

(No Model.)

A. H. MOYES.
SCREW JACK.

No. 563,608.

Patented July 7, 1896.

Fig. 4

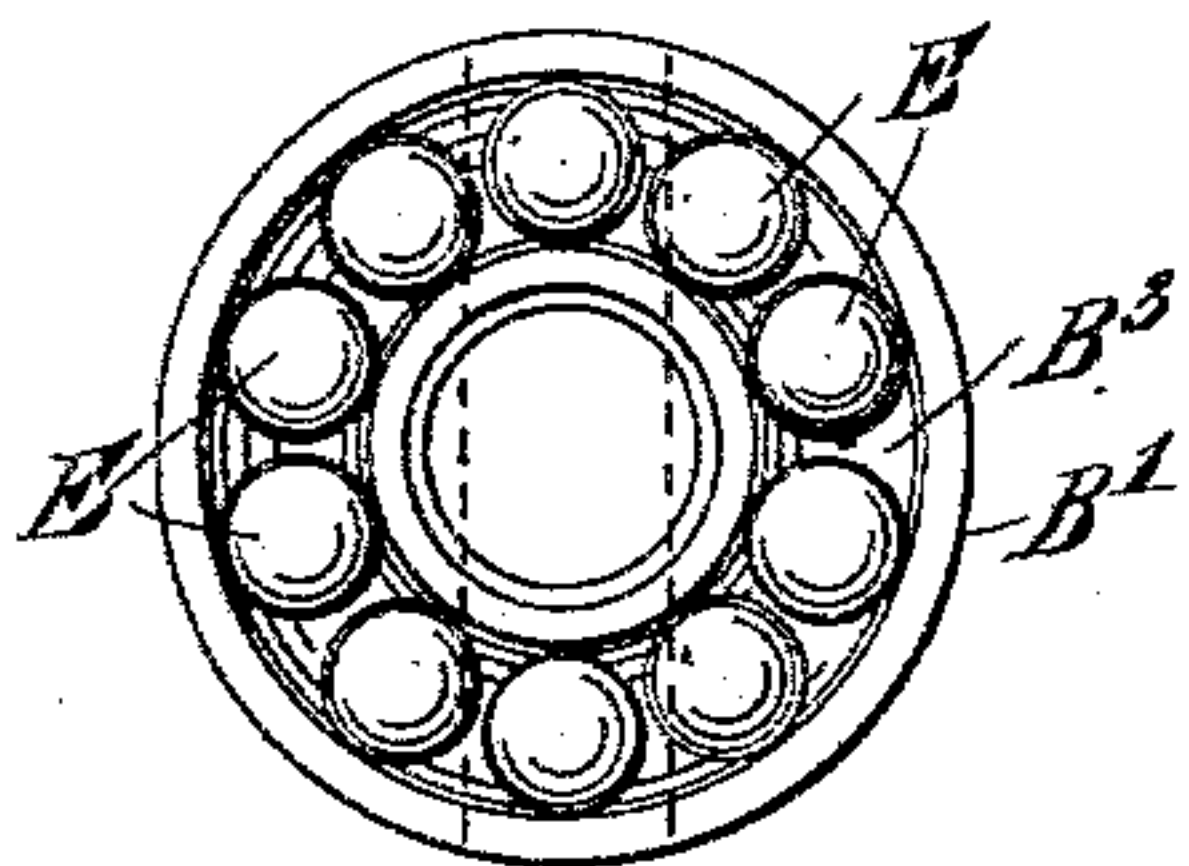


Fig. 2

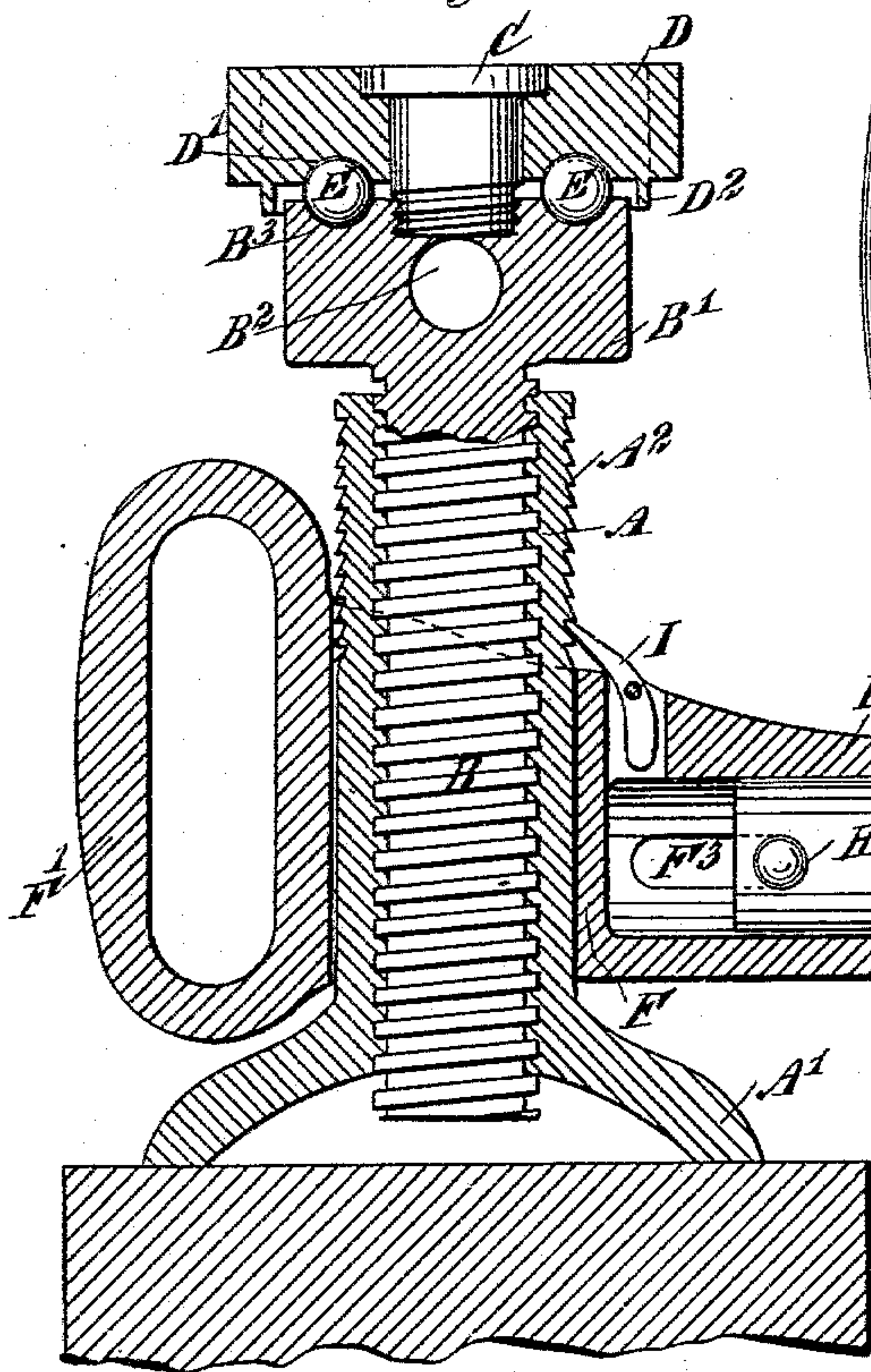


Fig. 1

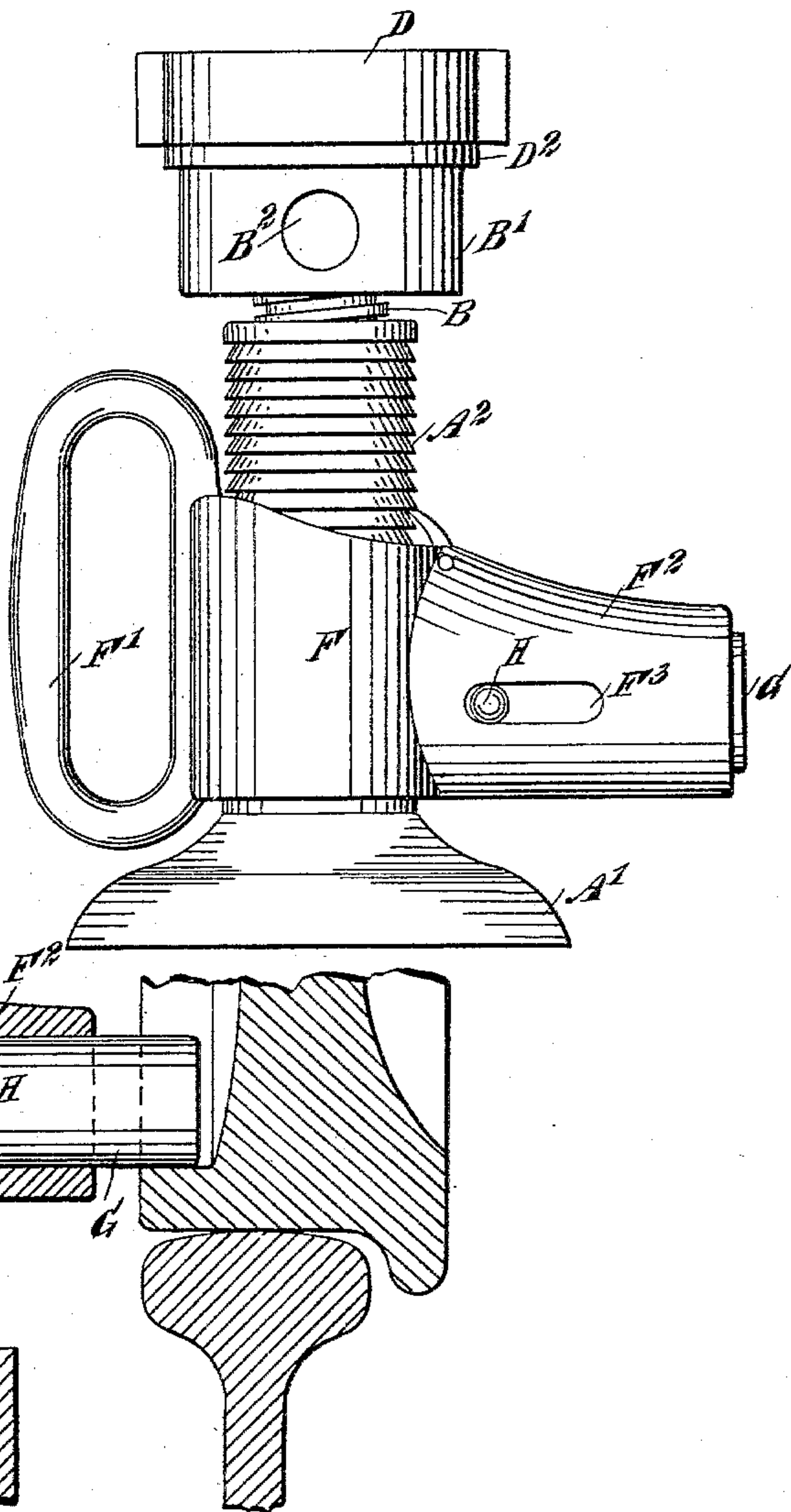
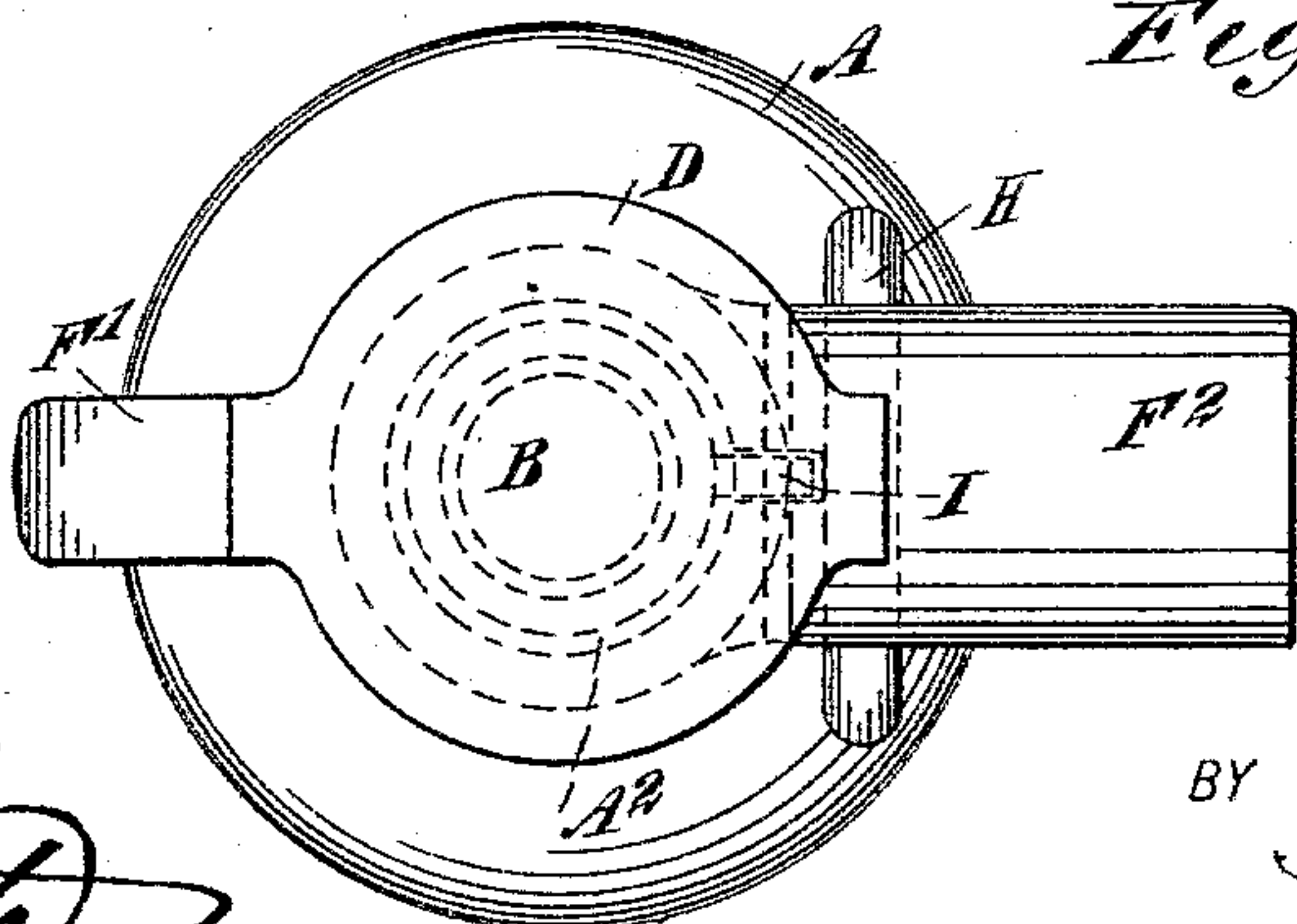


Fig. 3



WITNESSES:

C. Neveu

Geo. F. Howard

INVENTOR

A. H. Moyes

BY

Munn & Co

ATTORNEYS.

UNITED STATES PATENT OFFICE.

ALEXANDER HILL MOYES, OF OGDEN, UTAH, ASSIGNOR, BY DIRECT AND MESNE ASSIGNMENTS, TO THE OGDEN TRAIN-JACK AND MANUFACTURING COMPANY, OF SAME PLACE.

SCREW-JACK.

SPECIFICATION forming part of Letters Patent No. 563,608, dated July 7, 1896.

Application filed November 2, 1895. Serial No. 567,698. (No model.)

To all whom it may concern:

Be it known that I, ALEXANDER HILL MOYES, of Ogden, in the county of Weber and Territory of Utah, have invented a new and Improved Screw-Jack, of which the following is a full, clear, and exact description.

The object of the invention is to provide a new and improved jack which is simple and durable in construction, very effective in operation, and more especially designed for use on railroad-cars for conveniently jacking up cars, engines, journal-boxes, and other articles and devices.

The invention consists of certain parts and details and combinations of the same, as will be fully described hereinafter, and then pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures.

Figure 1 is a side elevation of the improvement. Fig. 2 is a sectional side elevation of the same on the line 2 2 of Fig. 3 and as applied for holding the wheel down on the rail. Fig. 3 is a plan view of the same; and Fig. 4 is a plan view of a head of the screw-post, showing the ball-bearing.

The improved screw-jack is provided with a casing A, preferably made cylindrical and provided at its lower end with a base A', adapted to rest on the ground, railroad-tie, or other suitable support. The casing A is formed with an interior screw-thread engaged by a threaded post B, formed at its upper end with a head B', provided with the usual transverse openings B², adapted to be engaged by a lever or by another suitable tool for conveniently turning the screw-post B up or down in the casing A.

In the top of the head B' is secured a pivot-pin C, on which is mounted to turn a cap D, adapted to engage the article to be lifted, the said cap being provided on its under side with an annular groove D', engaging the top of balls E, held in an annular groove B³, formed in the top of the head B'. By this arrangement a ball-bearing is interposed between the head B' and the cap D, so that the screw-post B can be conveniently screwed up

or down in the casing A, thus reducing the friction to a minimum.

In order to prevent dust from passing to the ball-bearing, I provide the under side of the cap D with an annular flange D², fitting over the upper end of the head B', as is plainly illustrated in Fig. 2.

On the casing A is fitted loosely a sleeve F, provided on one side with a handle F' for conveniently carrying the screw-jack about and for turning the said sleeve on the casing A whenever it is desired to hold a wheel down to the rail, as indicated in Fig. 2.

On the sleeve F is formed an extension F², located opposite the handle F' and containing a pin or bolt G, adapted to be moved outward to engage the inside of the rim of the car-wheel, as is plainly shown in Fig. 2. On the bolt G is secured a transversely-extending pin H, passing through longitudinal slots F³, formed in the sides of the extension F², so as to prevent the bolt G from turning. The pin H extends beyond the sides of the extension F² to permit the operator to conveniently take hold of the said pin to shoot the bolt G outward or back into an innermost position, as illustrated in Fig. 1.

In the extension F² is fulcrumed a weighted pawl I, adapted to engage one of a series of circular teeth A², formed on the outside of the casing A to lock the sleeve F and bolt G in a lowermost position at the time the said bolt G engages the inside of the wheel-rim, as shown in Fig. 2.

By the arrangement described the sleeve F can be conveniently moved up or down on the casing A, so as to bring the bolt G into the proper position to engage the inside of the wheel-rim.

The operation is as follows: When it is desired to raise an object, the screw-post B is moved into a lowermost position to bring the cap D under the article to be raised, and then the operator turns the head D', as previously described, to screw up the screw-post B in the casing A. The cap D, in engaging the under side of the article to be raised, remains stationary during the rest of the operation, as the screw-post, by the interposed ball-bearing, will readily rotate without rotating the

cap D, and at the same time the friction between the turning screw-post and the now stationary cap D is reduced to a minimum.

Owing to the arrangement described for holding the wheel down to the rail, it is not necessary to use blocks and similar devices, as are now employed.

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

1. A jack, comprising a casing, a lifting device carried thereby, a transverse sleeve held on the casing at an invariable angle thereto, and a pin slidable in said sleeve toward and from the casing, the free end of the pin being adapted to engage a car-wheel, substantially as described.

2. A jack provided with a casing, a sleeve held loosely on said casing, a bolt held in said sleeve and adapted to engage the wheel-rim to hold the wheel down on the rail while jacking up the journal, and a pawl held on said sleeve and adapted to engage one of a series of circular teeth formed on the exterior of the said casing, substantially as shown and described.

3. A screw-jack comprising a casing provided with a base and formed with an interior screw-thread and exterior circular threads, a screw-post screwing in the said casing and provided at its upper end with a head, a cap

mounted to turn on the said head, a ball-bearing interposed between the cap and head, a sleeve held loosely on the said casing and provided with a handle and an extension, and a bolt fitted to slide in the said extension and adapted to engage the inside of the wheel-rim to hold the wheel down on the rail while jacking up the journal-boxes, substantially as shown and described.

4. A screw-jack comprising a casing provided with a base and formed with an interior screw-thread and exterior circular threads, a screw-post screwing in the said casing and provided at its upper end with a head, a cap mounted to turn on the said head, a ball-bearing interposed between the cap and head, a sleeve held loosely on the said casing and provided with a handle and an extension, a bolt fitted to slide in the said extension and adapted to engage the inside of the wheel-rim to hold the wheel down on the rail while jacking up the journal-boxes, and a weighted pawl pivoted on the sleeve and adapted to engage one of the said exterior circular threads on the casing, substantially as shown and described.

ALEXANDER HILL MOYES.

Witnesses:

T. D. JOHNSON,

WILLIAM BUSH COURTNEY.

*