

H. C. HAVEMEYER.
Improvement in Suspended Lifting Jacks.
No. 120,275. Patented Oct. 24, 1871.

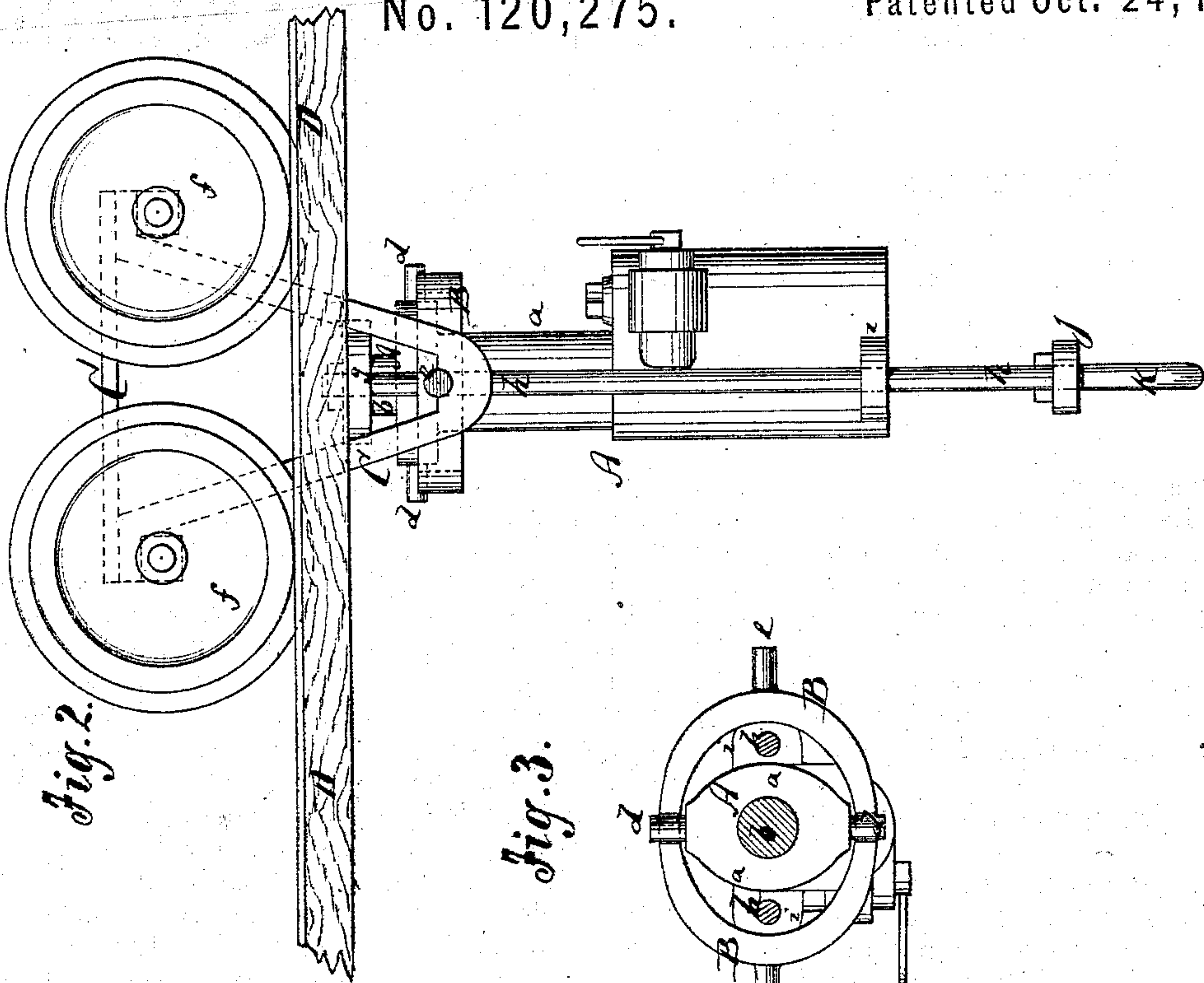
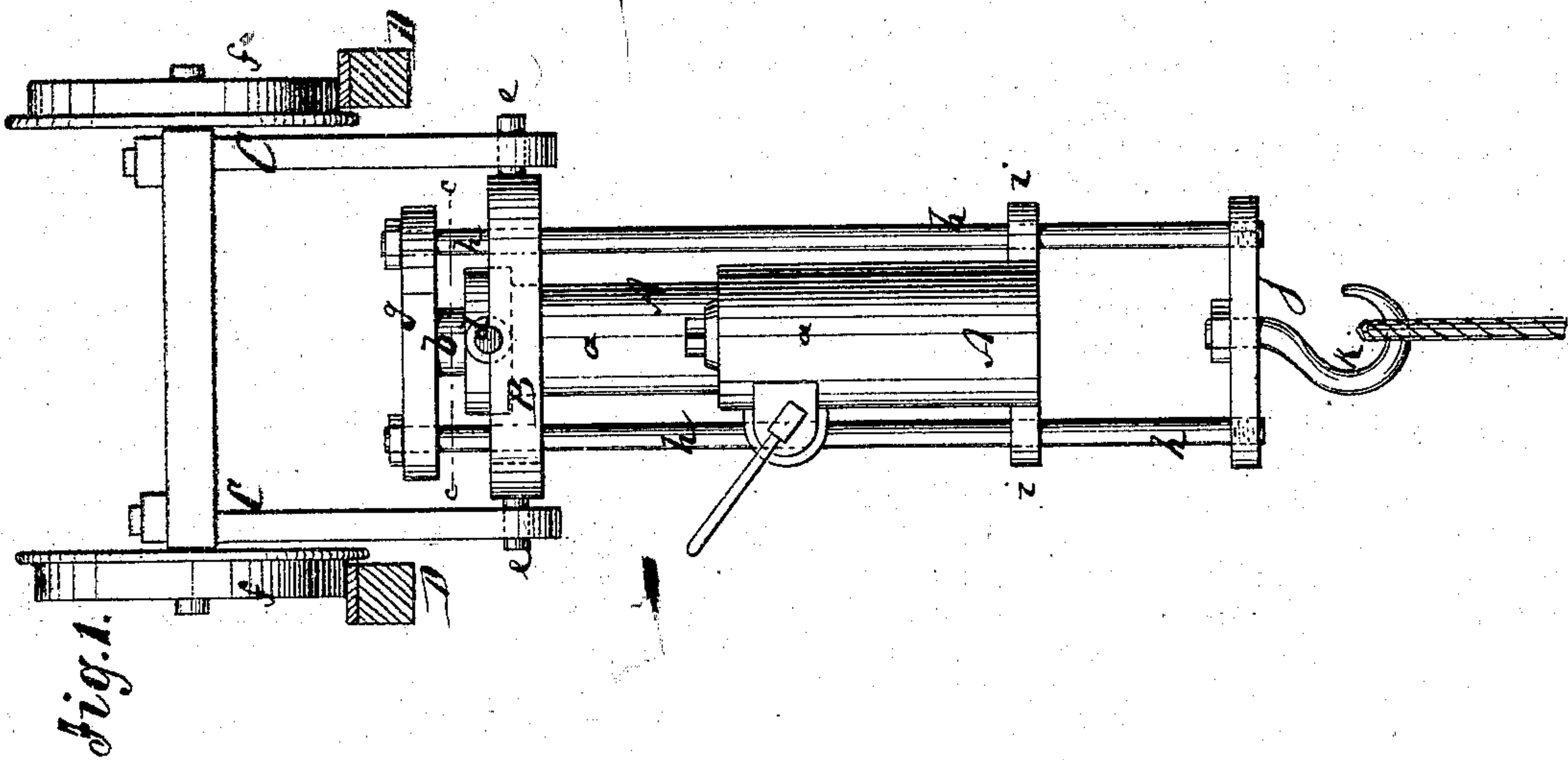
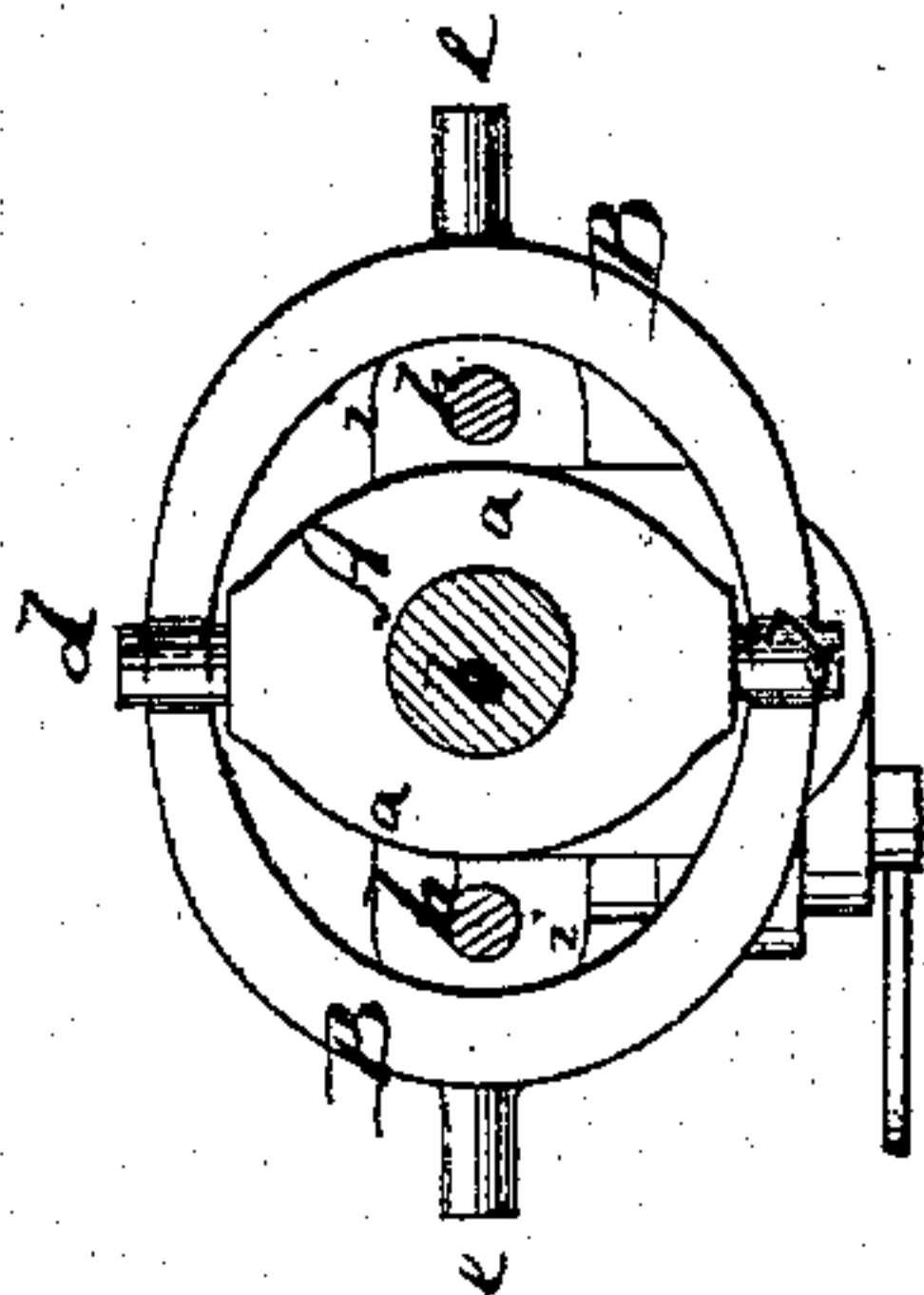


Fig. 3.



Witnesses:

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IMPROVEMENT IN SUSPENDED LIFTING-JACKS.

Specification forming part of Letters Patent No. 120,275, dated October 24, 1871.

To all whom it may concern:

Be it known that I, HECTOR C. HAVEMEYER, of the city, county, and State of New York, have invented certain Improvements in Suspended Lifting-Jacks, of which the following is a specification:

Figure 1 represents a front view of my improved lifting-jack. Fig. 2 is a side view of the same. Fig. 3 is a transverse section of the same on the line *c c*, Fig. 1.

Similar letters of reference indicate corresponding parts.

This invention relates to a new manner of applying hydraulic lifting-jacks, with the object of using them in warehouses, magazines, sugar-houses, shops, &c., for holding goods, hogsheads, or other devices, suspended and conveying the same along elevated tracks from one to another part of the buildings. The invention consists in suspending the lifting-jack from a truck running on an elevated track; in providing it with guide-rods and a lower cross-piece, whereby it is adapted to the suspended position and to the operation of lifting goods from the floor; and in the application to it of a universal joint, allowing it to swing in either direction without running the truck off the rails or springing the plunger.

A in the drawing represents a hydraulic jack of ordinary or suitable internal structure, *a* being its outer case and *b* the inner slide or plunger. To the upper end of the case *a* is secured a pair of projecting pins or trunnions, *d d*, which have their bearings in a ring, B. This ring has projecting pins *e e* at right angles to the pins *d*, but nearly in the same plane as the same. The pins *e* have their bearings in the pendent frame of a truck, C, whose wheels *f* stand on an elevated

track, D, as close to the ceiling of the establishment as practicable. The jack is in this manner suspended from the truck by a universal joint, and can swing in either direction on the pins *d d* and *e e*. To a projecting head, *g*, which is attached to the upper end of the sliding part *b*, are secured vertical rods *h h*, of proper strength. They pass through perforated ears *i i* projecting from the sides of the case *a*, and hold under the lifting-jack a cross-piece, *j*, to which a hook, *k*, or equivalent implement, is secured.

When the jack is operated it will elevate the slide *b* in the case *a*, and thereby, also, the rods *h*, cross-piece *j*, and hook *k*. Any article fastened to the hook can thus be elevated above the floor, and held suspended from the jack and truck, and may, with the latter, be conveniently conveyed on the track D. A very economical, powerful, and simple means of conveying heavy goods is thus provided.

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

1. The hydraulic jack provided with the rods *h h*, cross-piece *j*, and hook *k*, substantially as specified.

2. The lifting-jack, provided with the projecting trunnions *d d* and combined with the ring B having the pins *e e*, substantially as described, so that a universal joint is thus produced, for the purpose specified.

3. The combination of a hydraulic jack with the ring B and truck C, to operate substantially as herein shown and described.

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Witnesses:

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