Nov. 17, 1936. M. DWORK 2,061,026

JACKING ATTACHMENT

Original Filed May 3, 1935

Fig. 1.

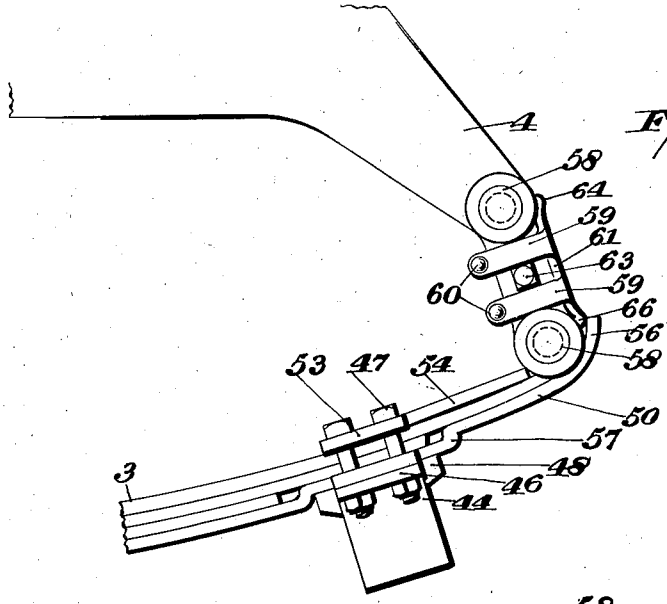



Fig. 3.

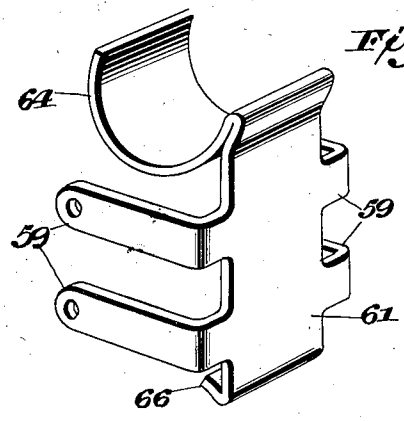



Fig. 2.

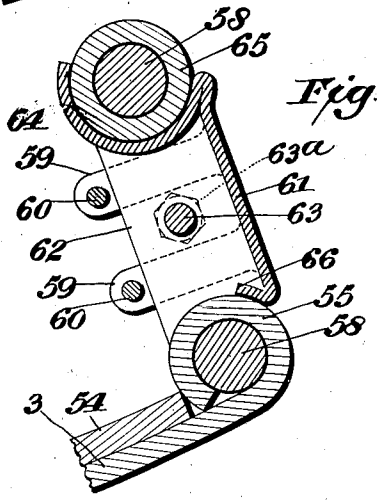
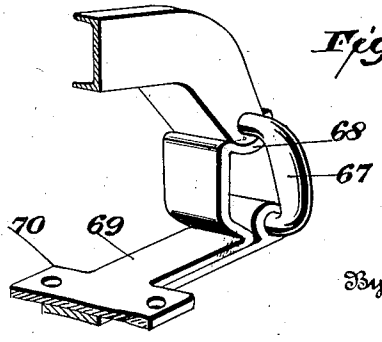



Fig. 4.




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Patented Nov. 17, 1936 2,061,026

# UNITED STATES PATENT OFFICE

2,061,026

## JACKING ATTACHMENT

Max Dwork, Brooklyn, N. Y.

Original application May 3, 1935, Serial No. 19,742. Divided and this application June 28, 1935, Serial No. 28,970

4 Claims. (Cl. 267—54)

This invention relates to improvements in jacking attachments in the class of land vehicle attachments, and its objects are as follows:—

First, to provide a stiff brace between the spring and chassis of the vehicle, said brace being for the purposes of lifting the chassis when jacking power is applied to the jack socket and for confining the shackle members so as to prevent their becoming loose or lost in the event that the staple comes out.

Second, to provide an auxiliary shackle which bears on the confronting chassis and spring knuckles in such a way as to relieve the shackle bolts of the connecting side links or shackle members of some of the weight of the vehicle and thereby retard the wear thereon.

Third, to use the pair of lugs on one side of the auxiliary shackle as a keeper for the head of the stay bolt, thereby keeping the stay bolt from turning while the nut is screwed on its other end.

In the drawing:—

Figure 1 is a side elevation of a portion of the rear end of a vehicle for particularly illustrating the application of the improved stiff brace or auxiliary shackle.

Figure 2 is an enlarged sectional view showing the internal details.

Figure 3 is a perspective view of the auxiliary shackle.

Figure 4 is a perspective view illustrating the adaptation of a different form of the stiff brace to a spring shackle of the open type.

This application is a division of an application for patent for Jacking attachment filed by Max Dwork, May 3, 1935, Serial No. 19,742. That application makes reference to a patent to Max Dwork also for a Jacking attachment, No. 1,964,625 of June 26, 1934.

Both the foregoing application and the patent are concerned with guarding the vehicle spring against damage by undue flexure when the jacking power is applied to said spring, as it conveniently is when the jack socket is mounted on the spring in the modern low-frame type of automotive vehicles.

A simple socket 44 is used for the purpose of the foregoing jack, (not shown). The socket is laterally flanged at 46 to receive the bolts 47 which secure the socket to the spring 3. The socket is further provided with lugs 48 at the front and back for the purpose of stabilization.

These lugs bear directly against a plate 50. This plate is known as a rack plate in the foregoing patent. The previously mentioned bolts 47 go through the plate 50 and through the ears 53 of a clamp plate 54. The rear end of the clamp plate is brought close up to one side of the spring knuckle 55 (Fig. 2). A curvature 56 on the rear end of the plate 50 is brought close to the other side of the spring knuckle, the two working together in preventing the socket 44 from slipping either forward or backward on the spring, it being further noted that the plate 50 has several offsets 57 in confronting positions with the ends of the spring leaves.

Now in particular regard to the invention, provision is made of a stiff brace or auxiliary shackle for transferring the lifting force applied to the socket 44 to the chassis 4, and to relieve the shackle bolts 58 (Fig. 2), especially of the upper shackle bolt, of some of the strain in doing so. A brace for this purpose is claimed in the foregoing patent, but in the type of brace under present consideration use is made of pairs of lugs 59 (Fig. 3) through which to insert bolts 60, the lugs and bolts embracing the shackle members 62 and thereby fixedly attaching the brace plate 61 to the shackle members. These members comprise what is known as a closed shackle and consist of duplicate links which connect the ends of the spring and chassis by means of the bolts 58 mentioned.

The lugs 59 extend above and below the stay bolt 63 which customarily clamps the shackle members in position on the ends of the shackle bolts. Sometimes the threads either in the nut 63a (Fig. 2) or on the end of the stay bolt become stripped, and in such event there is ordinarily nothing to prevent the shackle members from pulling apart. One of the purposes of the auxiliary shackle, comprising the brace plate 61 and its lugs 59, is to confine the shackle members 62 and prevent their becoming loose or lost in the event of the stay bolt 63 coming out. A further purpose of the lugs 59 is that of a keeper for the head of the stay bolt 63 (Fig. 1). By fitting the head between a pair of the lugs on one side the bolt is held from turning as the nut 63a is screwed home between the corresponding pair of lugs on the other side.

This auxiliary shackle has an integral saddle 64 offset therefrom to fit under the knuckle 65 of the chassis (Fig. 2). The saddle and brace plate 61 are very stiff, the two providing the stiff brace mentioned before which, for its other purpose, transfers the lifting power to the chassis. A curvature 66, offset from the brace plate to a less extent than the saddle 64 bears on the spring knuckle 55.

Some spring shackles are of the open type shown at 67 in Figure 4. This shackle is of U-

shape. For the purposes of this type a stiff brace more on the order of the one disclosed in the patent has been found preferable. This brace includes a saddle **68** to contain the knuckle of the chassis as shown (Fig. 4). This saddle is made part of a plate **69** which can be regarded as the equivalent of the clamp plate **54** in Figure 1. The clamp plate **69** has ears **70** which are for the same purpose as the ears **53**.

The operation is readily understood. The head of a jack is inserted in the socket **44**, and lifting force is applied to the spring **3** by the operation of the jack. This lifting force is transferred from the spring to the chassis **4** by the stiff brace or auxiliary shackle. The brace plate **61** of this auxiliary shackle is very stiff as already brought out, and because of its being held on the shackle members **62** by the lugs **59** and bolts **60**, and because of the saddle **64** and curvature **66** bearing against the respective knuckles **65**, **55** much of the weight is taken from the shackle bolts **58**. The lugs **59** and bolts **60** give the brace the additional function of holding the shackle members **62** together in the event of the stay bolt **63** becoming disabled.

I claim:—

1. In a jacking attachment having a socket to receive the head of a jack, and means by which the socket is attached to the spring of a vehicle, means to transfer the lifting force of the jack from the socket to the chassis comprising a stiff brace between the spring and chassis, said stiff brace having means embracing and thereby fixedly attaching said brace to shackle members which connect the spring with the chassis, said stiff brace including a saddle offset therefrom to fit under an adjacent part of the chassis and including a less offset portion which fits over an adjacent part of the spring.

2. In a jacking attachment, means to transfer the lifting force of a jack from a spring to a chassis which chassis has the spring connected to it by shackle members, said means comprising a brace plate applied to one side of the shackles and having a saddle at one end and a curvature at the other end respectively fitting under a portion of the chassis and over a portion of the spring, pairs of lugs extending from the plate to the other side of the shackles, and bolts extending between the lugs to secure the brace plate.

3. In a vehicle which includes a chassis, a spring and a pair of shackle members connected with the respective chassis and spring, a headed stay bolt for connecting the shackle members together, said bolt having a nut, an auxiliary shackle in a bracing position between the chassis and spring, and means which forms part of the auxiliary shackle serving as a keeper for the head of the stay bolt when screwing the nut home.

4. An auxiliary shackle comprising a brace plate, a saddle at one end of the brace plate consisting of a portion of the plate bent upon itself and then curved into a substantial semi-circle to fit under a chassis knuckle and a lesser curvature at the other end of the plate to bear on a spring knuckle, and pairs of lugs extending from the sides of the plate in the general direction of the saddle and curvature, the lugs having registering holes to receive fastening bolts.

MAX DWORK.