G. SUTTON.

THREAD PROTECTOR FOR WELL CASINGS.

APPLICATION FILED JAN. 9, 1917.

1,231,450. Patented June 26, 1917.

Fig. 1.

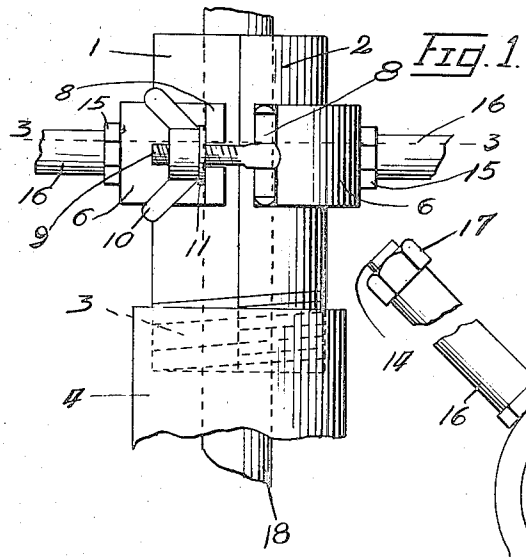


Fig. 4.

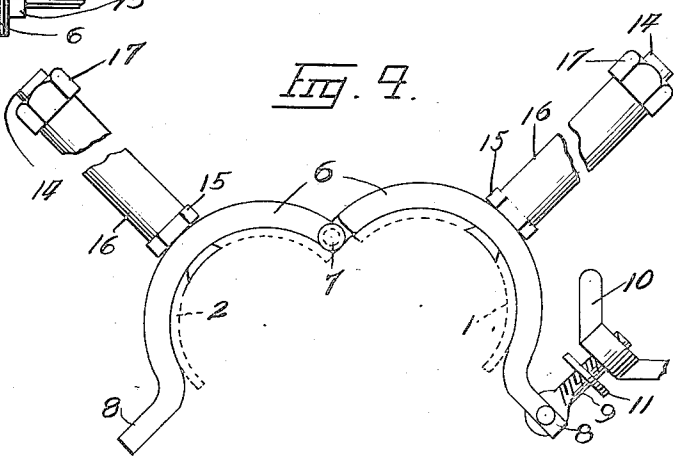


Fig. 3.

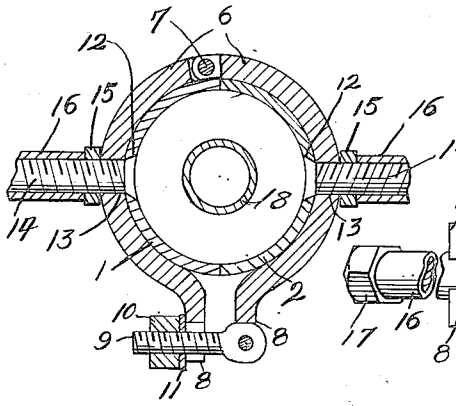
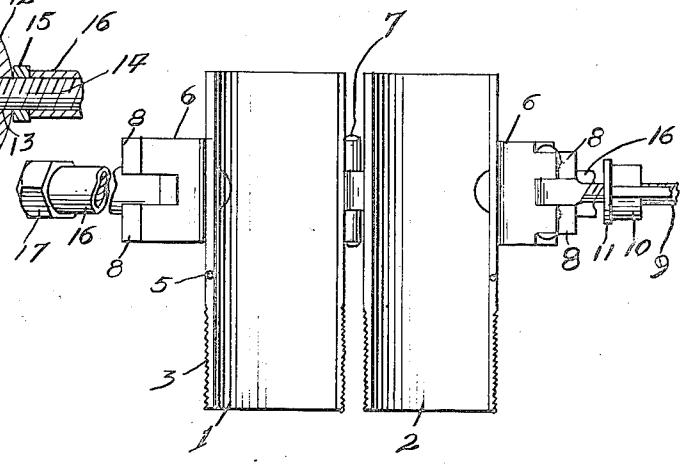


Fig. 2.



Witness

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UNITED STATES PATENT OFFICE.

GILBERT SUTTON, OF NEODESHA, KANSAS.

THREAD-PROTECTOR FOR WELL-CASINGS.

1,231,450. Specification of Letters Patent. Patented June 26, 1917.

Application filed January 9, 1917. Serial No. 141,403.

To all whom it may concern:

Be it known that I, GILBERT SUTTON, a citizen of the United States, residing at Neodesha, in the county of Wilson, State of Kansas, have invented certain new and useful Improvements in Thread-Protectors for Well-Casings; and I do hereby 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.

This invention relates to implements for use in removing rods and pipes from well tubes.

The object of the invention is to provide a protecting device which will guard the threads inside a well tube or casing while inserting or removing the well pipes or rods. It is well known that in well construction or repair work, the lowering or raising of pipes and rods through the casing batters the threads on the ends of the casing sections so that it is difficult and sometimes impossible to properly seat the packing box or casing head. This invention therefore, consists in the provision of a protective device which may be engaged with the threads inside of the casing or well tube while the rods or pipes are being inserted or removed, the device consisting of a split sleeve which may be readily placed around the rods or pipes, and after connection of the sections, screwed into the casing, the split sleeve being provided with suitable handles and connecting devices for the ready manipulation of the device. By the use of this improved protective device, the particular advantage is secured that it is not necessary to disconnect or unjoin the rod or pipe sections in order to place the protective device in position upon the well casing.

With the above objects in view and such others as may hereinafter appear, my invention will now be fully set forth and described, reference being had to the accompanying drawings.

In the drawings:—

Figure 1 is an elevation of the protective device positioned upon the top of a well casing,

Fig. 2 is an elevation of the device in open position,

Fig. 3 is a section on line 3—3 of Fig. 1, and

Fig. 4 is a plan of the clamp portion of the device in open position.

Referring more particularly to the drawings, 1 and 2 denote respectively the half sections of a split sleeve or collar which when assembled provide a cylindrical element which carries at its lower end, the threads 3. Said threads are adapted to be received by corresponding internal threads at the upper end of a well casing 4 (Fig. 1) from which the packing box has been removed. The sleeve or collar may be of any desired size to accommodate casing of various diameters, and the construction which will hereinafter be described may be renewed at any time that a sleeve or a section of a sleeve is broken or deformed. Upon the longitudinal edges of the sleeve sections 1 and 2 are provided the lugs 5 which fit into corresponding socket openings formed in the complementary edges of the opposite sections, so that when the sections are clasped together a perfectly formed cylinder will result.

A clamp consisting of the complementary semi-circular members 6 is removably secured to the sections 1 and 2, the members 6 being hinged at their rear ends upon a pintle 7, and at their forward ends are outturned and shaped into bifurcated tongues 8. Between the bifurcations of one of the tongues 8 is pivoted the screw bolt 9 which carries the butterfly nut 10 and the washer 11 for engagement with the outer face of the opposite tongue. Obviously, by manipulation of the screw bolt 9 and the butterfly nut 10 the sections 1 and 2 may be drawn together into their true cylindrical form.

In order to connect the clamp members 6 to the sections 1 and 2 inwardly flared sockets 12 are formed through the walls of the sections 1 and 2 and register with the cylindrical openings 13 in the clamp members so that bolts 14 may be passed through the registered openings to assemble the sections 1 and 2 and their respective clamp members, said bolts having conical heads to fit in the openings 12, and the bolts being furthermore threaded throughout their lengths to receive the lock nuts 15 which are adapted to bear against the outer faces of the clamp members in order to rigidly connect the clamp members and the sleeve sections. In order to further complete the device, sleeves

16 may be mounted upon the bolts 14 and thereon secured in any suitable manner as by additional nuts 17.

In the above manner, a practical protector for the threads of well tubes or casings is provided. In use, the clamp members are opened in an obvious manner, and by manipulation of the handles 16, the sections 1 and 2 are separated so that they may be placed around a pipe or rod 18 (Fig. 1) after which the clamp members are again tightened in order to draw the sections 1 and 2 together. Then the threads 3 may be let into the corresponding threads of the interior of the well casing. After this, the rods or pipes may be removed and worked upon without danger of battering or destroying the threads of the well casing. If, at any time it is necessary to renew the section 1 or 2, the handles 18 and bolts 14 may be removed as above described, and a new section or sections mounted upon the clamp members.

What I claim as my invention is:—

A thread protecting device for well casings comprising a split sleeve having two sections, a clamp member supporting each section, said clamp members being hinged at one side and having removable tightening connections at the opposite side, and removable bolts connecting the clamp members and the split sleeve sections, said bolts also constituting handles.

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

GILBERT SUTTON.

Witnesses:
J. W. STARR,
H. H. WOODRING.