D. L. HEETER.

DEVICE FOR GATHERING ROD WAX.

APPLICATION FILED MAR. 10, 1908.

913,286. Patented Feb. 23, 1909

Fig. 1.

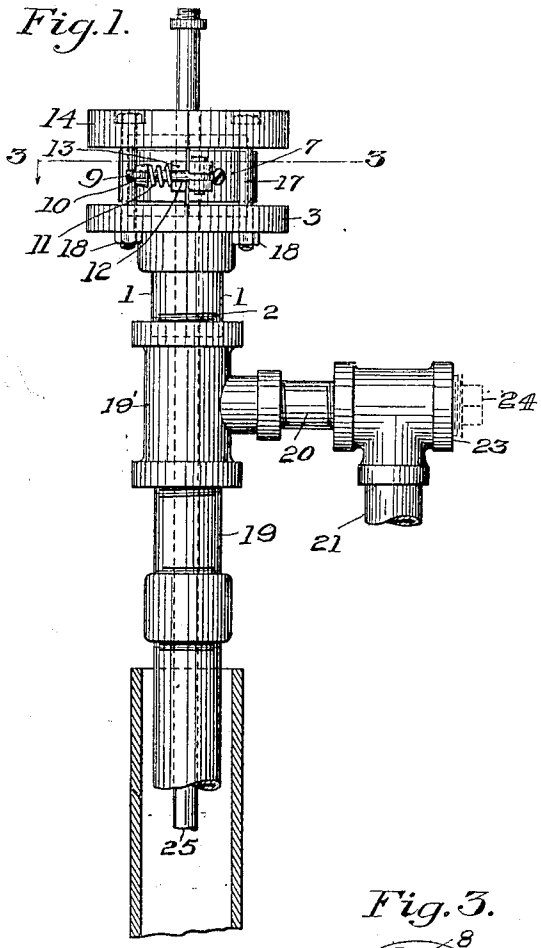


Fig. 2.

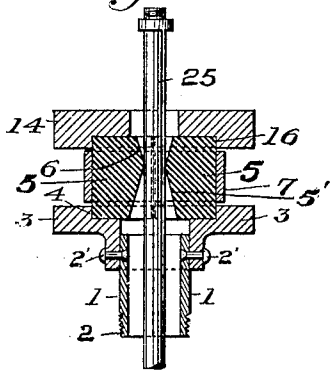
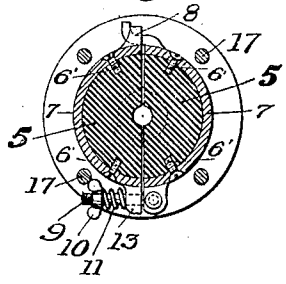


Fig. 3.



WITNESSES

Walter Samariss

Howard C. Hamilton

INVENTOR

Delbert L. Heeter

By John J. Power

Attorney

THE NORRIS PETERS CO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

DELBERT L. HEETER, OF PITTSBURG, PENNSYLVANIA.

DEVICE FOR GATHERING ROD-WAX.

No. 913,286. Specification of Letters Patent. Patented Feb. 23, 1909.

Application filed March 10, 1908. Serial No. 420,155.

To all whom it may concern:

Be it known that I, DELBERT L. HEETER, a citizen of the United States, resident of Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented a new and useful Improvement in Devices for Gathering Rod-Wax; and I do hereby declare the following to be a full, clear, and exact description thereof.

My invention relates to a device to be used in connection with oil wells.

The object of my invention is to gather from the pump rods of oil well apparatus, by mechanical means, the solid matter prevalent in petroleum oil, and which is known as rod-wax and is found to adhere to and accumulate on pump rods during the operating of oil wells. And a further object of my invention is to provide a simple and effective means for discharging from the device the solid matter thus gathered.

In the accompanying drawings Figure 1 is an elevation showing my invention surrounding a pump rod and attached to an oil well tubing. Fig. 2 is a view, in vertical section, of my invention. Fig. 3 is a plan view, in section, on lines 3—3 of Fig. 1, the pump rod being omitted.

The reference numerals in the following specification have reference to the drawings in which a nipple formed in sections 1 and having a threaded lower end 2 is secured by rivets 2′ to a flange composed of sections 3 which is countersunk at 4. Seated within the countersink 4 is a ring of flexible material 5, likewise in section, and tapered as at 5′ and at 6, to each section of which is fixedly secured by means of suitable screws 6′ a part of a metallic band formed of the sections 7, which are suitably hinged together at 8′ to one section of which is pivotally secured the small swinging bolt 9 having a thumb-screw 10, in threaded engagement with the outer end thereof, and carrying the coil spring 11, the bolt 9 being adapted to be swung into the slot 12 of the angular projection 13 formed on the band 7. A flange 14 having in its lower face a recess 16 which is adapted to engage the top of the flexible ring 6, while bolts 17 are inserted through suitable openings in the flange sections 14 the threaded ends of the bolts extending through openings in the flange sections 3, and having nuts 18 thereon. Attached to the top of the oil well tubing 19 is a T connection 19′ having an outlet at 20 leading to the T 20′, to which a pipe line 21 may be connected and an opening at 23 in which the plug 24 is inserted.

With the parts constructed and arranged preferably as above described, the nipple sections being rigidly secured to the separate sections of the flange 3, and a section of the flexible ring 6 to each of which is secured a half of the band 7 being held in position between the separate halves of the flanges 3 and 14, by means of the bolts 17 and nuts 18 being adapted to bind those parts together, to form one sectional structure, which may be conveniently placed and maintained in position around the pump rod 25 by inserting the threaded end 2 of the nipple 1 into the T 19′. The swinging bolt 9 is then swung into the slot 12 and the thumb-screw 10 is operated to force the spring 11 against the lug 13 and thereby exercise the tension of said spring upon the sections of the band 7 so as to effect a yielding compression of the flexible ring 6 against the pump rod 25.

The operation of my invention is as follows: With the device in position as shown in Fig. 1 the line outlet 20 being closed by any suitable means, and the plug 24 being withdrawn from the opening 23 the drawing of the pump rod may be commenced and the flexible ring 6 will arrest or wipe from the pump rod as it is being withdrawn the wax that may be adhering thereto, by reason of the frictional effect occasioned by the drawing of the rod through said ring the compression of which against the pump rod may be adjusted by means of the thumb-screw 10 and spring 11 so as to effect the desired result without interfering with a sufficiently free movement of the pump rod. The wax thus gleaned will be gradually and constantly displaced and forced downward by the wax which will constantly be accumulating below the point of contact between the flexible ring and the pump rod during the continued drawing of the latter, until the wax will pass out of the opening 23 to be received in any suitable container.

In practice, a pump rod is formed in sections, the connecting of which occasions irregularities on the pump rod, and rivets used in effecting the connection of those sections frequently work loose. The tapering of the ring at 5′ and 6 is a very advantageous

provision in that it obviates any obstruction, by allowing the irregularities on the rod to be carried between the rod and the ring which is adapted to yield to the protrusion and allow them to pass through the ring, and forcing loose bolts into position as they are carried towards the point of contact of the rod and the ring.

I have shown and described a preferable form of construction but I do not desire to be limited thereto, as various changes and modifications may be made without departing from the spirit of the invention.

What I claim as my invention and desire to secure by Letters Patent is:

1. A device for gathering rod-wax from an oil well pump-rod, comprising a sectional flexible member, sectional flanges adapted to carry the flexible member therein, means for compressing the flexible member against the pump-rod, a nipple for connecting the device to an oil well tubing, and an outlet communicating with the device and through which the wax may be discharged.

2. A device for gathering rod-wax, comprising a sectional flexible member, sectional flanges adapted to carry the flexible member, mechanism acting against the periphery of the flexible member to compress the latter against the pump-rod and to maintain the compression thus obtained, means connected to the flange sections to compress the flexible member between said sections, a nipple for connecting the device to an oil well tubing, and a discharge outlet, communicating with the device.

3. A device for gathering rod-wax, comprising a sectional flexible member, sectional flanges adapted to carry said flexible member, a band formed in sections operatively connected together and secured to said flexible member, means for drawing the sections of the band into close relation to compress the flexible member against the pump-rod and to maintain the relation thereof, a nipple fixedly secured by one end of each section to one of the flange sections for connecting the device to a well tubing and a discharge outlet.

4. A device for gathering rod-wax, comprising a sectional flexible member, sectional flange sections adapted to carry said flexible member, a band formed in sections operatively connected together and secured to said flexible member, means having an intervening spring for drawing the sections of the band into close relation to compress the flexible member yieldingly against the pump-rod and to maintain the relation thereof, a sectional nipple fixedly secured by one end of each section to one of the flange sections and adapted to be connected to a well tubing, and a discharge outlet, communicating with the device.

5. A sucker rod cleaner comprising a sectional ring, sectional means for holding the sectional ring in sections against the sucker rod, and means for holding said sections in position around the sucker rod.

6. A sucker rod cleaner, comprising a sectional ring, and means for holding the sectional ring in sections against the sucker rod.

7. A sucker rod cleaner, comprising a sectional ring, a sectional means for holding the sectional ring in sections around the rod, means for pressing the sections in position against the sucker rod, and means for connecting the cleaner with an oil well tubing.

8. A device comprising a partible ring arranged partibly around a rod, means for supporting the partible ring in position around the rod, and means for forcing said ring against the rod.

In testimony whereof, I the said DELBERT L. HEETER have hereunto set my hand.

DELBERT L. HEETER.

Witnesses:
J. L. TREFALLER, Jr.,
JOHN C. HASEMAN, Jr.