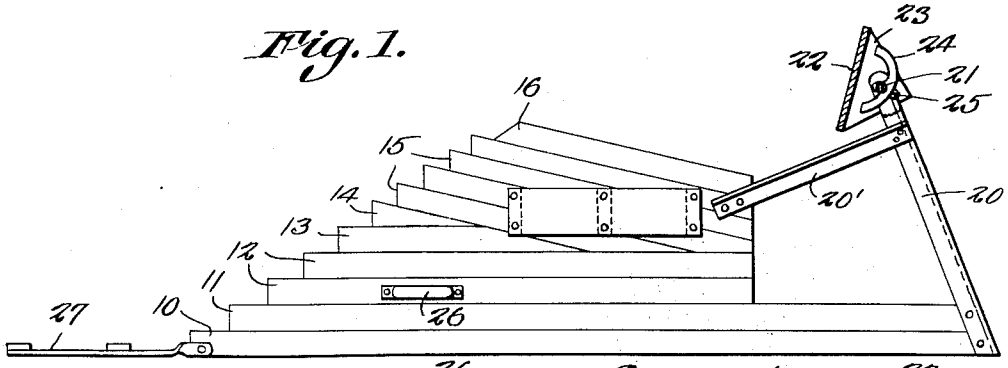
Aug. 15, 1933. M. K. McCOSH 1,922,551

VEHICLE JACK

Filed Feb. 13, 1931

Fig. 1.



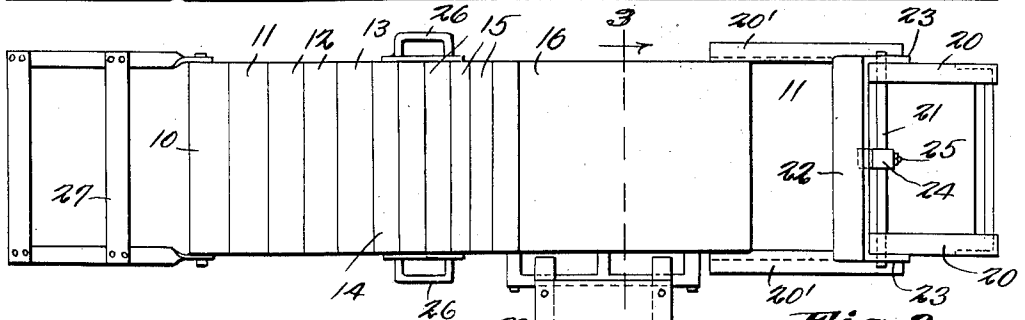


Fig. 2.

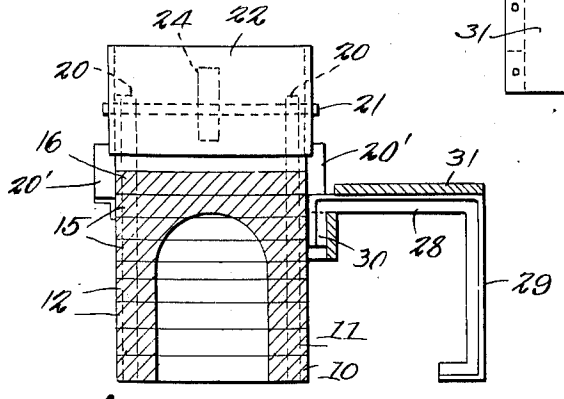


Fig. 3.

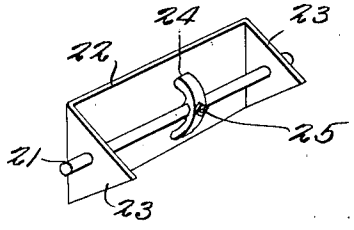


Fig. 4.

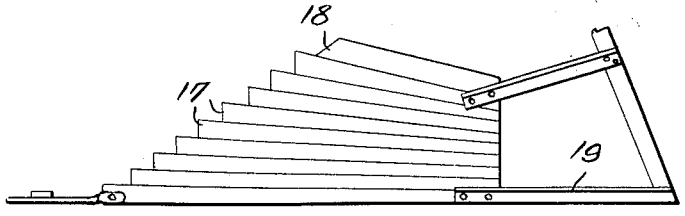


Fig. 5.

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Patented Aug. 15, 1933

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UNITED STATES PATENT OFFICE

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VEHICLE JACK

Marshall K. McCosh, Reisterstown, Md.

Application February 13, 1931. Serial No. 515,452

9 Claims. (Cl. 254—88)

This invention relates to vehicle jacks and has special reference to an automobile jack adapted for use in garages and other like places.

One important object of the invention is to provide a simple construction of jack having a body built entirely from superposed boards or planking of wood or other material.

A second important object of the invention is to provide a jack having a modern body formed of laminations so that the cracking common in large wooden blocks is obviated.

A third object of the invention is to provide a jack having a laminated body in which the individual laminations, whether of wood, metal or other material, can be readily formed and assembled.

A fourth important object of the invention is to provide a novel construction of jack having a laminated body wherein certain of the laminations are centrally apertured so that the body, when the laminations are assembled contains a hollow space and is correspondingly light while retaining the desired strength.

A fifth important object of the invention is to provide a movable side-platform assembly that can be positioned for the use of a hand-operated jack by moving it in a direction parallel with the side of the body of a jack of the class covered by this application while connected with and supported by said body.

A sixth important object of the invention is to provide an improved design of self-adjusting wheel-stop.

A seventh important object of the invention is to provide an improved general construction for devices of this character.

With the above and other objects in view as will be hereinafter apparent, the invention consists in general of certain novel details of construction and combinations of parts hereinafter fully described, illustrated in the accompanying drawing and specifically claimed.

In the accompanying drawing like characters of reference indicate like parts in the several views, and:

Figure 1 is a side elevation of the invention with the movable side-platform assembly omitted.

Figure 2 is a plan view thereof with the movable side-platform assembly in position for use.

Figure 3 is a section on the line 3—3 of Figure 2.

Figure 4 is a perspective view of the self-adjusting wheel-stop used herewith.

Figure 5 is a side elevation showing a somewhat modified form of body.

In the invention as shown in Figures 1 to 4 inclusive the jack body is built up of a series of laminations of which the lower or base lamination 10 extends from end to end of the jack and the second or sur-base lamination 11 extends almost from end to end, being co-terminous with the first lamination at its rear end and having its other end offset inwardly of the corresponding end of the lamination 10 to provide a step. Above this is a plurality of horizontal laminæ 12 having their rear ends flush with each other and spaced forwardly from the rear ends of the laminæ 10 and 11. The front ends of these laminæ 12 are arranged in stepped relation to each other and to the lamination 11. On top of the upper lamination 12 rests a horizontal lamination 13 stepped back at its front end and having its rear end spaced from the rear ends of the laminæ 12 and acutely bevelled. On top of the lamination 13 rests a wedge shaped lamination 14 having its front end stepped back from the front end of the lamination 13 and its upper face in the plane of the bevelled rear face of the lamination 13, the two laminations 13 and 14 forming wedge means having a stepped forward end. On top of the lamination 14 is a series of inclined laminations 15 successively stepped back at their forward ends and having their rear ends vertically alined with the rear ends of the laminations 12 except that the lowermost lamination 15 is bevelled off at its rear to rest on the upper lamination 12 and terminates at its rear forwardly of the laminations 12. These laminations 15 have their forward faces perpendicular and on the uppermost lamination 15 rests a lamination 16 having its forward face stepped back and rearwardly inclined.

In the form of the invention shown in Figure 5 the body is formed from a series of laminations 17 reducingly tapered in height from front to rear and supporting a lamination 18 substantially the same in form as the before described lamination 16. All these laminations terminate rearwardly in the same vertical plane and the forward edges of these laminations are successively stepped backwardly, the forward edge of each being spaced rearwardly of the forward edge of the lamination next below. In this form extension bars 19 project rearwardly from the body to take the place of the rearwardly extended portions of the laminations 10 and 11. Thus the body may be said to consist of a series of laminations forming a bluntly wedge shaped structure with its bottom face horizontal, its front face inclined rearwardly from botom to top and

having the successive laminations rearwardly stepped and its upper face inclined downwardly from front to rear. The body in each form may also be said to have an extension projecting rearwardly from its lower rear part.

Extending upwardly from the rear end of the extension, in each form, is a pair of forwardly inclined frame bars 20 having a shaft 21 fixed in their upper ends. A stop plate 22 extends parallel to the shaft 21 in front thereof and has its ends 23 bent rearwardly and perforated to receive the shaft 21, the stop plate being thus tiltably mounted on said shaft.

A limit-stop 24 is secured to the shaft 21 by a bolt 25 and serves to limit the tilting movement of the stop-plate 22.

The assembly consisting of shaft 21, stop-plate 22 with its ends 23, limit-stop 24 and bolt 25 is what I term a self-adjusting stop. (See my application for patent, Serial No. 515,453, filed Feb. 13, 1931.

Braces 20' connect the bars 20 to the upper part of the body. Handles 26 are fixed to the sides of the body for convenience in moving said body, and a floor-rack 27 is pivoted to the body at its lower front edge portion.

In connection with this body there is provided a movable side-platform assembly consisting of a pair of metallic members each having a horizontal portion 28, a long outer leg 29 and a short inner leg 30. The horizontal portions carry a floor 31. A slot-socket member 32 is fixed to the side of the jack body and receives the short legs 30 while the long outer legs rest on the floor. The slot-socket member is of such size and shape that the short inner legs 30 can be moved in the sockets in a direction parallel with the side of the jack body to position the side-platform assembly where desired in that direction for supporting a hand-operated jack in the position desired. In the embodiment of the slot-socket member shown it is divided vertically into two slot-sockets, each one of the slot-sockets receiving one of the legs 30.

Two of these jacks are usually used at the same time, the jacks being placed immediately in front of or behind the two front wheels or the two rear wheels of a vehicle. The two wheels are then run on the floor-racks 27 and thence upon the jacks, the stepped-back arrangement on each of the jacks preventing slipping down of the wheels which are being run up them. When the wheels are on the floor-racks the weight put on the floor-racks by the wheels pins the floor-racks to their supporting surface, thereby holding the jack bodies in position when the wheels come in contact with said bodies. On reaching the top of the bodies the wheels are run down the upper laminations until they come in contact with the stop-plates 22. The movable side-platform assembly can be attached to a jack body when desired and used to support a hand-operated jack for lifting higher the wheel which stands on the upper lamination of that jack body, for some such purpose as removing a wheel or tire; or the assembly can be attached for the purpose of supporting other objects such as tools. The movable side-platform assembly can be positioned along a line parallel with the side of the jack body by sliding the short inner legs 30 in the slot-socket member, as mentioned above.

There have thus been provided simple and efficient embodiments of the features of my invention.

It is obvious that various changes may be made in the form and construction of these embodiments without departing from the spirit and scope of my invention. I therefore desire to include, as my invention, all forms and constructions which properly come within the scope claimed.

Having thus described the invention, what is claimed as new, is:

1. A jack of the class described having a body consisting of a series of laminations arranged one on top of the other to form a structure of bluntly wedge shape with a bottom horizontal face, a front face rearwardly inclined from bottom to top and having the successive laminations rearwardly stepped at their front ends to form steps in said front face, and its top face downwardly inclined from front to rear.

2. A jack of the class described having a body consisting of a series of laminations arranged one on top of the other to form a structure of bluntly wedge shape with a bottom horizontal face, a front face rearwardly inclined from bottom to top and having the successive laminations rearwardly stepped at their front ends to form steps in said front face, and its top face downwardly inclined from front to rear, the uppermost lamination having its front edge bevelled rearwardly and the remainder of the laminations having vertical front edges.

3. A jack of the class described having a body consisting of a series of laminations arranged one on top of the other to form a structure of bluntly wedge shape with a bottom horizontal face, a front face rearwardly inclined from bottom to top and having the successive laminations rearwardly stepped at their front ends to form steps in said front face, its top face downwardly inclined from front to rear, said body having an extension extending rearwardly from the lower rear part thereof, a frame supported on said body and said extension and projecting above the body, and a stop member carried by the upper part of said frame.

4. A jack of the class described having a body consisting of a series of laminations arranged one on top of the other to form a structure of bluntly wedge shape with a bottom horizontal face, a front face rearwardly inclined from bottom to top and having the successive laminations rearwardly stepped at their front ends to form steps in said front face, its top face downwardly inclined from front to rear, the upper-most lamination having its front edge bevelled rearwardly and the remainder of the laminations having vertical front edges, said body having an extension extending rearwardly from the lower rear part thereof, a frame supported on said body and said extension and projecting above the body, and a stop member carried by the upper part of said frame.

5. A jack of the class described having a body consisting of a series of laminations arranged one on top of the other to form a structure of bluntly wedge shape with a bottom horizontal face, a front face rearwardly inclined from bottom to top and having the successive laminations rearwardly stepped at their front ends to form steps in said front face, its top face downwardly inclined from front to rear, said body having an extension extending rearwardly from the lower rear part thereof, a frame supported on said body and said extension and projecting above the body, a shaft fixed in the upper part of said frame, a stop plate rocking on said shaft, and a limit

stop fixed to said shaft for engagement by said plate to limit rocking movement thereof.

6. A jack of the class described having a body consisting of a series of laminations arranged one on top of the other to form a structure of bluntly wedge shape with a bottom horizontal face, a front face rearwardly inclined from bottom to top and having the successive laminations rearwardly stepped at their front ends to form steps in said front face, its top face downwardly inclined from front to rear, the upper-most lamination having its front edge bevelled rearwardly and the remainder of the laminations having vertical front edges, said body having an extension extending rearwardly from the lower rear part thereof, a frame supported on said body and said extension and projecting above the body, a shaft fixed in the upper part of said frame, a stop plate rocking on said shaft, and a limit stop fixed to said shaft for engagement by said plate to limit rocking movement thereof.

7. A runway, a shaft mounted at the rear of said runway, a wheel stop-plate having its ends extending rearwardly, said ends having perforations, said shaft extending through said perforations whereby said stop-plate is tiltably mounted on said shaft, said stop-plate being adapted to adjust itself to the tread of a wheel by turning on said shaft when a wheel is moved rearwardly of said runway and against said stop-plate.

8. A combination as set forth in claim 7, with the addition of means for limiting the turning movement of the stop-plate of said combination on the shaft of said combination.

9. A jack of the class described, comprising a body consisting of a series of laminations arranged one on top of the other, said laminations being rearwardly stepped at their front ends to form an upwardly and rearwardly extending runway leading to the top of said body, the top of said body constituting a runway extending downwardly and rearwardly; and a wheel stop-plate mounted at the rear of said body.

MARSHALL K. McCOSH.