

J. DIXON.

JACK.

APPLICATION FILED OCT. 14, 1909.

959,320.

Patented May 24, 1910.

2 SHEETS—SHEET 1.

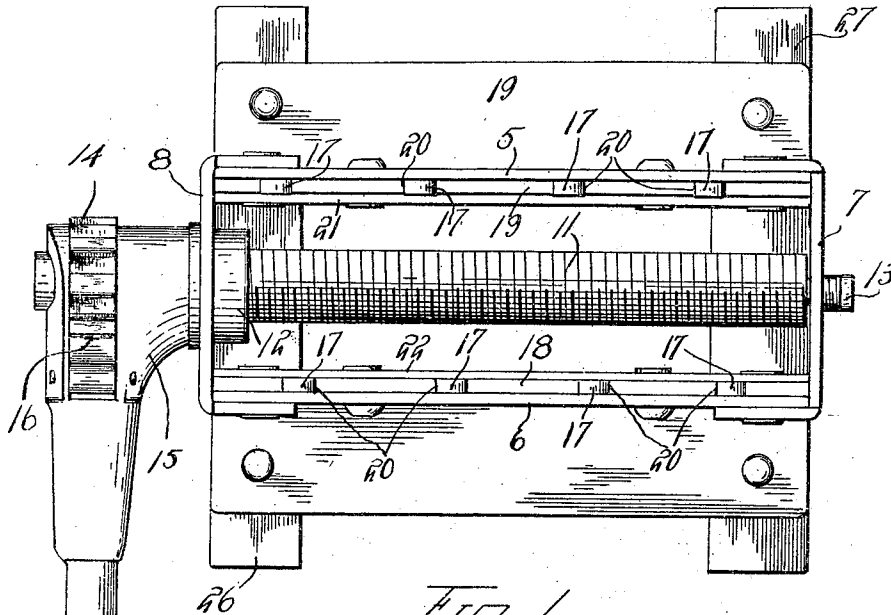


Fig. 1.

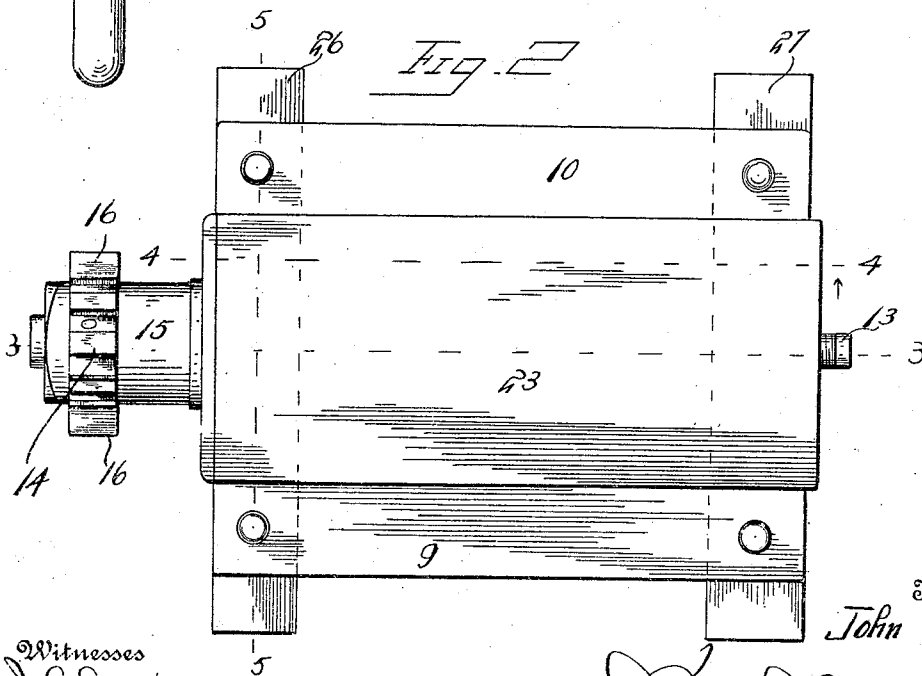


Fig. 2.

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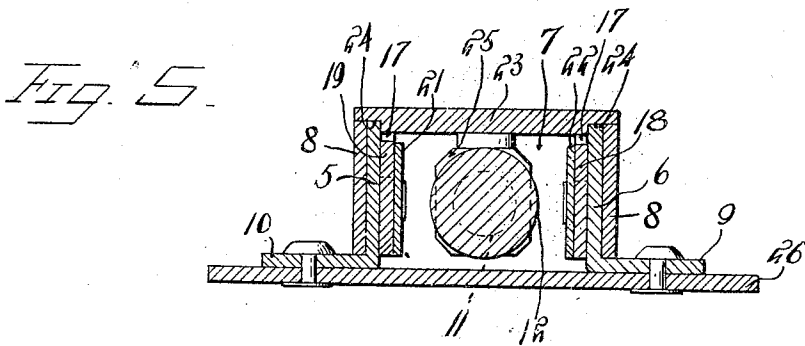
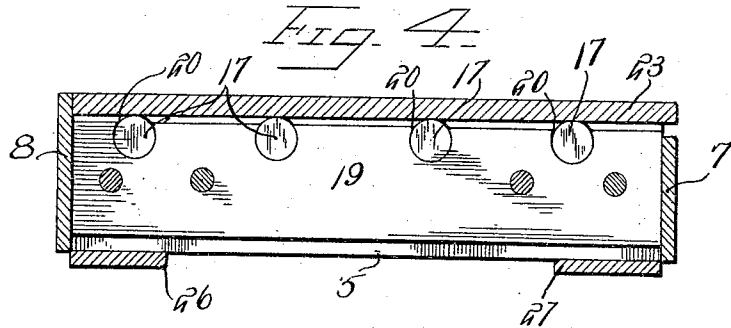
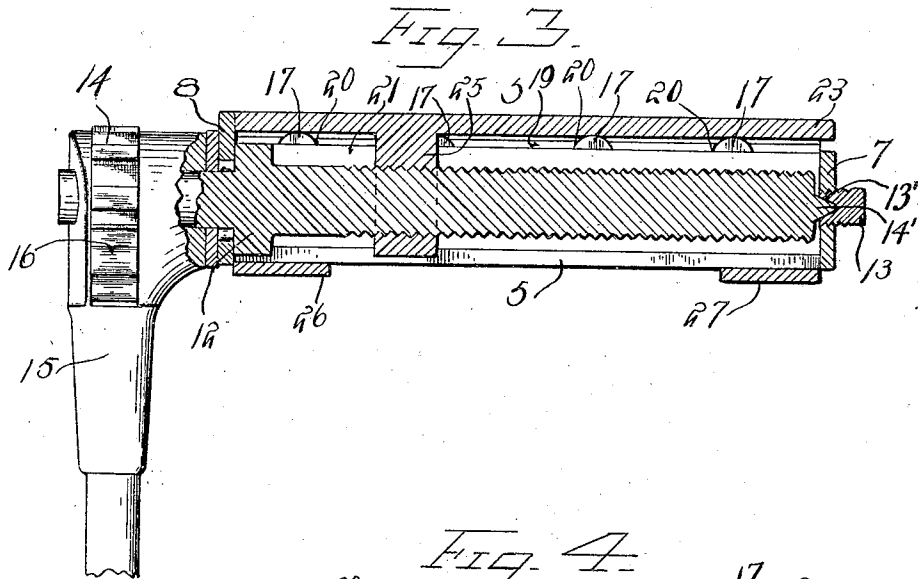
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UNITED STATES PATENT OFFICE.

JOHN DIXON, OF WEST BADEN, INDIANA.

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959,320.

Specification of Letters Patent.

Patented May 24, 1910.

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To all whom it may concern:

Be it known that I, JOHN DIXON, a citizen of the United States, residing at West Baden, in the county of Orange, State of Indiana, have invented certain new and useful Improvements in Jacks; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to improvements in jacks and has particular reference to a device of that kind usually employed for shifting a heavy body such as a locomotive or a car, laterally, after the said locomotive or car has been raised vertically.

The principal object of the invention is the provision of a jack provided with roller bearings upon which the shiftable platform bears, thus reducing the great amount of friction which would naturally exist were the platform to slide on a track.

With the above and other objects in view as will more fully hereinafter appear, the present invention consists in certain novel details of construction and arrangement of parts, hereinafter fully described, illustrated in the accompanying drawings and more particularly pointed out in the appended claims; it being understood that various changes in the form, proportion, size and minor details of the device may be made without departing from the spirit or sacrificing any of the advantages of the invention.

In the accompanying drawings forming part of the specification:—Figure 1 is a plan view of the device with the platform removed. Fig. 2 is a similar view with the platform in position. Fig. 3 is a longitudinal sectional view approximately on the line 3—3 of Fig. 2. Fig. 4 is a similar view on the line 4—4 of Fig. 2. Fig. 5 is a transverse sectional view on the line 5—5 of Fig. 2.

Similar numerals of reference are employed to designate corresponding parts throughout.

The frame upon which the platform is mounted for sliding movement is rectangular in contour and consists of the side plates 5 and 6, the opposite ends of which are connected by the end plates 7 and 8. These parts are all of metal and the frame may be cast as an integral structure or the

opposite ends of the side and end plates may be riveted together. As shown in the drawings the widths of the side plates 5 and 6 are considerably greater than the widths of the end plates 7 and 8, and at points in alinement with the lower edges of the end plates the side plates are bent longitudinally and at right-angles, whereby supporting flanges 9 and 10 are provided being approximately the same in width as the end plates 7 and 8.

An actuating bolt or screw 11 has one end journaled in the front end plate and extends through the said end plate, the portion of said screw lying adjacent the inner face of the end plate being provided with a bushing 12 arranged to bear on the inner face of the end plate and serving to prevent endwise movement of the screw in one direction. Threaded into the opposite end plate and in direct alinement with the axis of the actuating bolt or screw is a bearing screw 13, the terminal of which is blunt and has formed therein a conical socket 13' which receives the adjacent tapered end 14' of the actuating screw.

With this construction it is obvious that a cone bearing will be provided for the screw, thus facilitating the turning operation of the latter. That portion of the actuating bolt or screw extending through one of the end plates is provided adjacent its free end with a ratchet wheel 14 and journaled on the said projecting portion of the actuating bolt or screw is an operating handle 15. The handle 15 is provided with a pair of oppositely arranged spring pressed pawls 16 adapted to engage with the ratchet wheel 14 and when so engaging to impart a turning movement to the actuating bolt or screw when power is applied to the operating handle.

The bearing surface for the sliding or shifting platform will now be described. By referring to the drawings it will be seen that arranged on the opposed inner faces of the side plates 5 and 6 are a plurality of roller bearings. These members are arranged in staggered relation, that is to say, that the roller bearings on one side plate will not be in direct alinement with those on the opposite side plate, whereby the tendency of the platform to kink while supporting a heavy load during the jacking operation, will be prevented. The rollers are designated by the numeral 17 and are held in position by

a pair of bed plates 18 and 19. These members are formed of single pieces of metal and are riveted or otherwise secured to the inner faces of the side plates 5 and 6 with their upper longitudinal sides lying considerably below the upper longitudinal sides of the side plates 5 and 6. The bed plates 18 and 19 are provided with a plurality of spaced sockets 20. The sockets 20 are substantially three quarters round and open through the upper longitudinal sides of the bed plates. The rollers 17 are flat disks of diameters a trifle less than the diameters of the sockets so that when positioned in the latter a portion of the periphery of each roller will extend above the upper longitudinal side of the bed plate. The rollers are held against displacement by means of a pair of straps 21 and 22 riveted or otherwise secured to the inner faces of the bed plates with their upper longitudinal sides rising to points adjacent the upper longitudinal sides of the bed plates.

The shiftable or sliding platform is designated by the numeral 23 and is preferably formed of a single piece of metal of greater width than the width of the frame and corresponding in length to the length of the latter. The supporting platform is on its lower face, and adjacent its opposite longitudinal edges provided with under-cuts 24. The lower faces of these under-cuts overhang the side plates 5 and 6, whereby the lower face of the platform will bear on the rollers 17.

Depending from the medial portion and located adjacent that end of the platform adjacent the operating handle 15 is a screw nut 25 which receives the threaded portion of the actuating bolt or screw 11. The threads of the actuating bolt or screw and screw nut are such that when the actuating bolt or screw is turned in one position the platform will move bodily outward from the frame and when turned in the opposite direction, the platform will move over and on to the frame.

A pair of bearing feet 26 and 27 are located adjacent the opposite ends of the frame

and extend beyond the edges of the flanges 9 and 10. These bearing feet are preferably formed of single pieces of metal and by virtue of their lengths increase the area of the bearing surface of the jack and prevent the latter from toppling.

From the foregoing it can be seen that I have provided a device which is exceedingly simple in construction and comparatively inexpensive to manufacture, embodying few parts and these so arranged that the danger of derangement will be reduced to a minimum.

What is claimed as new, is:—

1. In a jack of the class described, a supporting frame, an actuating screw journaled in the opposite ends of said frame, rollers carried by the sides of the frame, the rollers upon one side being out of alignment with the rollers upon the opposite side, and a platform connected with the actuating screw and movable longitudinally of said frame with its lower face bearing on said rollers and upon the upper edges of the frame sides.

2. In a jack of the class described, a supporting frame, an actuating screw having its opposite ends journaled in the opposite ends of said frame, bed plates secured to the opposite inner faces of the sides of said frame, said bed plates being provided with sockets opening through the upper sides of the bed plates, rollers loosely fitted in said sockets with portions on their peripheries extending above the planes of the upper sides of the bed plates, a platform connected with the actuating screw and movable longitudinally of the frame, with its lower face bearing on said rollers, said platform being provided with undercuts forming guides and bearing on the upper edges and inner faces of the frame sides.

In testimony whereof, I affix my signature, in presence of two witnesses.

JOHN DIXON.

Witnesses:

EDGAR D. SPARKS,
THOMAS H. LOVE.