

No. 661,591.

Patented Nov. 13, 1900.

J. M. STUKES.

PUMP STRAINER.

(Application filed July 19, 1900.)

(No Model.)

Fig. 1.

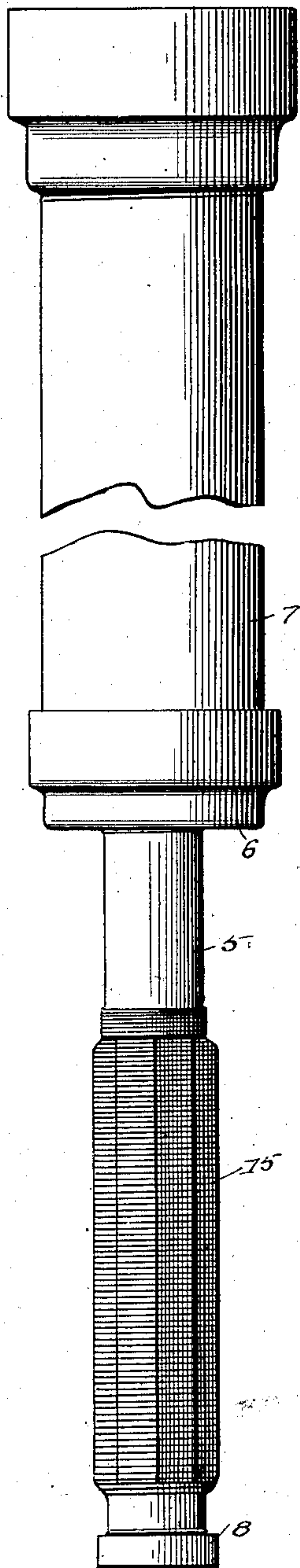


Fig. 2.

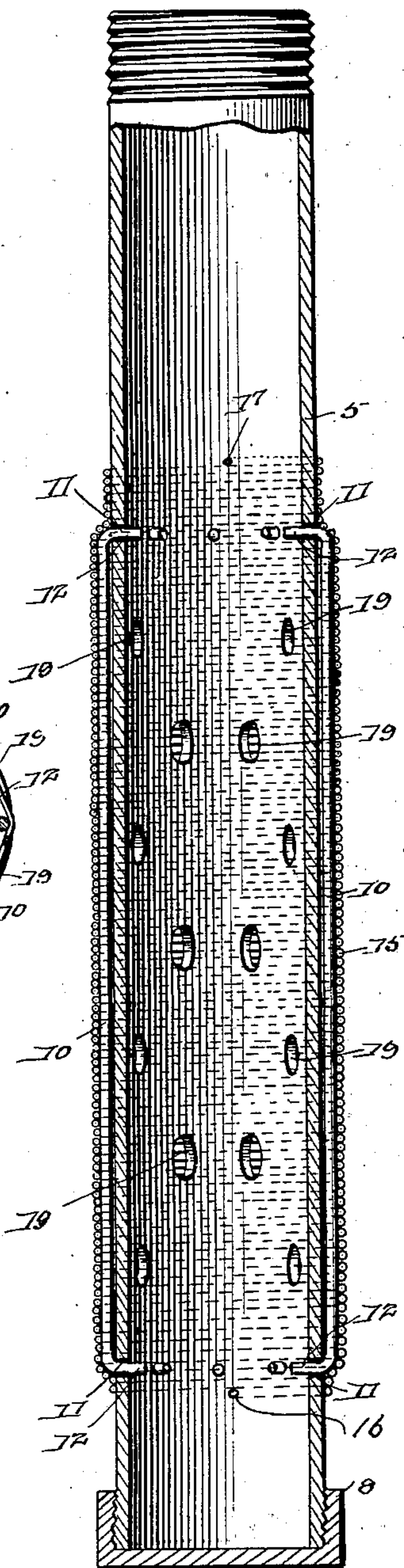
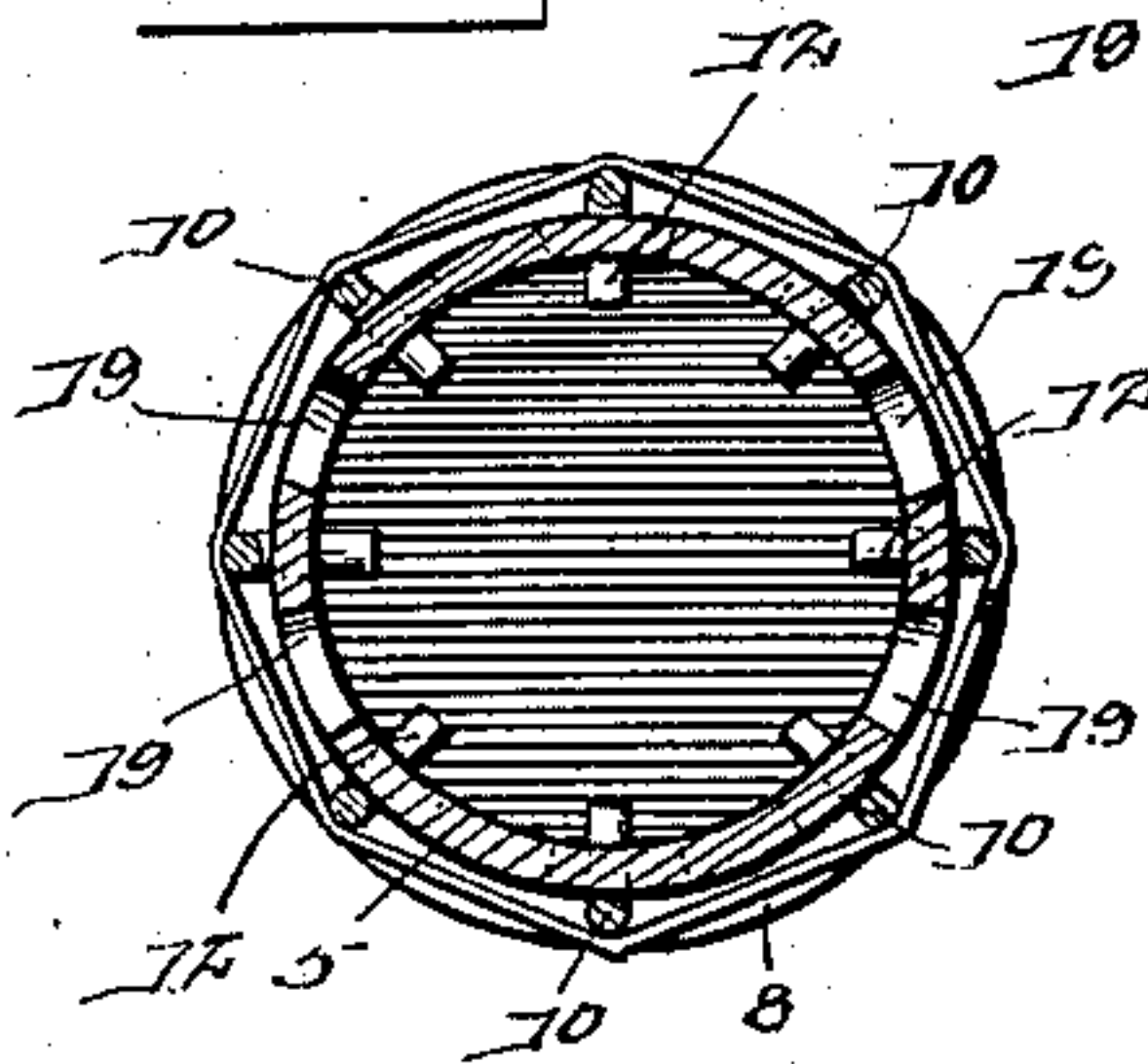


Fig. 3.



Witnesses

F. E. Alder.

Geo. H. Chandler.

J. M. Stukes Inventor

By C. A. Snow & Co.  
Attorneys



# UNITED STATES PATENT OFFICE.

JOHN MARION STUKES, OF SNYDER, TEXAS.

## PUMP-STRAINER.

SPECIFICATION forming part of Letters Patent No. 661,591, dated November 13, 1900.

Application filed July 19, 1900. Serial No. 24,237. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN MARION STUKES, a citizen of the United States, residing at Snyder, in the county of Scurry and State of Texas, have invented a new and useful Pump-Strainer, of which the following is a specification.

This invention relates to pumps in general, and more particularly to that class designed for lifting liquids from wells, and it has specific reference to strainers for pumps, one object of the invention being to provide a simple, cheap, and efficient construction which will be effective in excluding sand and other foreign matter which has the effect of locking the pump-valve, wearing the movable parts, and otherwise injuring or interfering with the parts of the pump.

Further objects of the invention will be evident from the following description.

In the drawings forming a portion of this specification, and in which like numerals of reference indicate similar parts in the several views, Figure 1 is an elevation showing the lower end of a pump-barrel and illustrating the strainer attached thereto. Fig. 2 is a central vertical section of the strainer, the upper end of the tubular core being shown in elevation. Fig. 3 is a transverse section taken through the strainer and its tubular core.

Referring now to the drawings, the strainer comprises a tubular core 5, the upper end of which is threaded for engagement with the reducing-coupling 6 at the lower end of the pump-barrel 7, while the lower end of the core is also threaded for engagement of a cap 8, which acts to close the pump-strainer at its lower end.

The strainer proper consists of a helical winding of wire about the core and spaced therefrom, and this wire is wound upon spacing bars or bridges. In the drawings the spacing bars are shown at 10 and have their ends bent at right angles to the central portions of the bars and in the same direction, these spacing-bars being disposed upon the outer surface of the tubular core and extending longitudinally thereof, the ends of the bars being engaged with perforations 11 in the core, said ends, as shown at 12, projecting into the core to an extent sufficient to pre-

vent accidental displacement of the bars which are spaced equidistant about the periphery of the core.

A wire 15, of brass or other suitable non-corrosive material, has one end engaged in a perforation 16 below the lower ends of the bars 10, and above this perforation the wire is wound upon the core and then up and over the ends of the bars 10, the winding being then continued round and round the core and over the bars until the bars are completely incased in a helix of wire. The winding of the wire is continued over and beyond the upper ends of the bars 10 and upon the core 5, and the upper end of the wire is engaged with a perforation 17 in the core. The core has thus an encircling helix of wire extending throughout a portion of its length and inclosing an interspace or chamber between it and the core, and this chamber communicates with the interior of the core through perforations 19, formed in the core. The several convolutions of the helix are of course separated by slight interspaces, which permit ingress of water, but prevent passage of sand and other large particles into the chamber between the helix and core, and in order to hold the wire in proper position upon the spacing-bars they are soldered above the bars. Solder is also preferably applied to the wire at the ends of the spacing-bars to hold the convolutions thereof against the in-turned ends of the bars. With this construction it will be seen that there is provided an effective strainer and one that is simple, cheap, and durable, and, furthermore, that in the manufacture of the strainer the spacing of the convolutions of the helix may be varied as desired to secure the best results under different conditions.

It will be understood that in practice various modifications of the specific construction shown may be made and that any suitable materials and proportions may be used for the various parts without departing from the spirit of the invention.

What is claimed is—

1. A strainer for pumps comprising a hollow core, spacing-bars disposed longitudinally of the core and upon its outer surface, a wire helix wound over the spacing-bars and in-



closing a chamber between it and the core, and openings in the core connecting the chamber and the interior of the core, said wire being continued inwardly over the ends of the bars and upon the body of the core to form closures for the ends of the chamber, and attached to the body.

2. A strainer comprising a hollow core having a closed end and adapted for attachment at its opposite end to a pump-barrel, spacing-bars disposed upon the outer surface of the core and longitudinally thereof and having inturned ends engaged with the core, a helix of wire wound upon the bars and inclosing a chamber between it and the core, and openings in the core connecting the chamber and the interior of the core.

3. A strainer comprising a hollow core, spacing-bars disposed upon the outer surface of the core, a wire wound over the core and resting upon the bars to inclose a chamber between the wire and core, and openings in the core connecting the chamber and the interior of the core, said wire being continued inwardly over the ends of the bars and upon the body of the core to form closures for the

ends of the chamber, and attached to the body.

4. A strainer comprising a hollow core having perforations therein, bars having their ends bent laterally and engaged with the perforations, a helix wound upon the bars and inclosing a chamber between the helix and core, and openings in the core connecting the chamber with the inclosure of the core.

5. A strainer comprising a hollow core having perforations therein, bars disposed longitudinally of the outer surface of the core and having their ends bent laterally and engaged with the perforations, and a wire helix wound upon the spacing-bars to inclose a chamber between the helix and the core, said core having openings connecting the chamber with the interior of the core.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

JOHN MARION STUKES.

Witnesses:

M. G. BUCHANAN,  
PETER SMYTHE.