W. R. EDELEN.

Device for Supporting Tubing or Pipes in Oil Wells.

No. 221,673. Patented Nov. 18, 1879.

Fig. 1.

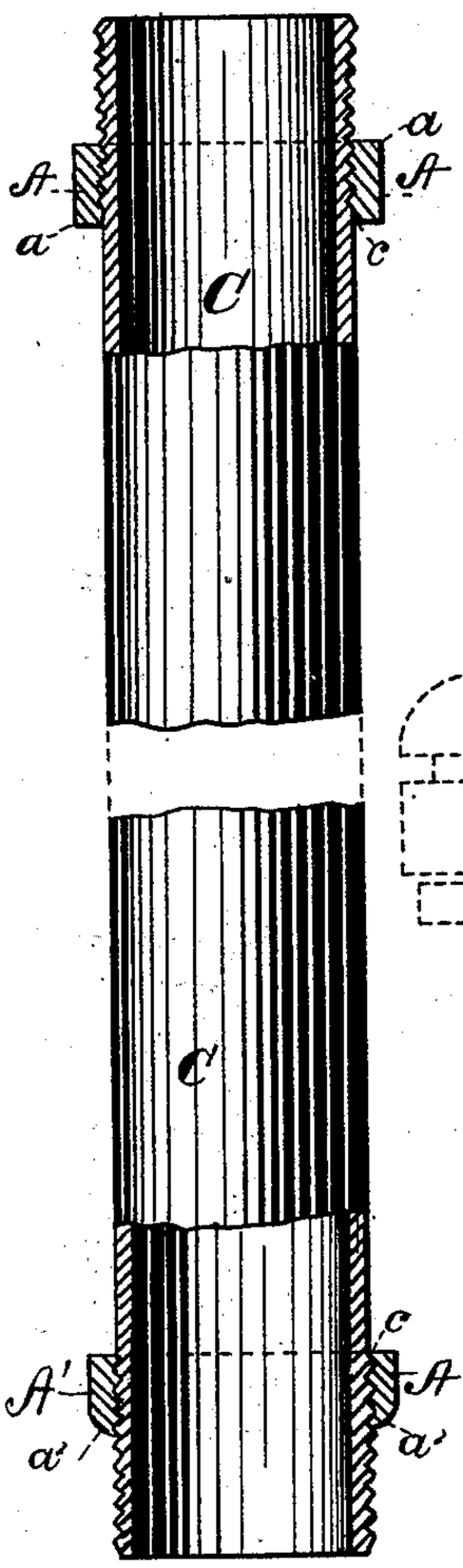


Fig. 3.

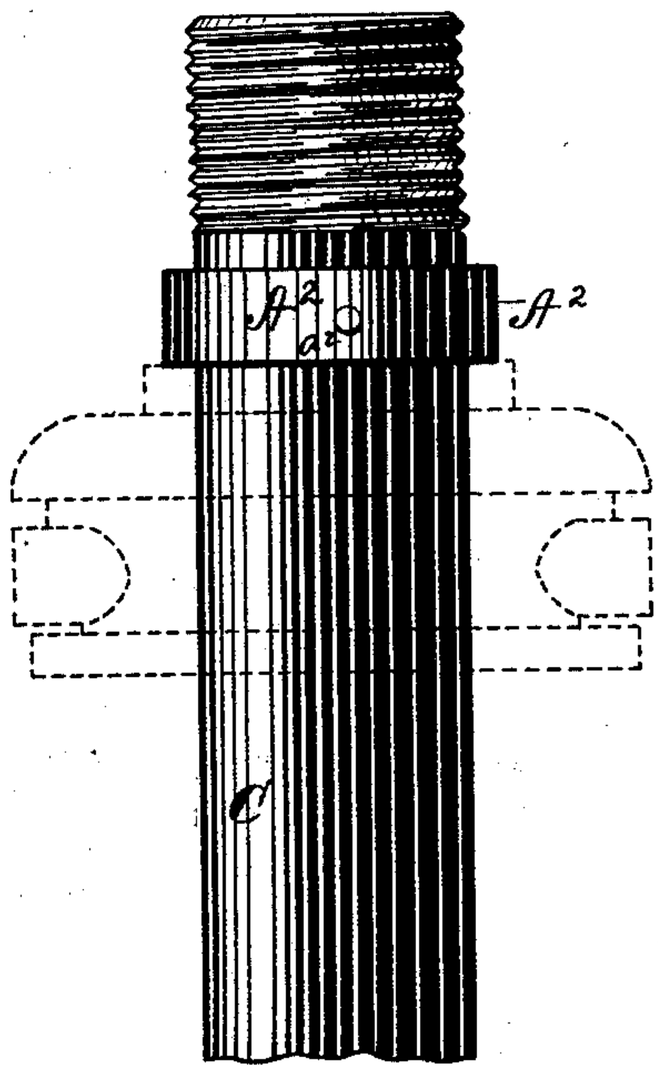
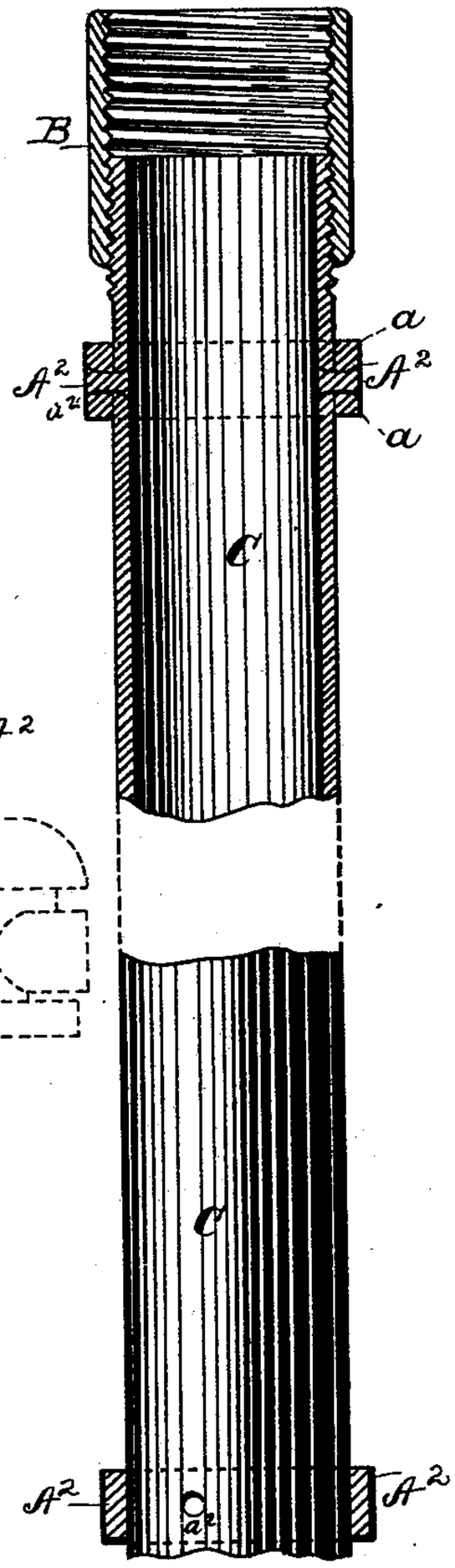


Fig. 2.



Witnesses

J. B. McAllister

F. H. Hayes

Inventor

William R. Edelen.

UNITED STATES PATENT OFFICE.

WILLIAM R. EDELEN, OF OIL CITY, PENNSYLVANIA, ASSIGNOR OF ONE-HALF OF HIS RIGHT TO BENJAMIN F. BRUNDRED, OF SAME PLACE.

IMPROVEMENT IN DEVICES FOR SUPPORTING TUBING OR PIPES IN OIL-WELLS.

Specification forming part of Letters Patent No. **221,673**, dated November 18, 1879; application filed August 9, 1879.

To all whom it may concern:

Be it known that I, WILLIAM R. EDELEN, of Oil City, in the county of Venango and State of Pennsylvania, have invented certain new and useful Improvements in Safety Devices for Supporting Tubing or Pipes in Oil-Wells Independent of the Thimbles; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification, in which—

Figure 1 represents a section of tubing or casing provided with my improved supporting-rings, secured to both ends of the same by means of screw-threads cut upon each. Fig. 2 represents a section of tubing provided with a thimble and one of my safety tubing-supporting rings at a little distance from said thimble, and secured by pins or rivets independent of the screw-threads. Fig. 3 represents an elevation of one of my safety supporting-rings secured to tubing by rivets independent of the screw-threads, and resting on a casing-head, which is shown in dotted lines.

My invention relates to improved safety devices for supporting tubing or casing in oil or Artesian wells independent of the thimbles or couplings.

The present mode of securing the tubing or casing in oil-wells is by means of the thimbles, the under edge of which rests upon clamps supported by the derrick-floor, or else upon suitable devices resting on the casing-head. In drawing tubing the clamps or elevators are placed under the thimbles and around the tubing, and sustain the entire weight of the string of tubing or casing. Two pairs of tongs are employed, and operated by as many men. One pair is placed around the thimble, the other pair upon the tubing, close to or resting on the upper edge of the thimble. The upper pair of tongs are supposed to do the unscrewing of the tubing from the thimble, and as the operators generally work very fast it often happens that the thimble turns in the thimble-tongs, and before the operators are aware of the danger the entire length of tubing is dropped from the under or lower side of the thimble to the bottom of the well.

With my safety supporting-rings there is no such danger, as a ring which can be considered as a part of the tube proper is always resting on the clamps or casing-head, and it matters not whether the thimbles come unscrewed or not, as the ring will sustain the tubing securely.

In the drawings, A, A′, and A^2 indicate the tube-supporting rings secured to the tubing C. B indicates a thimble for coupling or connecting together the various lengths of tubing.

The ring A is secured to the tubing at the point where the screw-thread *c* formed on the tubing terminates, said ring having, preferably, square shoulders *a* on its opposite edges. The under square shoulder is for supporting the entire weight of the string of tubing.

The ring A′ is secured in a similar manner to ring A, the only difference being in the edge *a′* nearest the thimble-connection, which edge is rounded, as it is not absolutely necessary to have the edge square nearest the thimble.

When the threads are properly cut on the tubing, (which should be tapering sufficiently to pack the thimbles when firmly secured thereon,) it is better that they should not come in contact with the rings A A′, but leave a slight space between them to form a firm union of the thimble and tubing.

The ring A^2 (shown in Fig. 2) is secured some distance below the thimble, and consequently independent of the screw-thread. It is secured by means of pins or rivets a^2 passing through the metal of the ring and of the tubing. It may also be secured by bringing the tubing and ring together to a welding-heat, and thus uniting them; but this last mode is more expensive, and does not give as good results as the modes heretofore mentioned, as the true circular form of the tube is liable to be distorted during the heating and welding.

The most convenient form of securing the

rings is by means of the screw-threads formed on each end of the tubing engaging with the thread upon the interior of the safety-thimble. The rings should not project beyond the thimble, or if so, very slightly, as the opening made for the tubing and thimble to pass through when drawing the same is only a trifle larger than said thimbles.

The rings can be of any desired depth to suit the manufacturer, though one inch is generally sufficient for two-inch tubes. Larger and smaller tubes can be made in proportion. They may also be made polygonal, or with indented surface; but the cylindrical form is preferable.

The rings can be placed on both ends of the tubing, though it is not necessary to have them on more than one end, unless it is to be used for other purposes.

To those familiar with the manner of operating oil-wells the utility of this invention will be obvious, and many accidents prevented thereby, as well as the loss of time and tubing, or even the destruction of the well itself, as has happened by the old form of tubing falling and lodging in the interior of the well.

I am aware that the couplings of flexible hose or of rigid water-tubing have been formed with rings cast thereon, or adjacent to them, to form shoulders or abutments upon one end of the coupling, to bear against a corresponding shoulder or recess upon the other half of said coupling to prevent leakage at that point.

I am also aware that the coupling-thimbles of sucker-rods have been secured over the joint by a jam-nut, of smaller diameter than the thimbles, screwed on said rods against the thimbles; but I am not aware that tubing for oil-wells, as above mentioned and constructed, for the purpose stated, have been made previous to my invention.

Having thus fully described my invention, I claim—

1. As a new article of manufacture for use in oil and Artesian wells, tubing provided with rings or safety-thimbles, secured thereto by means of pins, rivets, or the screw-thread of the tubing at the end or terminus of said screw-thread, at a distance from and independent of the ordinary thimbles, substantially as and for the purpose described.

2. In combination with tubing or casing of oil-wells, supporting-rings A A^2, secured as specified, and adapted to sustain tubing, substantially as shown and described.

In testimony that I claim the foregoing as my own I affix my signature in presence of two witnesses.

WILLIAM R. EDELEN.

Witnesses:
J. B. McALLISTER,
F. W. HAYS.