

C.F. Woodruff's Wheel & Axle.

PATENTED
FEB 4 1868

74186

Fig. 1.

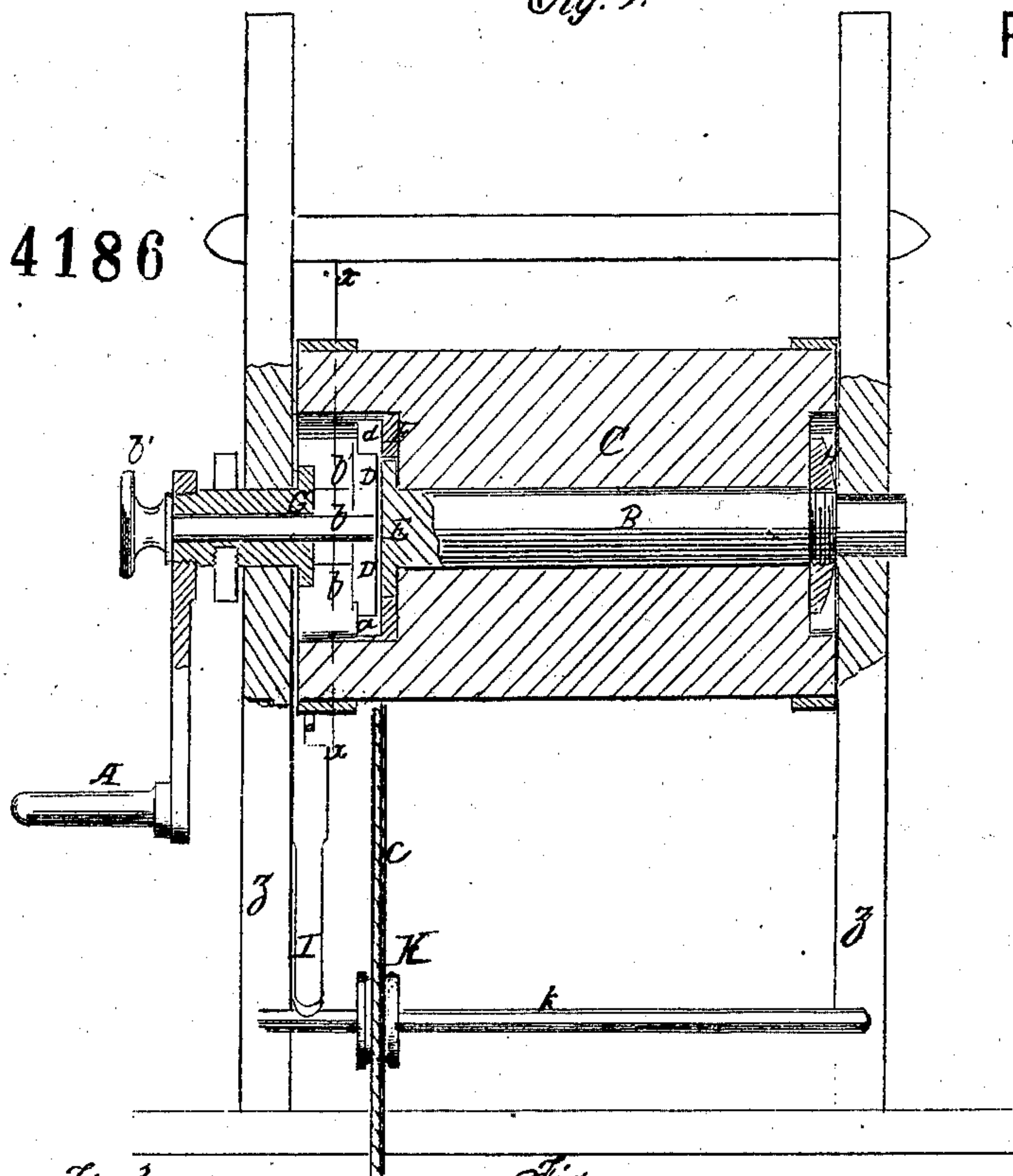


Fig. 3.

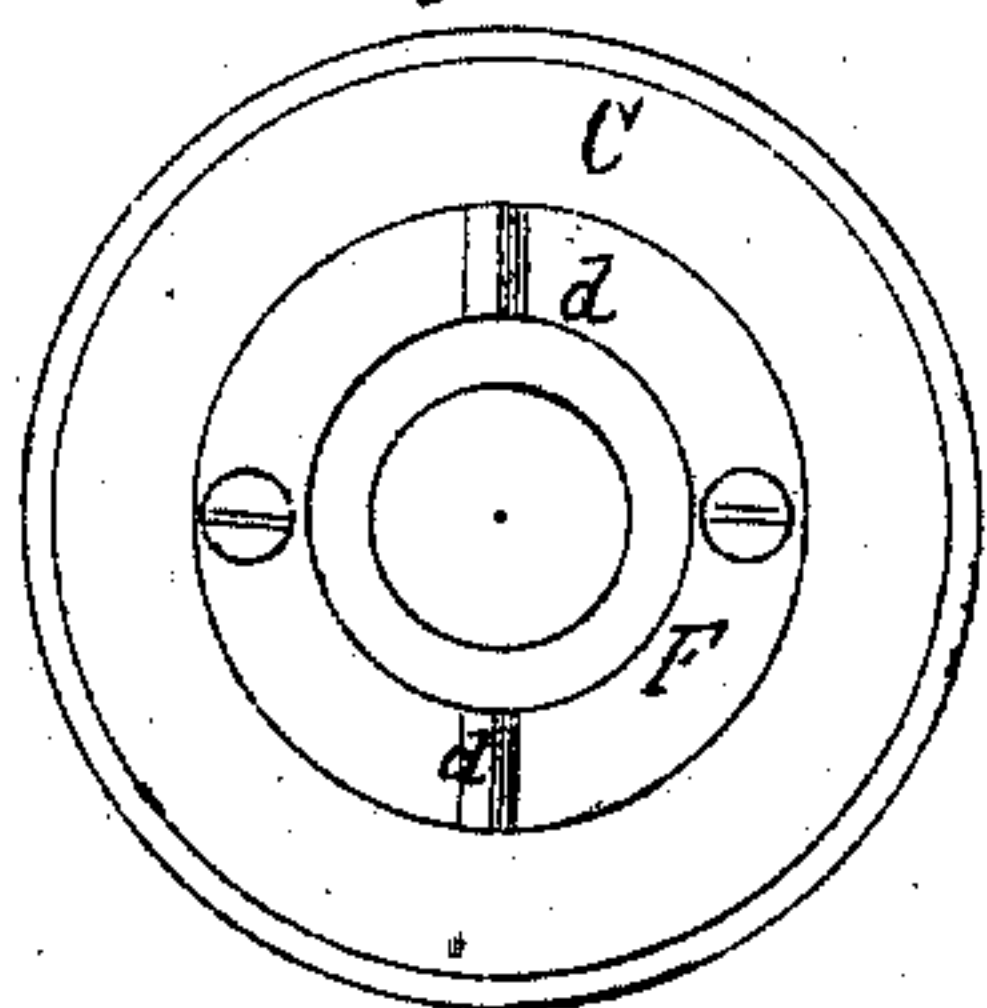


Fig.

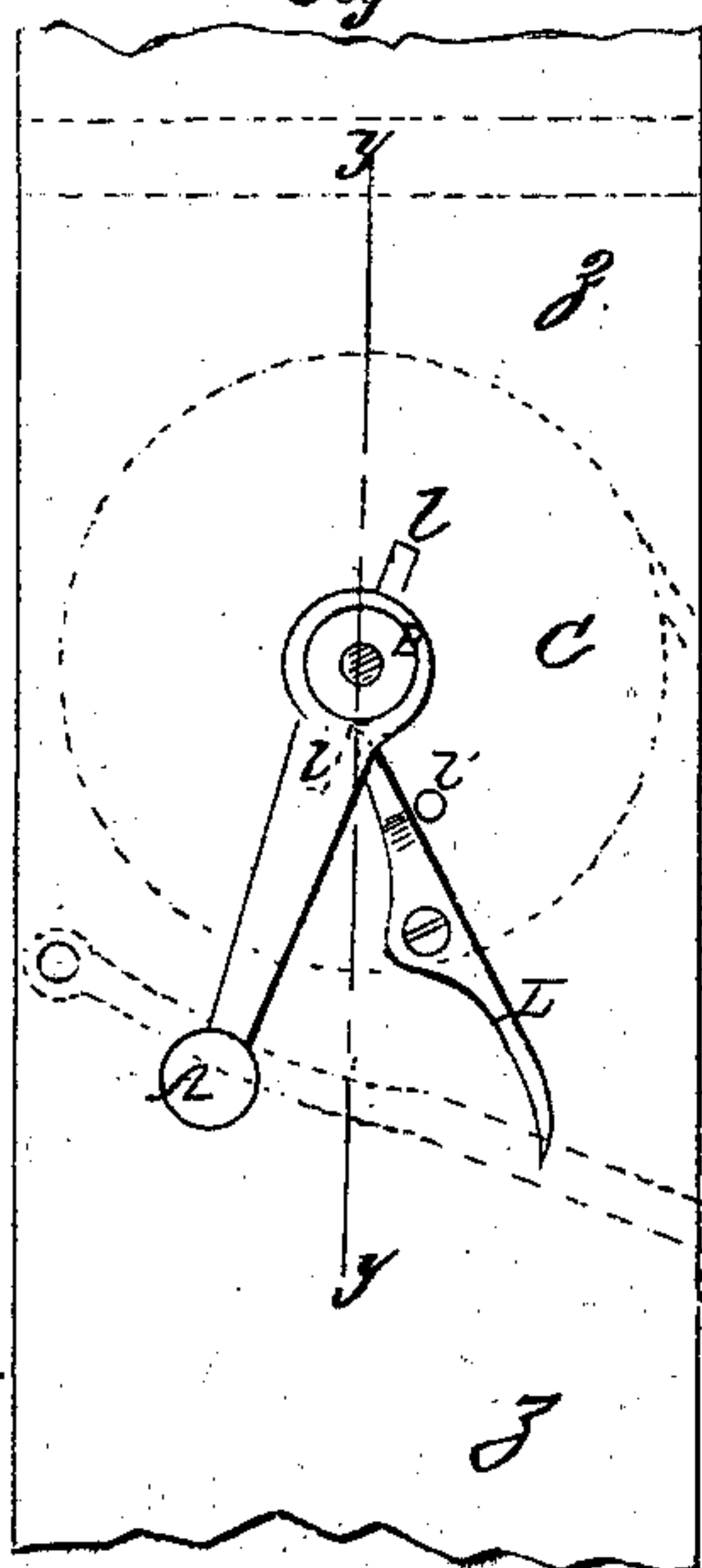
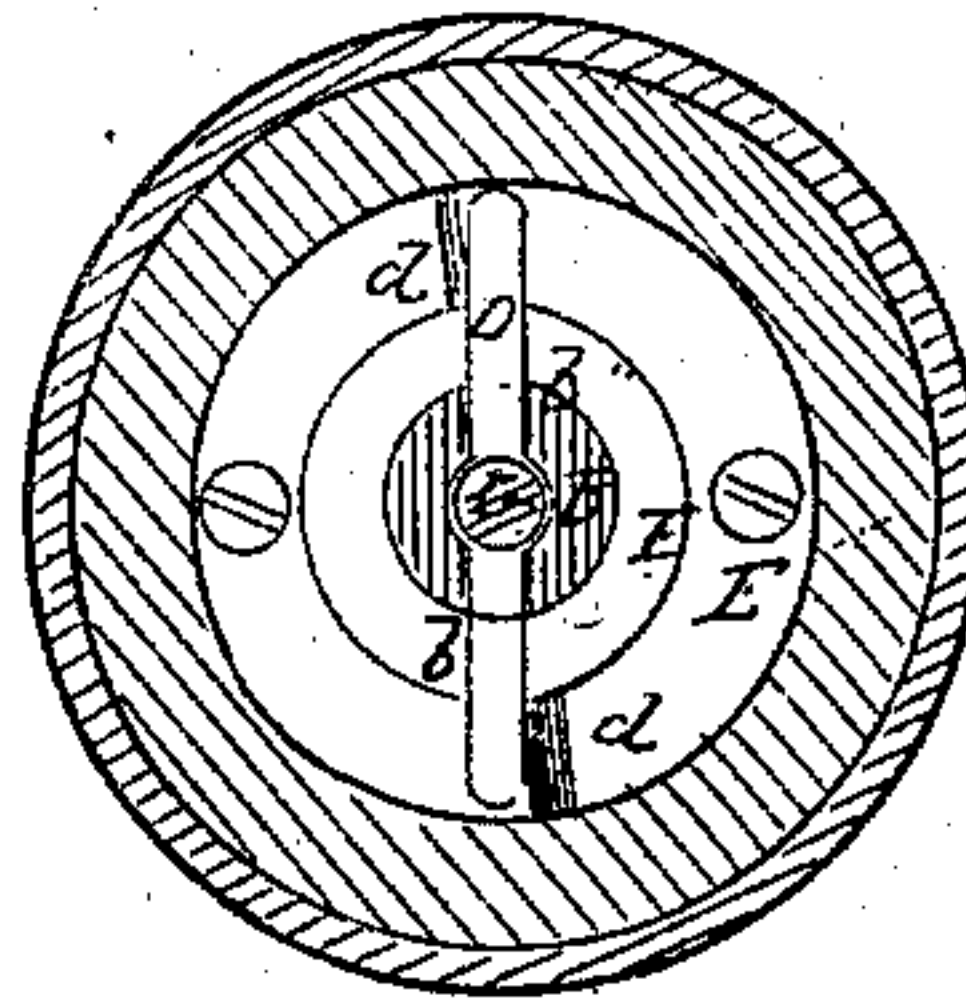


Fig. 4.



Witnesses.
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C. F. WOODRUFF, OF NEWBERN, TENNESSEE.

Letters Patent No. 74,186, dated February 4, 1868.

IMPROVEMENT IN WATER-ELEVATORS.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that I, C. F. WOODRUFF, of Newbern, in the county of Dyer, and State of Tennessee, have invented a new and improved Wheel and Axle; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable those skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification.

This invention relates to an improved wheel and axle, and is specially applicable to the raising of water from wells. It consists mainly of a drum, round which the rope coils, and through the axis whereof the axle passes, which can be connected and disconnected at pleasure, so as to enable the bucket to descend without the crank being revolved. In the accompanying drawings—

Figure 1 is a vertical section of my improved wheel and axle, at line *y y* of

Figure 2, which is a side view thereof

Figure 3 is a side view of drum, and

Figure 4 is a section thereof at line *x x* of fig. 1.

Similar letters of reference indicate corresponding parts.

A is the crank, B the axle, C the drum, set upon the axle B, and on which coils the rope *c*, to which the bucket or weight is attached. A shaft *b*, having a thumb-piece, *b'*, passes into the axle B, and screws into the bar D, which passes through the slot *b''* in the axle B. A disk, E, may be used, fitting into the ring F, and another disk, G, serves to hold the axle to its place, while the nut H, screwing on to the worm *h*, near the other extremity of the axle, serves the like purpose.

To operate the wheel and axle, the handle or thumb-piece *b'* is pressed in, carrying the bar D down the slot *b''* until it clutches the stops *d d*, cast upon the ring F. To release the drum without revolving the crank A, the thumb-piece *b'* is drawn out, unclutching the drum, which is then free to revolve, allowing the weight or bucket to descend, its velocity being regulated at pleasure by the break I, or the drum C may be connected with and disconnected from the axle B by any equivalent device.

K is a free pulley, set on the axle *k*, to carry the bucket away from the frame *z* down the well or other desired direction. L is a pawl, acting on the stops *l l'* to prevent the crank from flying back while connected with the drum.

I claim as new, and desire to secure by Letters Patent—

The shaft *b*, working in the axle B, having the bar D at its extremity, working through the slot *b''*, clutching the drum C by the stops *d*, in manner substantially as above set forth and described.

C. F. WOODRUFF.

Witnesses:

G. B. TINSLEY,

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