July 19, 1932. H. W. CHAMBERS ET AL 1,868,193

COMBINED LIFT JACK AND DOLLY

Filed May 20, 1931

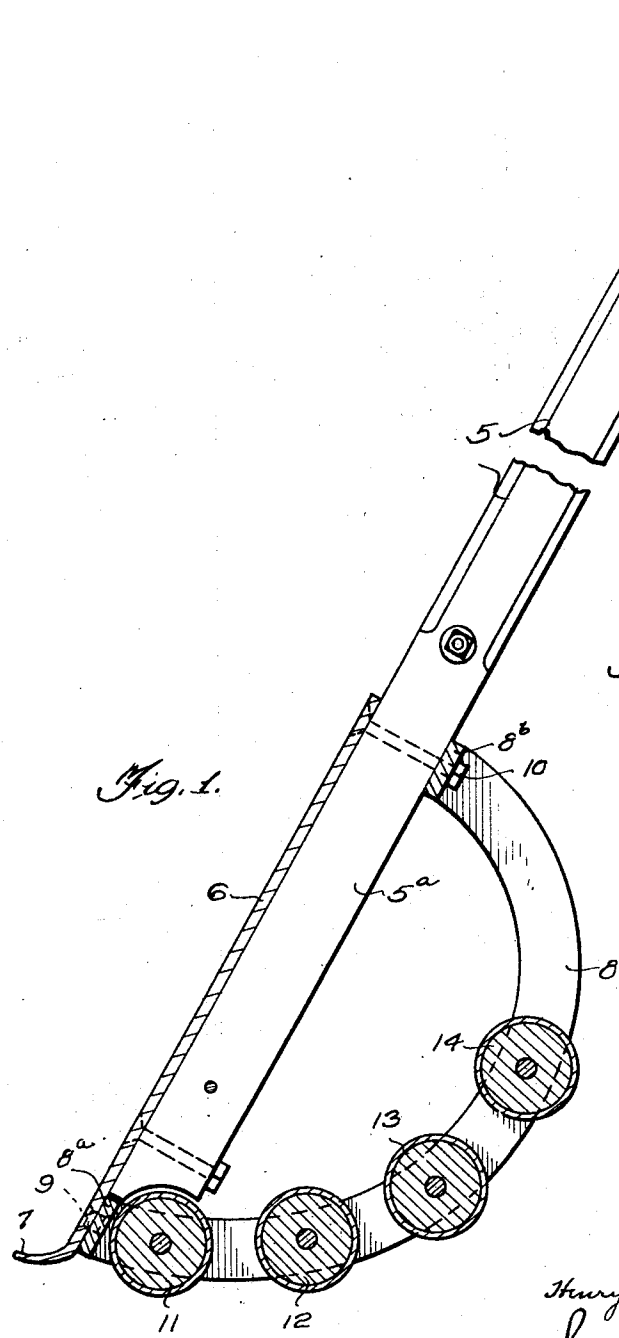


Fig. 1.

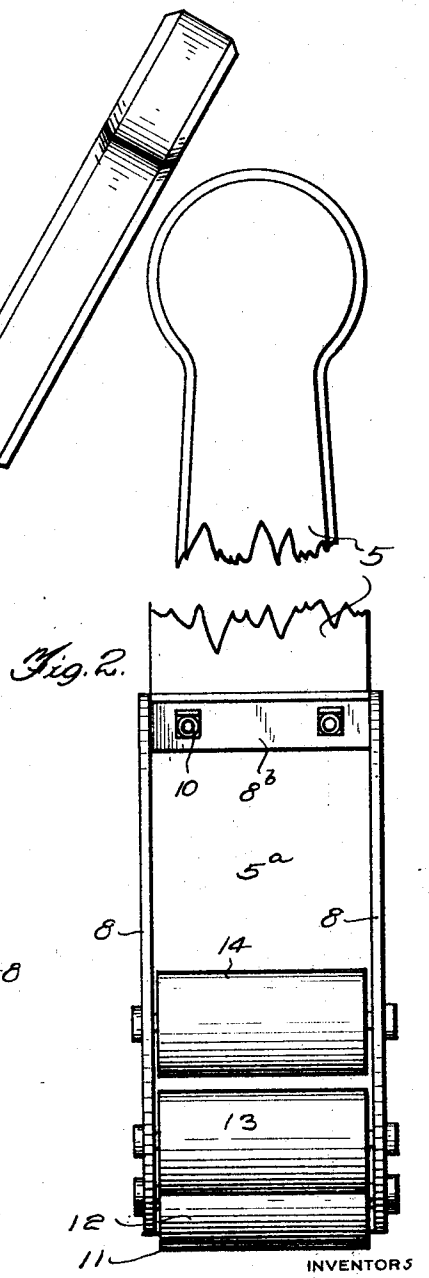


Fig. 2.

INVENTORS

Henry W. Chambers and Andrew Jakobi

BY Samuel Herrick,

ATTORNEY

Patented July 19, 1932 1,868,193

UNITED STATES PATENT OFFICE

HENRY W. CHAMBERS AND ANDREW JAKOBI, OF PHOENIX, ARIZONA

COMBINED LIFT JACK AND DOLLY

Application filed May 20, 1931. Serial No. 538,847.

This invention relates to a combined lift jack and dolly and it has for its object to provide a device of an extremely simple and economical nature by means of which heavy objects may be lifted and thereafter supported upon a roller mounting at a considerable elevation.

Further objects and advantages of the invention will be set forth in the detailed description as follows:

In the drawing:

Figure 1 is a sectional view of the device constructed in accordance with the invention and

Figure 2 is a rear elevation thereof.

The device of the present invention comprises an elongated handle 5 the lower end of which is of block like formation 5*a* and supports a metallic wear plate 6 having a toe 7 at its lower end. A pair of arcuate segments 8 having the cross connecting portions 8*a*, 8*b* are held in place by suitable fastening devices such as rivets 9 and bolts 10.

Transverse rollers 11, 12, 13 and 14 are mounted between the segments 8. In lifting a heavy object the toe 7 is engaged beneath said object and the handle is thrust downwardly with the roller 11 constituting a fulcrum. It will be understood that at the time of engagement of the toe 7 beneath the object to be lifted, the handle lies substantially vertical and the roller 11 is the only one of the rollers which contacts with the ground or floor. It will be observed that this roller 11 is of much smaller diameter than the wheels used upon ordinary stevedore trucks and consequently the leverage is very great.

As the handle is thrust downwardly and the device is worked beneath the article being lifted, the rollers 12, 13 and 14 successively come into contact with the floor or ground until finally the article to be transported rests upon the point of the toe 7 and the inner portion of the wear plate 6 and is supported for rolling movement upon rollers 13 and 14. The device of the present invention then constitutes a dolly upon which such article may be rolled any desired distance.

Where the article to be transported is of considerable width, two or more of these combined lifting jacks and dollies may be employed at each end of the same. It will be observed that the parts are so proportioned and related that when the device is in place the handle may be released and the operator may direct his attention elsewhere, since the structure will rest firmly upon the rollers 13 and 14 and will not require that the operator maintain a hold upon the handle.

It will be observed that the configuration of the parts is such that all of the rollers, except roller 14 is disposed forwardly of the center of the load receiving plate 6, while the roller 14 is disposed rearwardly of the transverse center line of said plate. Thus, the center of gravity of a load disposed upon said plate will be such that when the handle 5 is lowered to nearly horizontal position the load will be substantially equally supported by rollers 13 and 14.

It is to be understood that the invention is not limited to the precise arrangement set forth, because it is clear that many ways will suggest themselves, for assembling the essential parts, without departure from the basic principle, consequently it is to be understood that the invention includes within its purview whatever changes fairly come within either the terms or the spirit of the appended claims.

Having described our invention, what we claim is:

1. A device of the character described comprising an elongated member the upper portion of which constitutes a handle, a plate secured to the lower portion of said member, the lower end of which terminates in a forwardly projecting toe, an arcuate mounting disposed at the rear side of said member of a length to extend from a point adjacent the forward end of said plate to a point adjacent the rear end thereof, and a plurality of transverse rollers carried by said arcuate mounting, said rollers being more than two in number and being substantially equi-distantly spaced from each other, the foremost of said rollers lying adjacent said toe and the last two of said rollers being disposed

on opposite sides of the transverse center of said plate.

2. A device of the character described comprising an elongated member constituting a handle, a plate located at the lower portion thereof, the lower end of said plate terminating in a forwardly projecting toe, an arcuate mounting comprising a pair of spaced substantially semi-circular members connected by cross connecting portions at their front and rear ends, fastening means traversing the plate, the handle, and the rear cross connecting member, fastening elements traversing the plate and the front cross connecting member, and a plurality of rollers between said arcuate members, said rollers being more than two in number, the first of said rollers being disposed relatively close to said toe and the last two of said rollers being disposed at points along said arcuate members which are upon opposite sides of said transverse center line of said plate.

3. A device of the character described comprising an elongated member constituting a handle, a forwardly projecting toe at the lower end of said handle, a pair of arcuate bearing members lying in spaced relation to each other and located at the lower end of the handle and rearwardly thereof, means for securing said arcuate bearing members to the handle, and a plurality of rollers mounted between said arcuate bearing members, said rollers being four in number and being substantially equi-distantly spaced with respect to each other, the foremost of said rollers lying relatively close to said toe, all of said rollers except one lying forwardly of the center of gravity of a load upon the device and the remaining roller lying rearwardly of the center of gravity of a load upon the device.

In testimony whereof we affix our signatures.

HENRY W. CHAMBERS.
ANDREW JAKOBI.