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No. 814,491. PATENTED MAR. 6, 1906.

W. H. WESTERMAN.

WORKING BARREL FOR OIL AND OTHER PUMPS.

APPLICATION FILED MAR. 16, 1905.

Fig. 1.

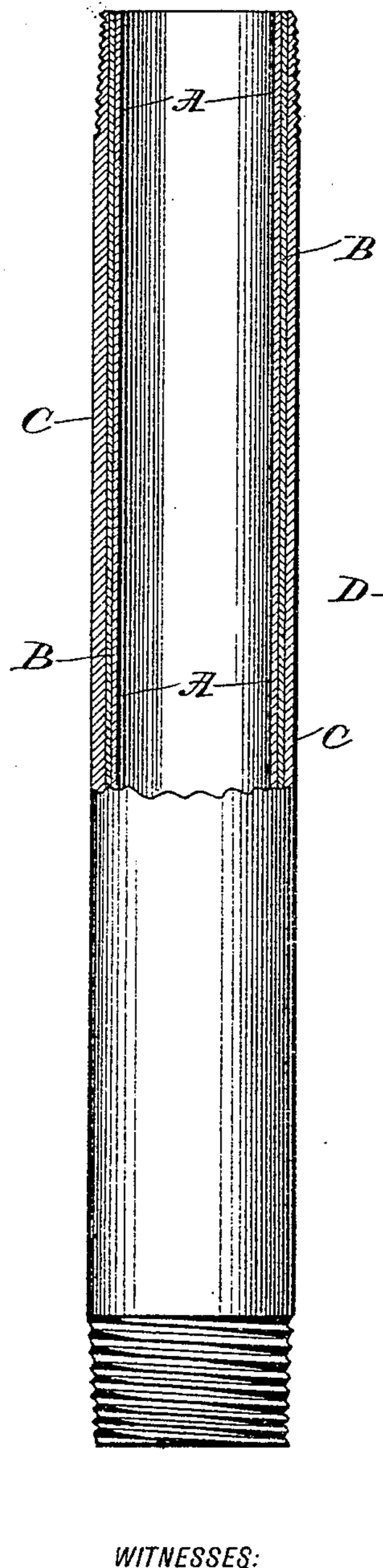


Fig. 2.

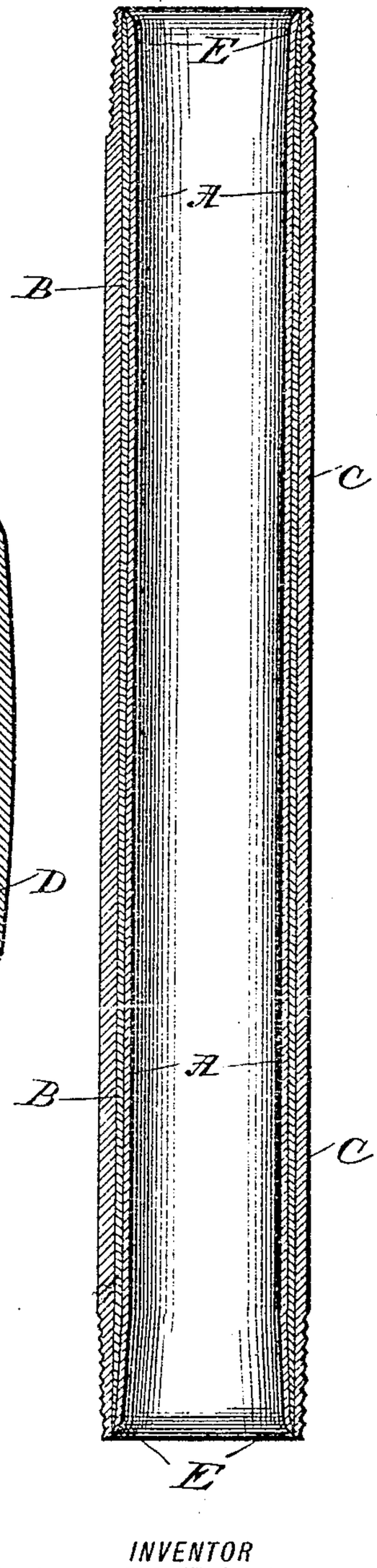
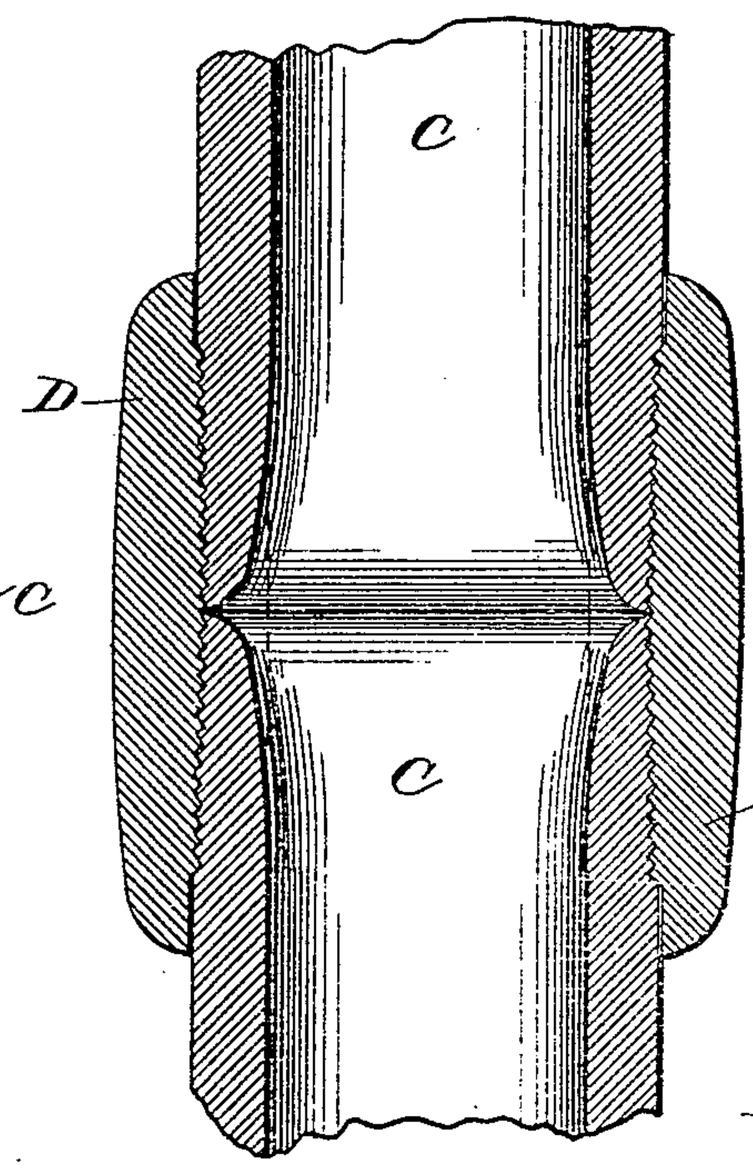


Fig. 3.



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64-21

UNITED STATES PATENT OFFICE.

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WORKING BARREL FOR OIL AND OTHER PUMPS.

No. 814,491. Specification of Letters Patent. Patented March 6, 1906.

Application filed March 16, 1905. Serial No. 250,451.

To all whom it may concern:

Be it known that I, WILLIAM H. WESTERMAN, a citizen of the United States, and a resident of Marietta, in the county of Washington and State of Ohio, have invented a new and useful Improvement in Working Barrels for Oil and other Pumps, of which the following is a specification.

My invention relates to an improvement in working barrels for pumps more particularly used in oil or deep water wells, the object being to produce a working barrel which is now usually made of brass, iron, or steel that will combine the advantages of iron, steel, and brass, that will be cheaper and stronger than the ordinary barrels, and one in which the cups or valves can be readily inserted without sticking and one in which the ends will not be crushed in when coupled with another section of barrel or pipe.

To these ends my invention consists in certain novel features, as will be hereinafter fully described and pointed out in the claims, reference being had to the accompanying drawings, in which—

Figure 1 is a side elevation of a working barrel, partly in section, showing the same before the upper and lower ends are swaged. Fig. 2 is a vertical section of the working barrel, showing the internal diameter of same slightly increased by swaging and the extreme ends rounded. Fig. 3 is a sectional view showing two working barrels with coupling applied.

Heretofore the sections of pump-barrels used in oil-wells and commonly known as "working barrels" have been usually made of iron, brass, or steel having a straight bore and threaded externally at each end to receive the couplings. Now these couplings, the threads of which and those of the ends of the sections are usually tapering, and when the sections are coupled the ends frequently collapse. These objections I overcome by the improved working barrel produced in accordance with my invention, which I will now proceed to describe.

A, which is of brass, steel, or other metal, but which I prefer to make of brass, represents the inside pipe or liner of my barrels.

B is an inclosing jacket of Babbitt metal or lead, and C the outside tubing or pipe, the three forming the complete barrel.

D represents couplings the threads of which are tapering and are to be screwed on the tapering threads at each end of the barrel.

In order to produce my improved working barrel, the liner-tube A is inserted in the iron pipe C, which is of suitable bore to receive said liner-tube and allow a slight space between them. They are then placed in a retort and heated to a degree of heat that will melt Babbitt metal or lead which is placed at the top, the pipes standing in a vertical position. The Babbitt metal or lead will then run down and fill in the cavity between the brass, steel, or other liner-tube and the outside iron pipe and make a perfectly solid and homogeneous compound working barrel. By this means a cheaper barrel can be produced than the ones commonly used, as the liner-tube can be made about one-sixteenth of an inch in thickness and the outside iron pipe correspondingly reduced in thickness. The barrel produced in accordance with my invention will also be much stiffer than the old form. The working barrel will also have its bore at its upper and also at its lower end swaged or expanded for a short distance from each end, and the extreme ends of the barrel will be rounded or beveled, as shown at E. This construction will facilitate the insertion of the cups or valves without sticking. The barrel is swaged outwardly at each end about one-sixteenth of an inch for about a distance of ten inches, and, as before stated, the extreme ends are rounded or beveled. By thus making the working barrels the cups or valves may be readily let into the barrel and taken out for repairs without sticking, and the ends of the barrel-sections will not collapse when couplings are screwed on.

While I have shown a compound working barrel, it will of course be understood that I do not limit myself to this construction, as the feature of the flared mouth or swaging of the barrel is equally applicable to working barrels made of solid iron, steel, brass, or other suitable metal.

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

1. The herein-described improvement in working barrels for pumps consisting of a thin inner brass tube, a thicker outer iron tube, an intermediate filling of fusible metal attached to the inner and outer tubes and uniting them in a single homogeneous tube, said tube having its outer surface reduced at its upper and lower ends and externally screw-threaded to receive coupling-sleeves, the inner surface of the complete tube being

swaged outwardly at its upper and lower ends to increase the internal diameter of the tube at such ends, whereby when the coupling-sleeves are applied, the upper and lower ends of the tube will not be compressed sufficiently to collapse and cause the internal diameter of the tube at its upper and lower ends to become less than that of the body portion of the tube.

2. As a new article of manufacture, a working barrel for pumps consisting of a tubular cylindrical section having its external surface reduced at its upper and lower ends and externally screw-threaded at such points to receive threaded coupling-sleeves, the inner surface of the tube being swaged outwardly at its upper and lower ends to increase the internal diameter of the tube at those points, whereby when coupling-sleeves are applied to the ends of the tube, the internal diameter of the tube at its upper and lower ends will not be reduced to less than the internal diameter of the body portion of the tube.

WILLIAM H. WESTERMAN.

Witnesses:
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