Nov. 18, 1952 C. SINTZ 2,618,464

JACK

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FIG.3.

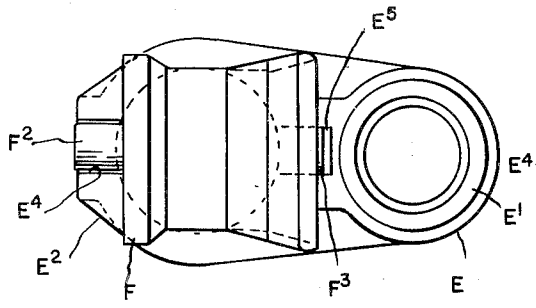


FIG.4.

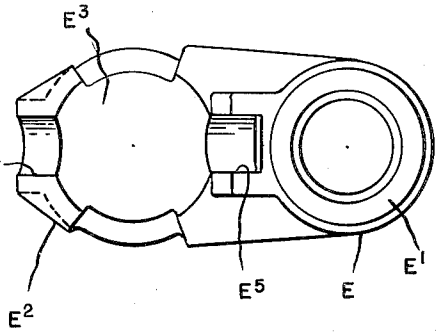
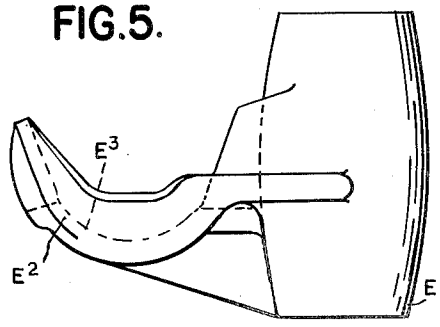


FIG.5.



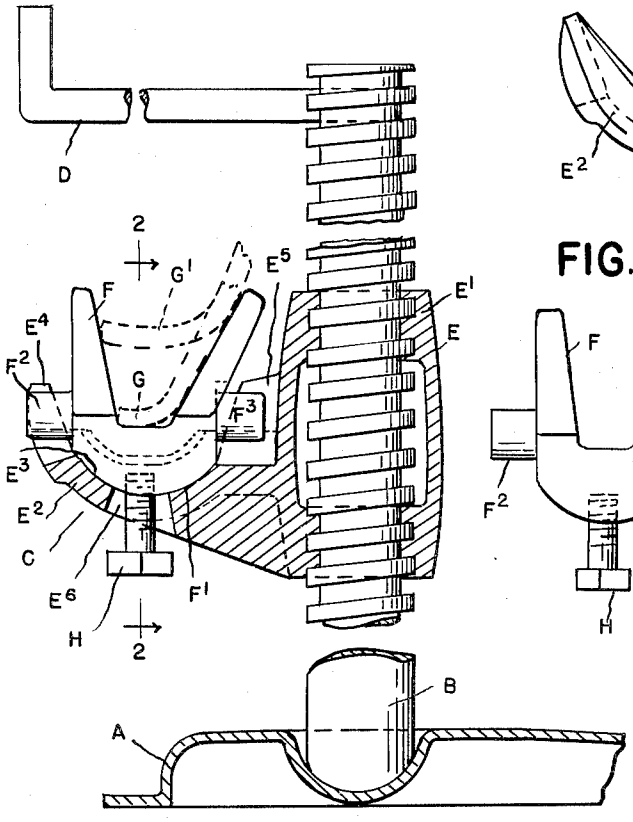


FIG.1.

FIG.6.

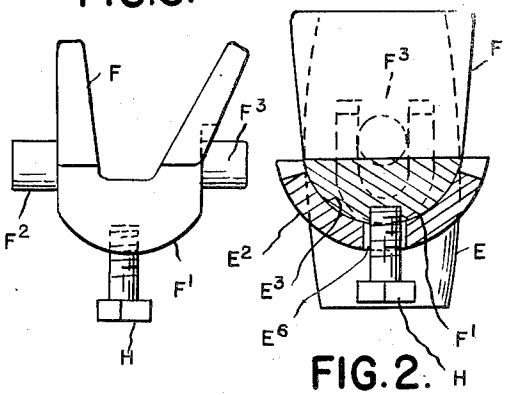


FIG.2.

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FIG. 7.

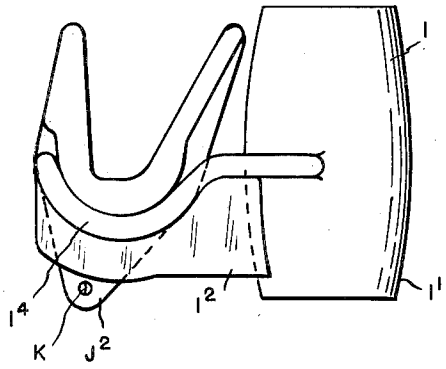


FIG. 8.

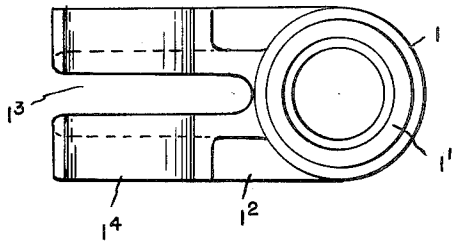


FIG. 9.

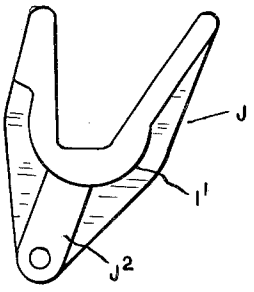
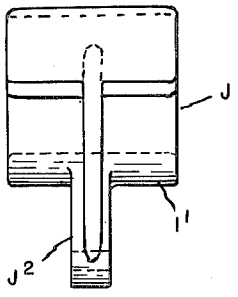


FIG. 10.



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JACK

Claude Sintz, Detroit, Mich.

Application November 5, 1945, Serial No. 626,669

2 Claims. (Cl. 254—100)

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The invention relates to jacks more particularly designed for use with motor vehicles and of that type adapted to be engaged with the bumper or other member projecting beyond the vehicle body. Jacks of this type have heretofore been constructed but due to the different styles and various changes in bumper constructions, said jacks are not always adapted for engagement therewith.

It is the object of the instant invention to obtain a construction which is universally engageable with all of the various styles of bumpers in general use as well as others which may be hereafter designed.

It is a further object to obtain a construction which will eliminate objectionable stresses on the jack due to the lifting pressure applied thereto.

Still further it is an object to obtain an exceedingly simple construction and one which can be manufactured at low cost. With these objects in view the invention consists in the construction as hereinafter set forth.

In the drawings:

Fig. 1 is a sectional elevation showing a jack of my improved construction;

Fig. 2 is a transverse section on line 2—2, Fig. 1;

Fig. 3 is a plan view of the two-part lifting member;

Fig. 4 is a similar view of one of said parts with the other removed;

Fig. 5 is a side elevation of Fig. 4;

Fig. 6 is a side elevation of the second part of the lifting member detached;

Fig. 7 is a side elevation of a modified construction of a two-part lifting member;

Fig. 8 is a plan view of one of the parts thereof;

Fig. 9 is a detached side elevation of the other part;

Fig. 10 is an end elevation thereof.

The general type of jack to which my improvements are applied includes a base plate A, a supporting rod B having its lower end pivotally engaging a socket in said base plate and a lifting member C engaging said rod and adapted to be adjusted vertically upward thereon while under load. Different means have been used for adjusting the lifting member vertically upward on the rod while under load but I shall illustrate only one of such means which consists in an external screw thread on the rod engaging an internal screw thread in the lifting member. Thus, by rotating the rod as by means of a suitable crank D engaging its upper end, the member C will be raised while under load.

As above described, motor vehicle bumpers are

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of various cross sectional shapes so that it is difficult to design a lifting member which is engageable with all. Furthermore, the stresses developed during the raising of the lifting member frequently react upon the rod so as to distort the same. Such difficulties I have eliminated in my improved construction which is as follows.

As shown in Figs. 1 to 6, E is a member having an internally threaded sleeve portion E' for engaging the external threads on the rod B. E^2 is an arm projecting laterally from the sleeve portion E' and provided in its upper face near its outer end with a spherical socket E^3. It is also provided with vertical slots E^4 and E^5 in diametrically opposite walls of the socket E^3 and in the central plane of the sleeve portion E'. F is another member which is of a substantially V-shape form with a spherical lower end F' for fitting within the spherical socket E^3. This member is further provided with diametrically opposite projecting pins F^2 and F^3 for engaging the slots E^4 and E^5. The construction is such that the member F is universally pivoted in the socket E^3 so that it can be rocked in any direction but the pins F^2 and F^3 in engagement with the slots E^4 and E^5 will prevent rotation of the member F in said socket. Thus, the V-shape recess in the member F will accommodate a great variety of cross sectional shapes of automobile bumpers, two of these being represented by dotted lines respectively at G and G'. The member F will rock in its socket while engaging the bumper so as to assume the best position for carrying the load but after such engagement will remain in substantially fixed relation in the member E. However, it may rock further if necessary to compensate for any angular movement of the bumper. Vertical adjustment of the member E is accomplished by rotating the rod B by the crank handle D and any torque stresses transmitted to the member E will be carried into the member F by the pins F^2 and F^3. Thus, as the member F cannot turn due to its engagement with the bumper, it will anchor the member E and hold it also from turning. If it is desired to hold the members E and F in permanent engagement with each other, this may be accomplished by providing an aperture E^6 through the arm E^2 at the bottom of the socket E^3 and extending a headed screw H through this aperture into engagement with the member F.

The modified construction illustrated by Figs. 7 to 10 differs from that previously described in the engagement between the two members of the load lifter. Thus, as shown a member I is similar to the member E in having a sleeve portion I'

for engaging the rod B and a laterally extending arm I^2. This arm is bifurcated to form a central slot I^3 between the furcations thereof and segmental recess bearings I^4 are formed in the furcations. A member J is similar to the member F but has segmental portions J' for rotatably engaging the bearings I^4. It is also provided with a depending finger J^2 extending through the slot I^3 and a cotter pin K extending transversely through the lower end of the finger J^2 prevents disengagement of the member J from the member I. Otherwise, the construction is substantially the same as that previously described.

What I claim as my invention is:

1. In a jack, the combination with an externally screw-threaded supporting rod, of a load carrying member internally threaded for engagement with said rod to be vertically adjustable thereon by a relative rotation thereof, said member being provided with a laterally extending arm having a socket near its outer end, a V-shaped member for directly engaging the load universally rockably supported on said arm in said socket, and torque resisting means between said last mentioned member and arm.

2. In a jack, the combination with an externally screw-threaded supporting rod, of a load carrying member internally threaded for engagement with said rod to be vertically adjustable thereon by a relative rotation thereof, said member being provided with a bifurcated laterally extending arm having segmental bearings in the furcations thereof, a V-shaped member for directly engaging the load having segmental portions for engaging said segmental bearings and a portion extending downward between the furcations of said arm, and a cotter pin extending through said portion beneath said furcations for holding said V-shaped member attached to said arm.

CLAUDE SINTZ.

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