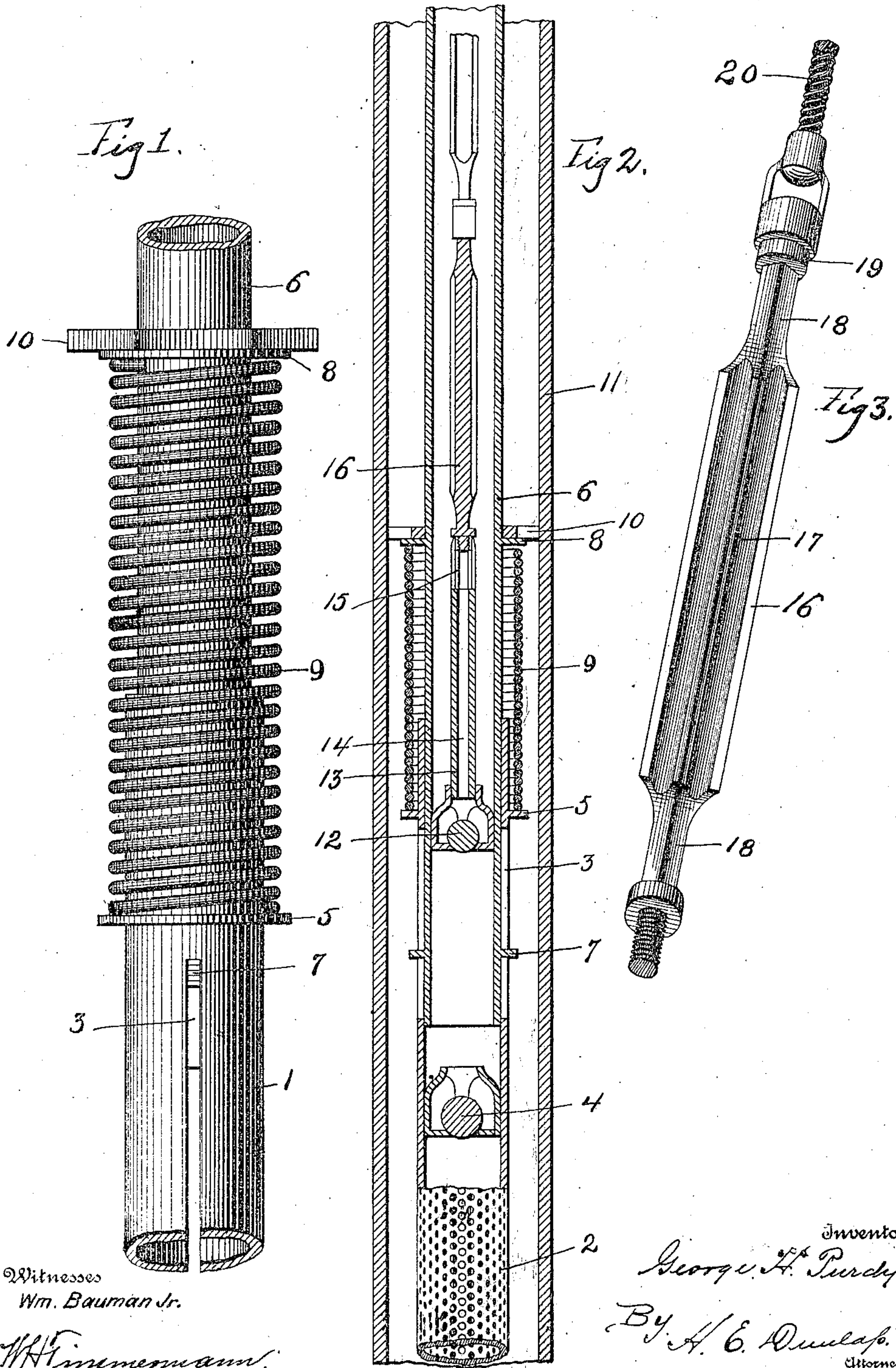


G. H. PURDY.
DEVICE FOR PUMPING OIL WELLS.

(Application filed Jan. 26, 1898.)

(No Model.)



Witnesses
Wm. Bauman Jr.
W. H. Finckmann.

Inventor
George H. Purdy
By A. C. Dunlap.
Attorney

UNITED STATES PATENT OFFICE.

GEORGE H. PURDY, OF WITTENS, OHIO.

DEVICE FOR PUMPING OIL-WELLS.

SPECIFICATION forming part of Letters Patent No. 617,770, dated January 17, 1899.

Application filed January 26, 1898. Serial No. 668,056. (No model.)

To all whom it may concern:

Be it known that I, GEORGE H. PURDY, a citizen of the United States of America, residing at Wittens, in the county of Monroe and State of Ohio, have invented certain new and useful Improvements in Devices for Pumping Oil-Wells, of which the following is a specification, reference being had therein to the accompanying drawings.

10 This invention relates to improvements in tubing for oil-wells, and has for its object to splice the lower section thereof, that a yielding connection may result, thus reducing the liability of breaking.

15 In the construction now employed the entire weight of the tubing is supported from the top of the casing, and great difficulty is experienced in getting tubing that will withstand the enormous strain without breaking.

20 A still further object of my invention is to provide a tubing that will be simple of construction, strong, durable, and comparatively inexpensive to manufacture.

25 In describing the invention in detail reference is had to the accompanying drawings, forming a part of this specification, wherein like figures of reference indicate similar parts through the several views, in which—

30 Figure 1 is a section in elevation of my improved tubing. Fig. 2 is a longitudinal sectional view of the casing, tubing, and valves. Fig. 3 is a perspective view of one of a series of rods which is to be substituted for the ordinary rope.

35 Referring to the drawings, 1 indicates the anchor, which is provided with perforations 2 in its lower end. Said anchor is provided with longitudinal slots 3, located some distance above the perforations 2.

40 Arranged within the anchor and between the perforations and the longitudinal slots 3 is a valve 4 of any desired construction. In the present case I have shown the ordinary ball-valve. Said anchor is also provided with an external flange 5. Said flange is located intermediate the top end of the longitudinal slots and the top end of the anchor. Operating in said anchor is a working barrel 6, which is provided near the lower end with lugs or projections 7, operating in the longitudinal slots 3 of the anchor. Said lugs are adapted to support the weight of the anchor

when the same is withdrawn from the well. Said working barrel is provided at predetermined positions with external flanges 8, which engage and support the tubing leading to the top of the well.

Engaging the end of the anchor above the flange 5 and the working barrel below the flange 8 is a spiral spring 9. In its normal condition it is in an expanded position, as shown in Fig. 1; but when the weight of the tubing is placed upon the flange 8 the spring is compressed, as shown in Fig. 2.

Engaging the working barrel just above the flange 8 is a ring 10, said ring having lugs engaging the casing 11. A number of such rings may be employed throughout the entire length of the barrel that the said barrel may be held in alinement with relation to the casing, thereby preventing breaks.

Operating in the working barrel is a piston 12 of the ordinary ball type. Secured to said valve is a rod 13, which is provided with a longitudinal opening 14. Communicating with said longitudinal opening are vertical openings 15. Secured to the top end of the rod 13 is a rod 16. Said rod is provided with longitudinal flutes 17 and reduced portions 18. At the top end of said rod a head or flange 19 is formed. Said head or flange is adapted to engage the lower end of the rope 20, which is carried out through the top of the well and is attached to the walking-beam.

It will be noted that any number of the rods like that shown in Fig. 3 may be used; also, that the length of the sections may be regulated as desired.

It will be apparent from the drawings that the operation of assembling the tubing, the main feature of my invention, resides in the construction of the lower section and anchor.

It will be noted that various changes may be made in the details of construction without departing from the spirit of my invention.

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

In combination with the tubing of an oil-well and the like, an anchor provided with longitudinal slots an external flange formed on said anchor above the slots, a working barrel operating within said anchor, lugs formed on the lower end of said working bar-

rel and engaging the slots in the anchor, an
external flange formed on said working bar-
rel, a spring operating between said flanges
and means engaging the tubing whereby the
5 same is kept in alinement throughout its en-
tire length, substantially as shown and de-
scribed.

In testimony whereof I affix my signature
in presence of two witnesses.

GEORGE H. PURDY.

Witnesses:

H. C. PETERMANN,
ALEX. KEMPLE.