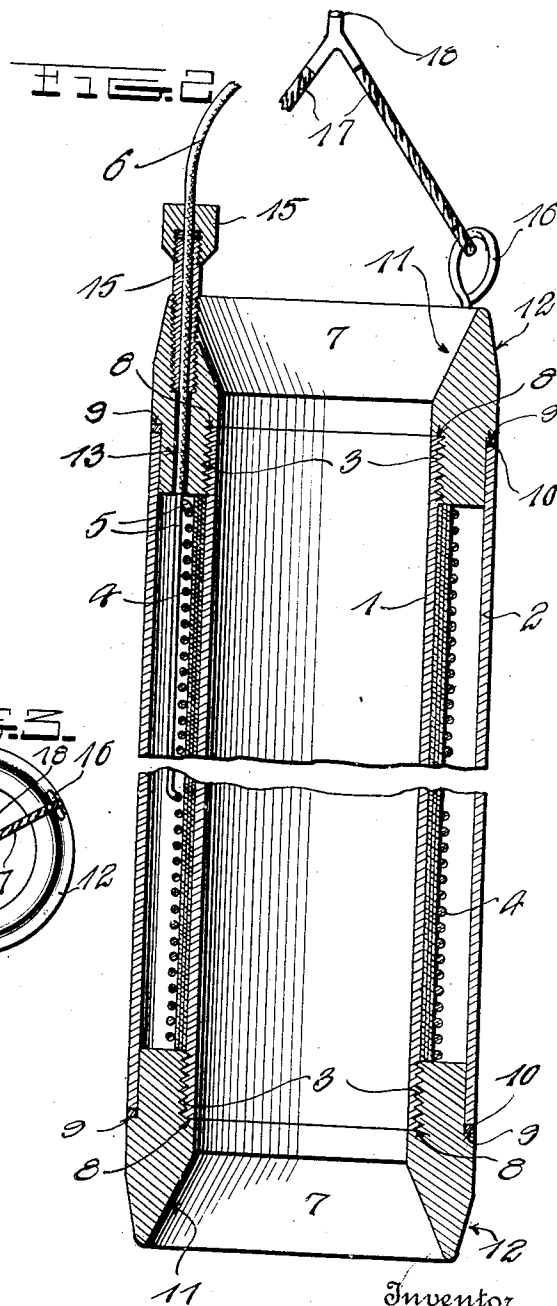


1,232,736.



Inventor
V. TRUMAN
AND
G. L. SKILLEN

By *A. B. Wilson & Co*
Attorneys

George W. Giovanniello

UNITED STATES PATENT OFFICE.

VIN TRUMAN, OF MUSKOGEE, AND GEORGE L. SKILLEN, OF BOYNTON, OKLAHOMA,
ASSIGNORS TO NATIONAL OIL WELL ELECTRIC CLEANING CO., OF HASKELL, OKLA-
HOMA, A CORPORATION.

OIL-WELL HEATER.

1,232,736.

Specification of Letters Patent.

Patented July 10, 1917.

Application filed October 5, 1916. Serial No. 123,882.

To all whom it may concern:

Be it known that we, VIN TRUMAN, a citizen of the United States, residing at Muskogee, in the county of Muskogee, State of Oklahoma, and GEORGE L. SKILLEN, a citizen of the United States, residing at Boynton, in the county of Muskogee and State of Oklahoma, have invented certain new and useful Improvements in Oil-Well Heaters; and we do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

Our invention aims to provide a simple and inexpensive yet highly efficient device to be lowered into oil wells for the purpose of heating and melting any substance therein which may have accumulated due to the prevalence of paraffin or mineral base. It is a well known fact that the accumulation of such substance often so clogs the pump tubing as to render it necessary to often remove the same for cleaning purposes, and furthermore, it accumulates on the oil sand and thus retards the flow of oil and sometimes checks it entirely. These difficulties are overcome by the improved heater shown in the accompanying drawing which constitutes a part of this application and in which:

Figure 1 is a side elevation;

Fig. 2 is a central longitudinal section;

Fig. 3 is an end elevation.

In the accompanying drawing above briefly described, the numerals 1 and 2 designate respectively an inner and an outer tube preferably of uniform length, the ends of the inner tube 1 being threaded externally at 3.

Upper and lower heating coils 4 are wound around the inner tube 1 and insulated therefrom in any preferred manner, one end of these coils being grounded to said tube while the other ends 5 thereof are electrically connected with a feed wire 6.

A pair of end rings 7 are provided, the inner edges of these rings being reduced in thickness and received between the ends of the inner and outer tubes 1 and 2 in threaded engagement with said tube 1 by means of screw threads interengaging the threads 3.

By reducing the inner edges of the rings 7, inner and outer shoulders 8 and 9 are provided, said inner shoulders being in contact

with the ends of the inner tube 1 while gaskets 10 are interposed between the ends of tube 2 and shoulders 9 to prevent the entrance of fluid.

The outer edges of the rings 7 are beveled both internally and externally as shown respectively at 11 and 12 to prevent them from lodging on collars and other joints of the well casing, the pump tubing and the sucker rods.

One of the rings 7 is formed with a bore 13 which extends from one of its edges to the other and receives the wire 6 above described, this wire being insulated and being also passed through a tubular housing 14 threaded in the outer end of the bore 13, said housing having at its upper end a packing gland 15.

For lowering the entire device into the well and withdrawing it when required, the upper ring 7 is provided with a pair of eyes or the like 16 and branches 17 on the lower end of a metallic cable 18 are secured to said eyes, said cable and branches cooperating with the wire 6 in carrying the current for the coils 4, it being obvious that current entering said coils through the wire 6 will pass from said coils through the inner tube 1, the upper ring 7, and the eyes 16 to the branches of said cable.

By constructing the device in the manner shown and described, it may be easily and inexpensively manufactured and thus sold at a minimum cost. Regardless of this, however, it will be highly efficient and durable, emphasis being therefore laid upon the general construction set forth although it is to be understood that within the scope of the invention as claimed, numerous changes may be made without sacrificing the principal advantages.

We claim:

1. An oil well heater to surround the pump tubing and sucker rods, said heater comprising a tubular electric heating member open at both ends and beveled both externally and internally at its ends to prevent lodging on the joints of the well casing, the pump tubing, or the sucker rods, both the inner and outer sides of said heating member being smooth and free from projections.

2. An oil well heater to surround the pump tubing and sucker rods, said heater comprising an inner tube open at both ends,

one or more heating coils wound around said tube, an outer tube extending around the coil or coils, and a pair of end rings having their inner edges received between
5 the ends of the inner and outer tubes in threaded engagement with one thereof, the outer edges of said rings being beveled both internally and externally to prevent lodg-
10 ing on the joint of the well casing, the pump tubing, or the sucker rods, the inner side of the inner tube, the outer side of the outer tube, and both sides of the ring being smooth and free from projections.

3. An oil well heater to surround the
15 pump tubing and sucker rods, said heater comprising an inner tube open at both ends and threaded externally at its ends, a heating coil or coils wound around said tube, an outer tube surrounding said coil or coils,
20 a pair of end rings whose inner edges are reduced in thickness and received between

the ends of the inner and outer tubes in threaded engagement with one thereof, the outer edges of said rings being beveled both externally and internally to prevent lodg- 25
ing on the joints of the well casing, pump tubing, or sucker rods, one of said rings having a bore formed therethrough from one edge to the other, and one or more feed wires for the coil or coils passing through 30
said bore, the inner side of the inner tube, the outer side of the outer tube, and both sides of the end rings being smooth and free from projections.

In testimony whereof we have hereunto 35
set our hands in the presence of two subscribing witnesses.

VIN TRUMAN.

GEORGE L. SKILLEN.

Witnesses:

CLARA MILLIGAN,

WALTER C. EPPERSON.