K. HALLEN.

AUTOMOBILE JACK.

APPLICATION FILED AUG. 30, 1913.

1,093,405. Patented Apr. 14, 1914.

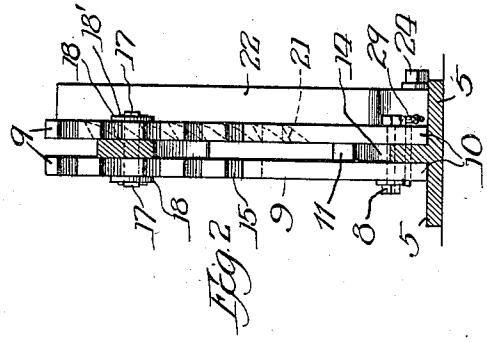


Fig. 2.

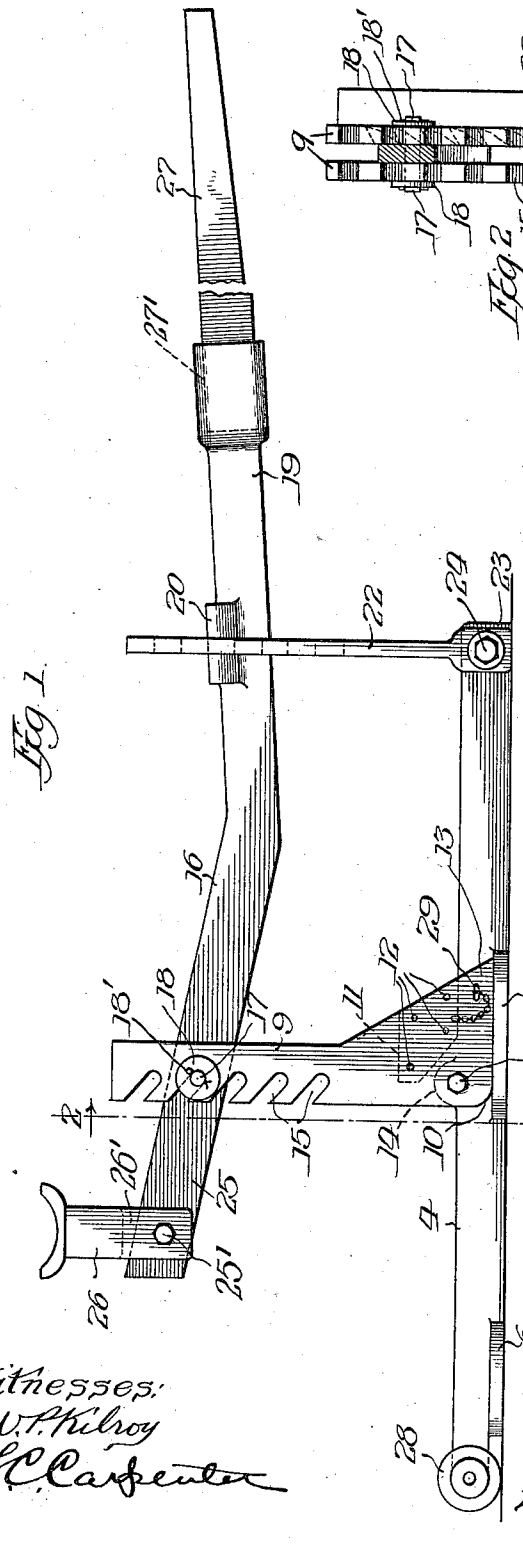


Fig. 1.

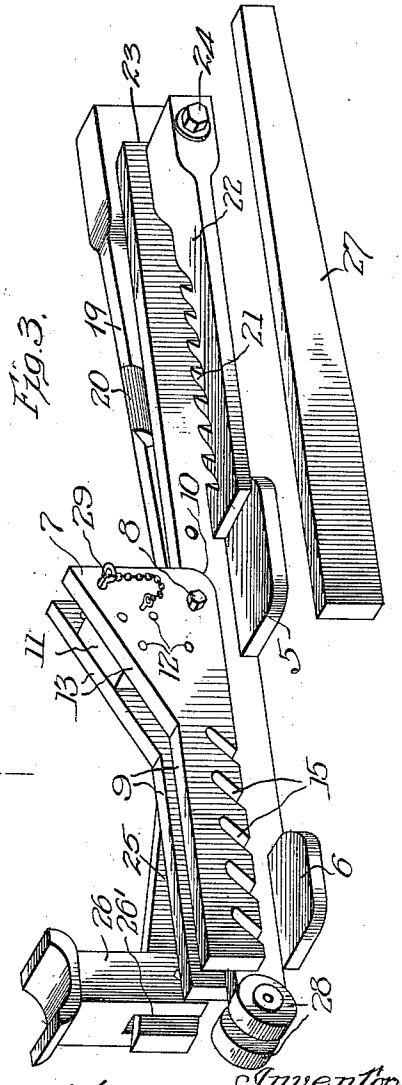


Fig. 3.

Witnesses:
W. F. Kilroy
S. C. Carpenter

Inventor:
Kasper Hallen
By Lothrop & Morgan Fuller
Attys

COLUMBIA PLANOGRAPH CO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

KASPER HALLEN, OF CHICAGO, ILLINOIS.

AUTOMOBILE-JACK.

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To all whom it may concern:

Be it known that I, KASPER HALLEN, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Automobile-Jacks, as set forth in the annexed specification.

My invention relates in general to lifting jacks and more particularly to lifting jacks provided for use in connection with automobiles, wagons and similar vehicles.

One of the primary objects of the invention is to provide an automobile jack which will be strong, durable and easily operable, which will consequently be well adapted to use in a garage or stable, which will be easily collapsible, and which, when collapsed, will occupy little storage space so that it may be readily carried in the automobile or wagon for emergency use while on the road.

A further object of the invention is to provide a jack of the character described composed of few and simple parts of economic construction.

Additional objects and advantages of the invention will be apparent from the following description when taken in connection with the accompanying drawing illustrating a preferred embodiment thereof:

On the drawing, Figure 1 is a side elevation of a lifting jack embodying my invention showing the parts arranged in operative positions; Fig. 2 is a transverse section on the line 2—2 of Fig. 1, and Fig. 3 is a perspective showing the jack collapsed and ready for storage.

Referring to the drawing, 4 designates the base member which is a bar, beam or sill adapted to rest upon the floor of the garage or the ground when the jack is in use. This member is preferably provided with a pair of outwardly extending wings 5, 6 on each side to prevent the jack from toppling over and to serve as rests for the folding standard and arm which will be later described.

A standard 7 is pivoted on the base member by a bolt passing through the standard and through the base member. This standard preferably consists of two parts 9, identical in shape and construction. The two parts 9 and the spacing block 11 are rigidly fastened together by suitable bolts, rivets or the like 12 so that the two parts and the spacing block constitute a rigid member. Each of the parts 9 of the standard consists preferably of a flat bar of suitable material and substantial thickness, the lower portion of which is enlarged to provide a rearwardly extending wing 13 adapted to rest upon the wings 5 of the base member 4 when the standard is in elevated or operative position. The bolt 8 passes through the lower forward corners 10 of the parts 9 and through a boss 14 on the member 4, one of the parts 9 being disposed on each side of the base member. The corners 10 are rounded so that they may clear the wings 5 when the standard is moved from folded to operative positions, and vice versa. In the forward faces of the two parts 9 are provided a plurality of inclined slots or recesses 15 for the reception of the pivots of the lifting lever, the slots being arranged in coöperating pairs, a member of each pair being provided in each part 9.

The lifting lever, designated generally by the reference character 16, is provided adjacent its forward end with a pair of outwardly disposed pivots 17 which are adapted to seat in the slots 15, as just described, to fulcrum the lever on the standard. Upon the end of each pivot 17 is provided a washer 18 adapted to be disposed upon the outside of the standard when the lever is connected thereto and this washer is preferably held in place by a cotter pin 18′. The operating arm 19 of the lifting lever is provided with a pawl or outwardly extending tooth 20 which is adapted to engage any one of a number of teeth 21 provided in the edge of a locking arm 22. The locking arm 22 is pivotally secured to the base member 4 adjacent its rear end 23 by a bolt 24 passing through the locking arm 22 and through the base member.

A shoe 26 adapted to engage beneath

the axle of the vehicle preparatory to the operation of the jack is provided at its lower end with a slot 26′ in which the lifting arm 25 of the lever 16 is pivotally fastened by a bolt or other suitable fastening means 25′. The pivotal connection between the shoe and the lever thus provided permits the shoe to move angularly through an arc limited by the engagement of the arm of the lever with the base of the slot, thereby maintaining the shoe always in position when the parts of the jack are arranged in operative relation to properly engage the axle or other part of the vehicle and to move about its pivotal connection as the lever is actuated to lift the part carried by the shoe.

The operating arm 19 of the lever is provided with a handle 27 which is adapted to be detached from the body of the lever when the jack is to be folded up preparatory to storage. This handle preferably fits in a suitable recess 27′ formed in the end of the arm 19 although it may be connected thereto in any desired manner.

The parts are arranged so that the free end of the standard will rest upon the wings 6 and the free end of the arm 22 on one wing 5 when the jack is collapsed. This construction disposes one of the parts 9 of the standard on each side of the base member and the arm 22 against this member. When folded down in this manner the standard and arm are protected by the base member and can not be easily bent or twisted.

When the standard is in upright position the wings 14 of the standard rest upon the wings 5 of the base member and the wings 5 thereby sustain much of the load carried by the jack. In order that the jack, when the parts are operatively arranged, may be easily moved about the garage or over the ground, I provide a pair of rollers 28 at its forward end and fasten the standard in upright position by a pin 29 passing through suitable apertures in the two parts 9 of the standard and in the base member. When the parts are in operative position the handle 27 may be lifted and the tooth 20 engaged with any tooth 21 of the locking arm, thereby causing the base member 4 to be raised with the arm 19 of the lifting lever so that the jack may be moved about upon the rollers 28 to position it beneath the axle of the vehicle. A jack embodying my invention may therefore be positioned without requiring the operator to bend down and place the jack accurately beneath the part it is intended to lift and obviates also the necessity of lifting the jack in moving it from one part of the garage to another. The pin 29 prevents the standard from being turned down to folded position when the jack is pushed forward into position by the handle 27 and the locking arm holds up the rear end of the base member while the handle is elevated.

It will be noted, by reference to Figs. 1 and 3 of the drawings, that the forward extremity of the base or sill 4 is reduced in its vertical thickness by being cut away on its under side in front of the wings 6. The rollers 28 are so mounted upon this reduced extremity of the base or sill that the bottom peripheral faces of the rollers are in substantially the same plane with that of the bottom of the base or sill 4 whereby said base or sill and its wings 5 and 6 may rest flat upon the floor or ground when the jack is in use and may be slightly lifted above the ground or floor upon the rollers 28 as a fulcrum whenever it is desired to move the jack about upon the rollers as hereinbefore described.

When the parts are to be stored beneath the seat of an automobile or in a tool box, it is only necessary to remove the lifting lever and the pin 29, fold down the standard 7 and the arm 22 and detach the handle of the lifting lever. As will be readily apparent all of the parts, either singly or bundled together, then may be stored in relatively small space and are ready for instant assemblage with little effort in case of emergency.

The parts herein described are all simple and strong and it will be apparent that the jack may be cheaply constructed and will be durable and efficient in operation. It will be obvious, moreover, that various changes may be made in the form, construction and arrangement of the parts without departing from the spirit and scope of the invention or sacrificing any of its material advantages, the form hereinbefore disclosed being merely a preferred embodiment thereof.

I claim:

1. A lifting jack comprising a base, a supporting roller provided upon the forward portion of the base, a standard rising from the base, a lifting lever fulcrumed upon the standard and having a handle portion extending rearwardly from said standard, and means to hold the lever against movement of the handle upwardly with respect to the base, whereby the device may be tilted into an inclined position upon the roller as a support by lifting the handle of the lever.

2. A lifting jack comprising a base, a supporting roller upon the forward portion of the base, a pair of spaced standard members rising from the base and provided in their front edges with corresponding sockets, a lever disposed between the standard members and provided with oppositely extending pivots for detachable engagement with

the respective sockets of the standard members, said lever having a handle portion extending rearwardly from the standard members, and a lever locking arm rising from the base in rear of the standard members and having detachable engagement with the lever to hold said lever against movement of the handle portion thereof upwardly with respect to the base, whereby the device may be tilted into an inclined position upon the roller as a support by lifting upon the handle portion of the lever.

KASPER HALLEN.

Witnesses:
POTTER PALMER, Jr.,
M. F. HYNSON.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."