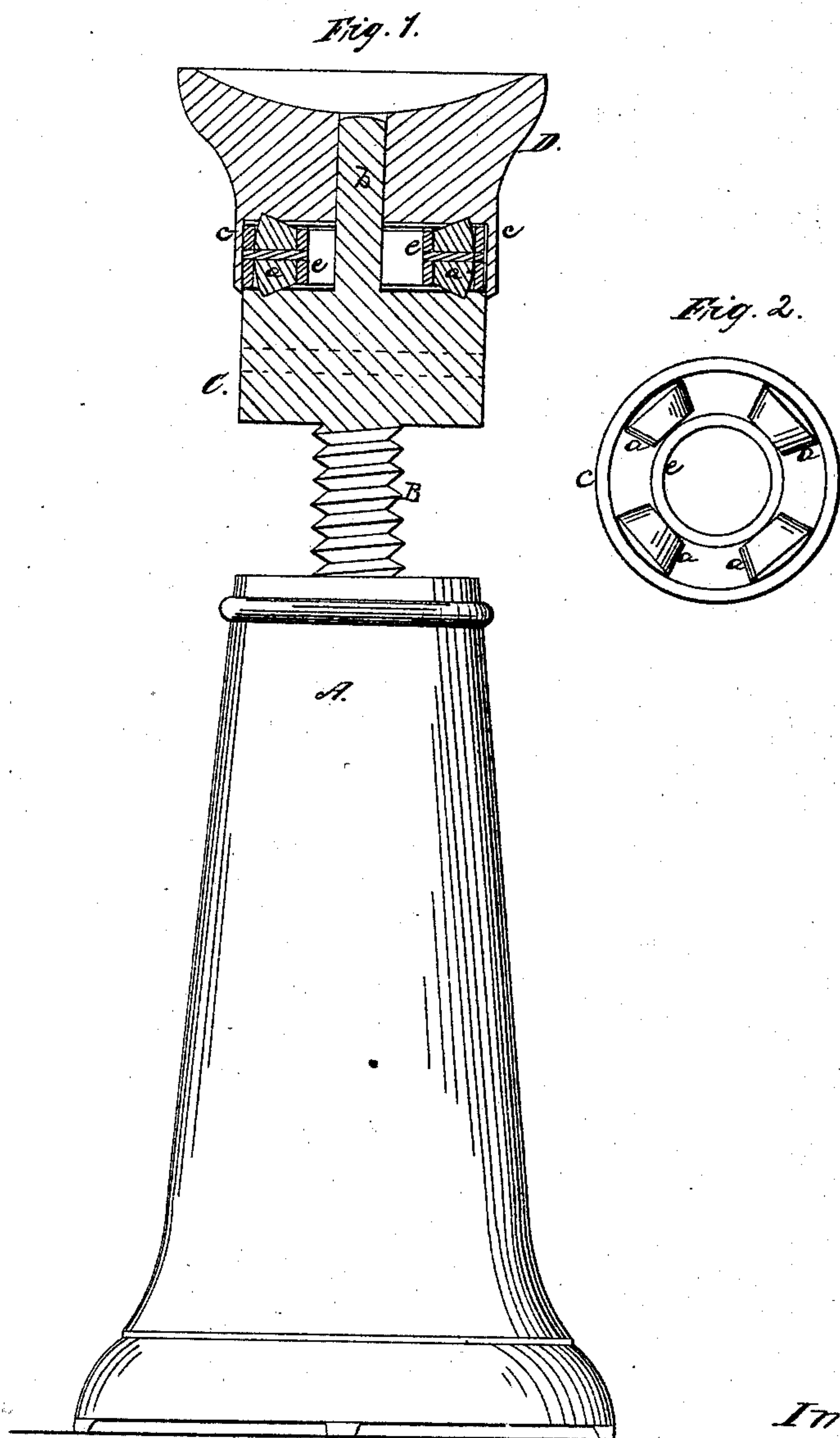


*J. W. Steed,  
Lifting Jack,*

*No 60,080,*

*Patented Nov. 27, 1866.*



*Witnesses:*

*P. J. Dodge  
H. S. Tappan*

*Inventor:*

*J. W. Steed  
By W. C. Dodge  
Attorney.*

# United States Patent Office.

## IMPROVEMENT IN HOISTING JACKS.

J. W. STEED, OF MINNEAPOLIS, MINNESOTA.

*Letters Patent No. 60,080, dated November 27, 1866.*

### SPECIFICATION.

#### TO ALL WHOM IT MAY CONCERN:

Be it known that I, J. W. STEED, of Minneapolis, in the county of Hennepin, and State of Minnesota, have invented certain new and useful Improvements in Hoisting Jacks; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings making part of this specification, and to the letters of reference marked thereon, like letters indicating like parts, wherever they occur. To enable others skilled in the art to construct and use the invention, I will proceed to describe it.

My invention relates to that class of implements used for elevating or lifting heavy weights, usually denominated jack screws; and consists in providing a series of conical friction rollers, interposed between the cap and the shoulder or flange upon the upper portion of the screw, to lessen the friction between the parts.

Figure 1 is a side elevation, with the upper portion shown in section.

Figure 2 is a plan view of the friction rollers mounted in their frame, and detached from the implement.

A represents the body of the jack, which is made of cast iron, usually, and made hollow. B represents a screw fitting into a suitable screw cut for it in the upper portion of the body, A. This screw, B, is provided with a strong projecting block or flange, C, which is attached rigidly to the screw, B, and turns with it; the projection, C, being provided with a series of holes for the insertion of a lever to turn the screw. Upon the projecting flange, C, a series of conical rollers, *a*, mounted in a circular frame, consisting of two rings, *c* and *e*, as shown in fig. 2, are placed, the upper surface of the flange, C, being suitably grooved to form a track for them, as shown in fig. 1. A cap, D, is placed on the rollers, and has its under surface similarly grooved to fit the rollers, *a*; this cap, D, having a hole bored vertically through its centre to receive the stem or journal, *b*, of the screw, which projects, as shown in fig. 1, to keep the cap, D, in place. It will thus be seen that when the jack is placed under any weight to be raised, the whole weight of the object will be thrown upon the rollers *a*, and that by the use of these rollers the screw can be turned with ease.

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

The combination of the cap D, and the screw B, with the flange C, and the conical rollers *a*, arranged and operating substantially as and for the purpose set forth.

J. W. STEED.

Witnesses:

J. C. WILLIAMS,

JOSIAH ESPY.