G. F. HEAP.

OIL WELL TOOL.

APPLICATION FILED JUNE 13, 1921.

1,424,820. **Patented Aug. 8, 1922.**

Fig. 1.

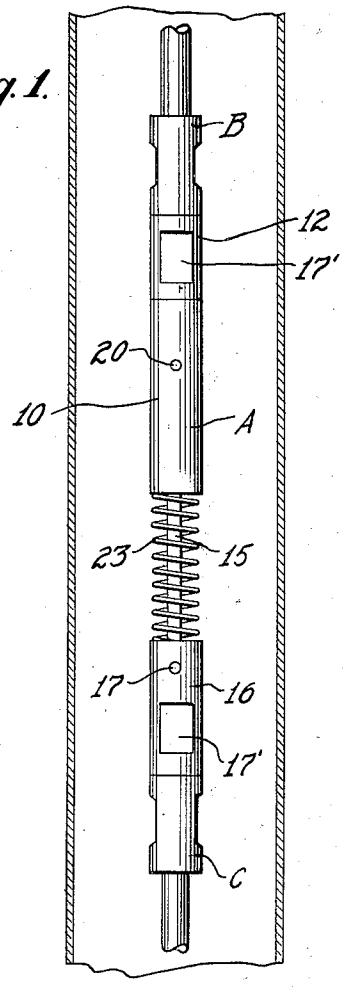
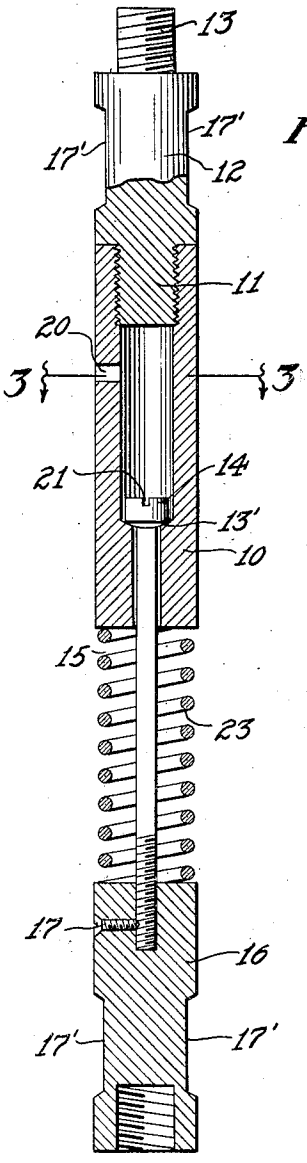


Fig. 2.



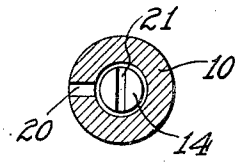


Fig. 3.

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WITNESS:

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GUY F. HEAP, OF MIDIAN, KANSAS.

OIL-WELL TOOL.

1,424,820. Specification of Letters Patent. Patented Aug. 8, 1922.

Application filed June 13, 1921. Serial No. 477,311.

To all whom it may concern:

Be it known that I, GUY F. HEAP, a citizen of the United States, residing at Midian, in the county of Butler and State of Kansas, have invented new and useful Improvements in Oil-Well Tools, of which the following is a specification.

This invention relates to sucker rods for oil wells or the like, and aims to provide a rod section which is designed to relieve the rod of undue vibration, torsional strain or twists which frequently cause breaking of the rod.

The nature and advantages of the invention will be better understood when the following detailed description is read in connection with the accompanying drawing, the invention residing in the combination, construction, and arrangement of parts as claimed.

In the drawing forming part of this application, like numerals of reference indicate similar parts in the several views and wherein:

Figure 1 is a fragmentary view of a rod showing the particular section thereof forming the subject matter of the invention.

Figure 2 is a vertical sectional view taken through Figure 1.

Figure 3 is a transverse sectional view taken on line 3—3 of Figure 2.

Referring to the drawing in detail, the sucker rod includes a section A which is suitably connected with the sections B and C, and it is desired to be understood that any number of the sections A may be utilized in a single rod if found necessary. The section A comprises a hollow tubular body portion 10 which is threaded internally at its upper end to accommodate the threaded extension 11 of the adjacent coupling member 12, the latter being equipped with an extension 13 which is also threaded to accommodate itself to the section B of the rod. The tubular body portion 10 of the section A is formed with an internal shoulder 13′ which constitutes a seat for the head 14 of a swiveled rod 15, the latter projecting an appreciable distance beyond the lower end of the body portion 10 and terminating to provide a threaded portion which accommodates itself to the coupling 16, the latter being interiorly threaded to couple both the rod 15 and the section C of the rod. A screw or other suitable threaded element 17 is associated with the coupling 16 to prevent relative rotation between the latter and the swiveled rod 15. Both of the couplings at the opposed ends of the body portion 10 are provided with flat surfaces 17′ by means of which a suitable tool may be used in assembling the parts. The tubular body portion is provided with a drain opening 20, while the head 14 of the swiveled rod is kerfed as at 21 to accommodate a screw driver which is inserted through the upper end of the tubular body portion 10. Encircling the swiveled rod 15 is a coiled spring 23, one end of which bears against the adjacent end of the body 10, and the opposite end of which reposes upon the coupling member 16. The spring is utilized to absorb shocks and jars to which the rod is subjected, while the rod 15 which is swivelly connected with the body portion 10 eliminates the twisting movements and torsional strains to which these rods are frequently subjected, and which quite frequently results in the breakage of the rod.

While it is believed that from the foregoing description the nature and advantages of the invention will be readily apparent, I desire to have it understood that I do not limit myself to what is herein shown and described, and that such changes may be resorted to when desired as fall within the scope of what is claimed.

What I claim is:

1. A sucker rod for oil wells comprising a plurality of sections, one of said sections including a tubular body portion, a coupling member joining the body portion with one of said sections, a rod swivelly connected with the said body portion and projecting beyond the end thereof, a coupling joining the rod with the adjacent section of the rod, and a cushioning element interposed between the latter mentioned sections of the rod for the purpose specified.

2. A sucker rod for wells comprising a plurality of sections, one of said sections including a tubular body portion, a coupling joining the body portion with one of said sections of the rod, an internal shoulder

formed on said tubular body portion, a rod fitted within the tubular body portion and including a head adapted to repose upon said shoulder to provide for a swiveled connection between the rod and said tubular body portion, a coupling joining the exposed end of the rod with the adjacent section, and a coiled spring encircling said rod and bearing against the latter mentioned coupling and said tubular body portion for the purpose specified.

In testimony whereof I affix my signature.

GUY F. HEAP.