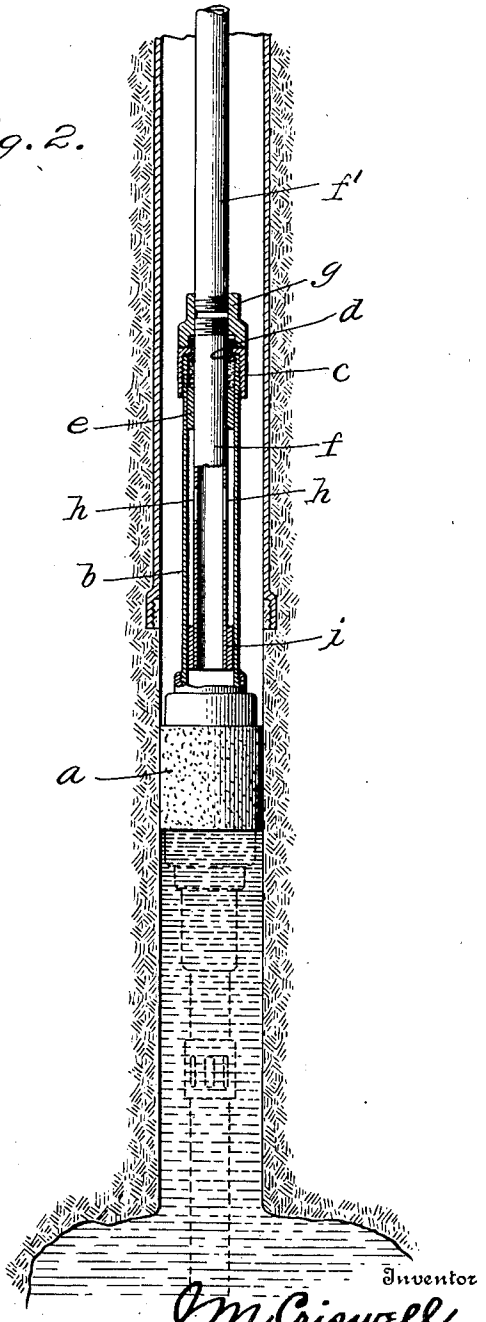


Fig. 2.



Witnesses

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WELL-TUBING.

No. 871,258. Specification of Letters Patent. Patented Nov. 19, 1907.

Application filed April 30, 1907. Serial No. 371,046.

To all whom it may concern:

Be it known that I, JAMES M. CRISWELL, a citizen of the United States of America, and resident of Pullman, county of Ritchie, State of West Virginia, have invented certain new and useful Improvements in Well-Tubing, of which the following is a full and clear specification, reference being had to the accompanying drawing, in which—

Figure 1 is a vertical section of the lower end of a tube well showing the well tube apparatus in side elevation, the exit tube being drawn up to permit the escape of water which may have accumulated in the well above the packer; and Fig. 2 a similar view showing the telescoping tubes in vertical section, the exit tube being pushed down to its normal position.

The object of this invention is to provide such a connection between the discharge tube and the packer tube as to permit the water accumulated above the packer and exterior to the discharge tube to be readily taken off, so that the packer may be removed with greater ease; and another object is to so construct the apparatus that should the packer be stuck it may be loosened by jarring, as more fully hereinafter set forth.

Referring to the drawings by reference letters, *a* designates a packer of the usual construction to which is connected an up-standing packer tube *b* which has screwed on its upper end an exterior cap *c* which holds in place the gland *d* of the stuffing box formed within the upper end of the tube *b* by means of said gland and a collar *e* affixed to the interior of tube *b* at a suitable point below the gland, the intermediate space being filled with a suitable packing. Working through said packing box is an extension *f* of the discharge tube *f'*, this extension being connected with the main discharge tube *f''* by an exterior coupling *g*. This coupling or collar is located at such a distance from the lower end of the discharge tube that when the tube is pushed down to its lowermost position its collar rests upon the cap *c*. When in that position the lower end of the extension of the discharge tube terminates just above the packer. The lower end of tube *f''* is provided with an exterior enlargement or collar *i'* which when the tube is drawn upward to its uppermost limit as shown in Fig. 1 strikes against the collar *e*. When thus drawn up one or more openings *h* in the extension *f* are brought to a point above the stuffing box when put into communication with the well space above the packer, thus permitting water and sediment that may have accumulated above the packer to be drawn off.

Should the packer stick fast in the bore of the well it may be loosened preparatory to removing the tubing by quickly lifting the main part of the tubing so as to obtain a forcible impact of the collar *i* against the fixed abutment collar *e*, as is obvious.

It will be observed that when the packer is pushed down into place all the thrust is taken up by the collar *g* bearing against the cap *d*, this cap thereby affording a protection to the gland of the stuffing box and serving to limit the downward movement of the extension tube into the packer tube. As will be observed also the upper jar or impact collar *e* serves as the bottom flange of the packing box.

As a whole the apparatus, it will be observed, is exceedingly compact and strong and will thus be exceedingly unlikely to become deranged.

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

1. In an apparatus of the class set forth, a packer having an upstanding tube connected thereto, a stuffing box within the upper end of the tube, a fixed jar head or collar on the interior of the tube near its upper end, this jar head forming the bottom of the stuffing box, and a discharge tube having a perforated extension, said extension depending slidably through said stuffing box into said packer tube and provided at its lower end with an exterior jar head or collar, for the purposes set forth.

2. In an apparatus of the class set forth, a packer having an upstanding tube connected thereto, a stuffing box within the upper end of the tube, a fixed jar head or collar on the interior of the tube near its upper end, this jar head forming the bottom of the stuffing

box; and a discharge tube having a perforated extension, said extension depending slidably through said stuffing box into said packer tube and provided at its lower end with an exterior jar head or collar, said discharge tube being provided with an exterior stop collar at a point above the stuffing box, for the purpose set forth.

In testimony whereof I hereunto affix my signature in the presence of two witnesses this 26th day of April 1907.

JAMES M. CRISWELL.

Witnesses:
C. H. BROADWATER,
T. E. CLOOIS.