

No. 793,690.

PATENTED JULY 4, 1905.

K. P. SNYDER.  
COUPLING.

APPLICATION FILED MAR. 24, 1905.

Fig. 1.

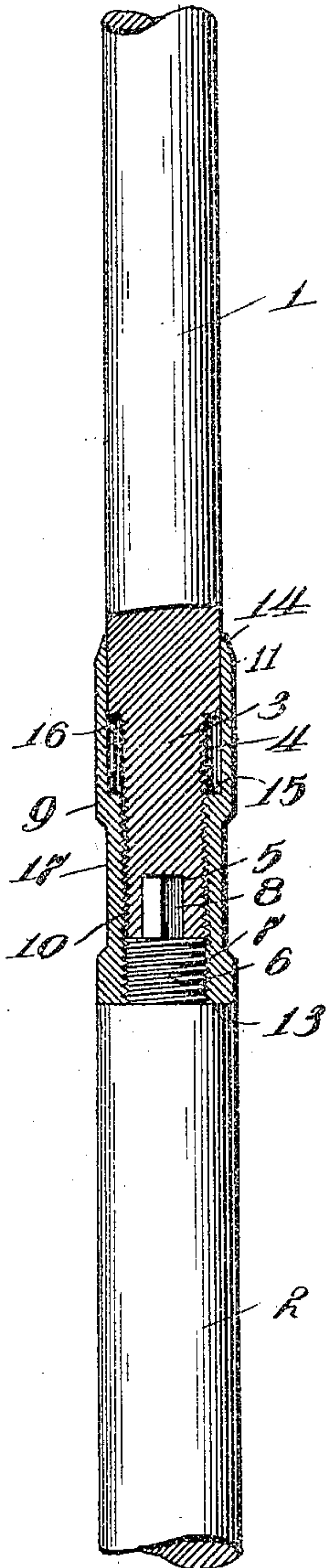


Fig. 2.

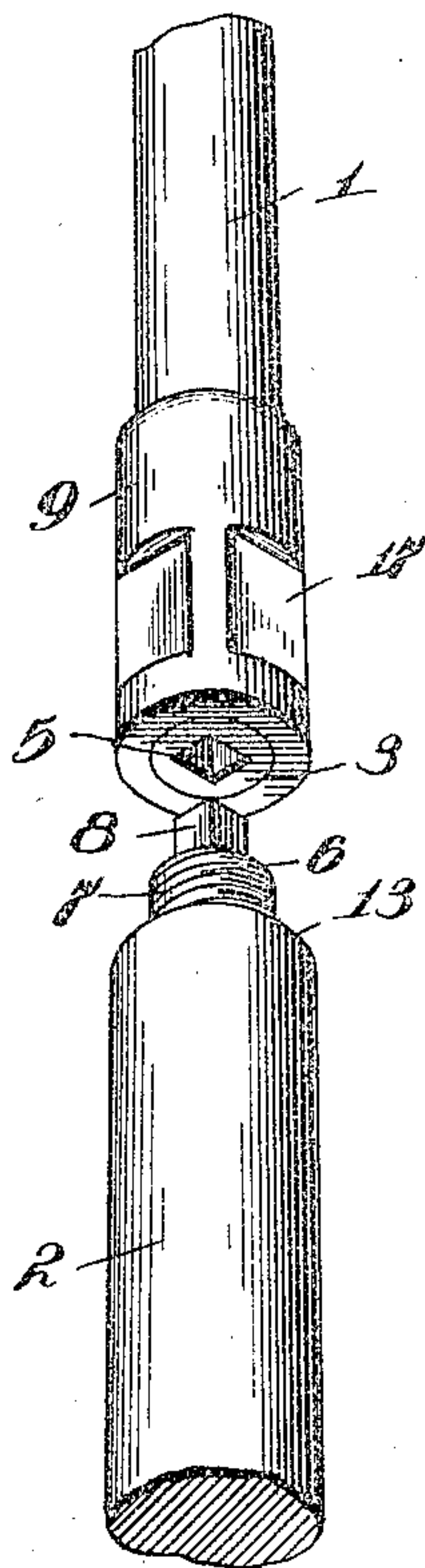
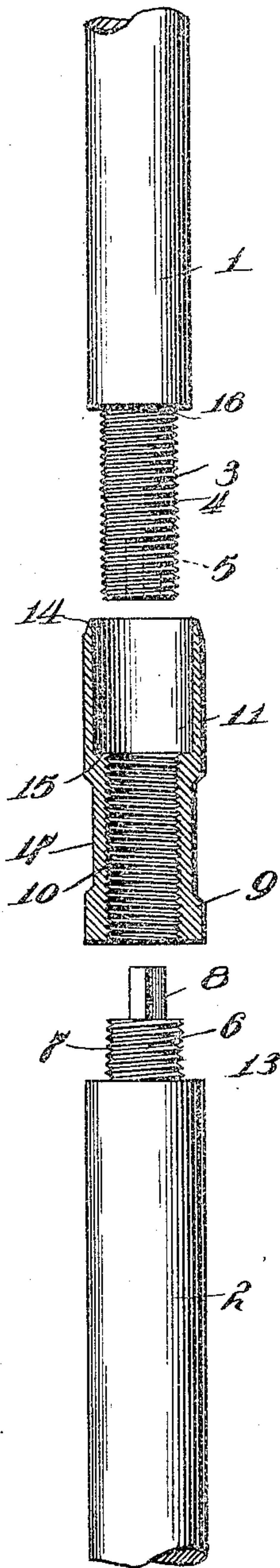


Fig. 3.



Witnesses

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# UNITED STATES PATENT OFFICE.

KEARNEY P. SNYDER, OF PASADENA, CALIFORNIA.

## COUPLING.

SPECIFICATION forming part of Letters Patent No. 793,690, dated July 4, 1905.

Application filed March 24, 1905. Serial No. 251,879.

*To all whom it may concern:*

Be it known that I, KEARNEY P. SNYDER, a citizen of the United States, residing at Pasadena, county of Los Angeles, and State of California, have invented certain new and useful Improvements in Couplings, of which the following is a specification.

My invention relates to couplings, and more especially to couplings of that type which are used on sucker-rods and other rods used in oil-well drilling, although I wish it understood that this coupling is well adapted for other purposes, such as shaft-couplings or even pipe-couplings; but I do not care to be limited to the structure which is shown in the drawings, as that is only for purposes of illustration.

The object of the invention is the provision of a coupling which will prevent any turning of the two sections of the rod and which embodies not only the good features of the old style of coupling, but also embodies features which will be described more minutely hereinafter and which are novel.

A further object of the invention is the provision on the coupling member of a protecting-sleeve adapted to protect the screw-threads of the upper section.

A still further object of the invention is the novel way in which the coupling connects the two sections together, so that one section is flush with the coupling, whereby accidents to the coupling member are practically obviated.

The invention consists of the novel features and combination of parts, which will be more fully hereinafter described, and pointed out in the appended claims.

In the drawings which form part of this application, Figure 1 is a longitudinal section through the coupling and two sections of a sucker-rod. Fig. 2 shows the sections separated and the coupling held upon the upper section and in position to receive the lower section, and Fig. 3 shows the parts separated.

Referring more specially to the drawings, 1 represents the upper section of a sucker-rod, and 2 represents the lower section. This lower section might be a bit, which can be attached to any section the same as could a similar section. Each section at the end thereof

is turned down at 3 and is provided with screw-threads 4 and a square mortise 5 in the end. The opposite or upper end of each section is somewhat larger than the lower end and is also turned down at 6 and provided with screw-threads 7 of the same pitch as the screw-threads 4, and this end of each section being turned down, so that the screw-threaded portion of the lower end of the opposite section will be of the same diameter. Projecting from the end of the screw-threaded portion 7 is a squared tenon 8, adapted to enter the mortise 5 of the screw-threaded portion 4. This effectively prevents the sections from turning with relation to each other.

9 represents a cylindrical coupling-sleeve provided with interior screw-threads 10 of the same pitch as the screw-threads 4 and 7 and of substantially the same interior diameter for a portion of its length as the exterior diameter of the threaded portions of the sections 1 and 2. Extending beyond the screw-threaded portion of the sleeve 9 is a cylindrical flange 11, which is adapted to protect the screw-threaded portion 4 when the coupling is screwed down upon the shoulder 13, formed by the turning down of the section 2. This flange projects up and beyond the screw-threaded portion 4 and is sheared at 14, so as to present a sliding face to any obstruction with which the rod might meet in its upward movement.

At 15 the coupling is provided with an interior shoulder, which is adapted to abut against a shoulder 16, formed by the turning down of the section 1, to limit the movement of the coupling on the rod when the sections are uncoupled. When the shoulders 15 and 16 are abutting, the outer end of the coupling 9 is flush with the outer end of the screw-threaded portion 4, and at this position the section 2 may be withdrawn. To secure a more firm hold upon the coupling-sleeve 9, I have provided it with sunken nut-surfaces 17, upon which a monkey-wrench may be placed to tighten the sleeve against the shoulder 13.

In operation the sleeve 9 is screwed upon the portion 4 until the shoulder 15 on the sleeve abuts the shoulder 16 on the section 1



and the outer end of the sleeve 9 is flush with the outer end of the portion 4. The tenon 8 is now inserted in the mortise 5 as far as possible, and the sleeve is then screwed down upon the portion 7 until the outer end of said sleeve abuts the shoulder 13. In this position the sides of the coupling-sleeve 9 are flush with the section 2, and therefore present no obstruction whatever to the free working of the rod within the well, this being a decided advantage over what has been shown and what is now being used, as all of the structures known to me use a coupling which projects considerably from the sides of the rod and present a rather prominent object to be caught against by anything falling down the well-hole and to stop the machinery. This is very frequently the occurrence where such couplings are used, and, as stated before, this is one of the important objects of my invention. The sleeve or flange 2 being only thick enough to sufficiently protect the threaded portion 4, which would be ordinarily exposed when the coupling was screwed into position if it were not for such flange, is sheared off at 14, so as to present a glancing face to any object with which it might contact.

Making the screw-threaded portions 4 and 7 smaller in circumference than the circumference of the sections provides shoulders for limiting the movement of the sleeve and also allows the sleeve to be made flush and to protect the threads, whereas if the threads were cut right upon each section without turning it down the sleeve would be bulged out from the sides of the section and form an obstruction, which is very undesirable in the class of work to which these rods are subjected.

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

1. In a coupling, the combination with independent members having reduced screw-threaded portions and shoulders formed thereby, of a coupling-sleeve limited in its endwise movements by said shoulders and having internal screw-threads adapted to engage the screw-threaded portions aforesaid and also provided with an endwise-projecting flange at one end which is of greater internal diameter than the diameter of the internal screw-threaded portion of the sleeve and adapted to cover the reduced screw-threaded portion of the member aforesaid connected to that end of said sleeve and also overlap said member beyond the screw-threaded portion thereof.

2. In a coupling, the combination with independent members, one of which is of smaller diameter than the other, both having reduced screw-threaded portions and shoulders formed thereby and also provided with interlocking ends, of a coupling-sleeve of substantially the same diameter as the larger member which is limited in its endwise movements by said shoulders and has internal screw-threads adapted to engage the screw-threaded portions aforesaid and also provided with an endwise-projecting flange at one end which is of greater internal diameter than the diameter of the internal screw-threaded portion of the sleeve, thereby providing a shoulder, and adapted to cover the reduced screw-threaded portion of the member aforesaid connected to that end of said sleeve and also overlap and substantially fit said member beyond the screw-threaded portion thereof.

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

KEARNEY P. SNYDER.

Witnesses:

E. STEINMAN,  
C. H. YEARIAN.