June 17, 1924. 1,498,150

E. M. BUTLER

MOTOR CAR LIFTING DEVICE

Filed March 22, 1922 2 Sheets-Sheet 1

Fig. 1

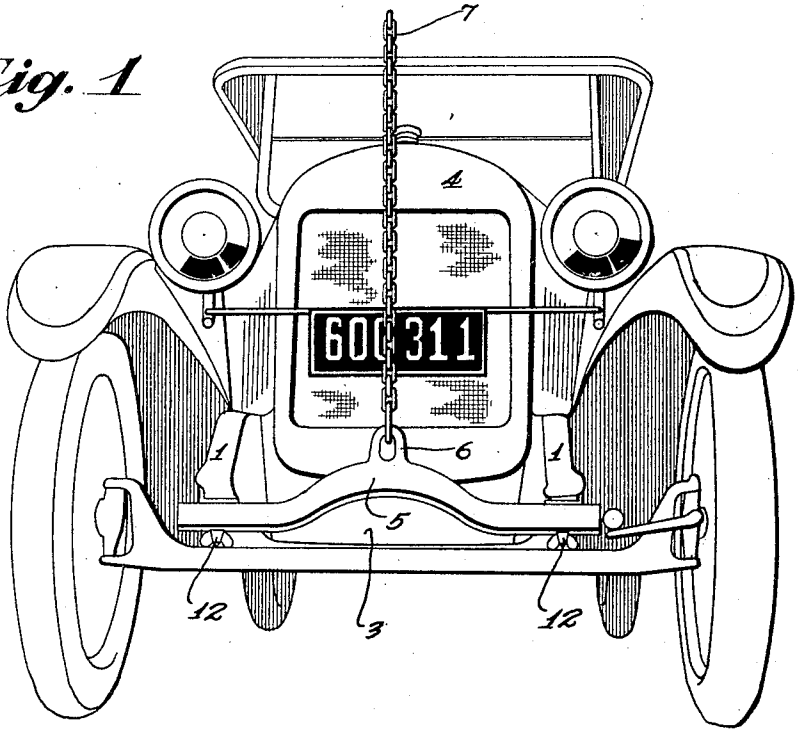
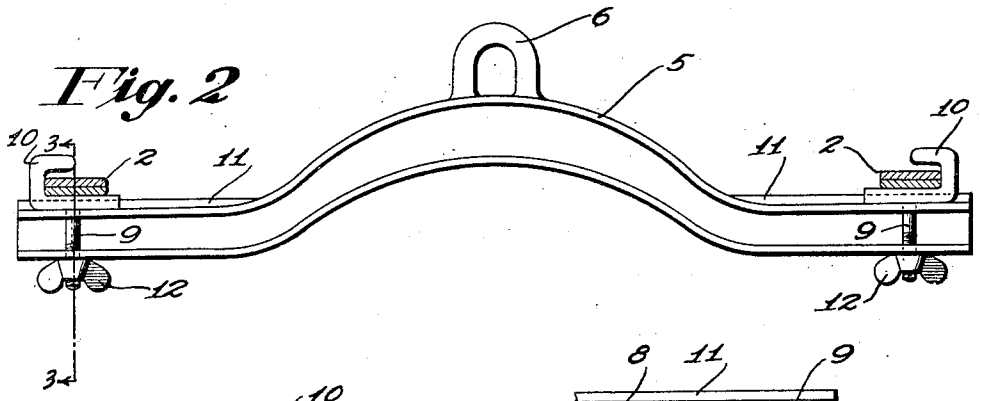


Fig. 2



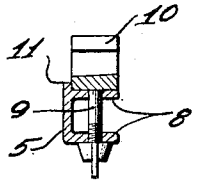


Fig. 3



Fig. 4

INVENTOR.
Edgar M. Butler
BY Jas. H. Griffin.
ATTORNEYS.

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Fig. 5

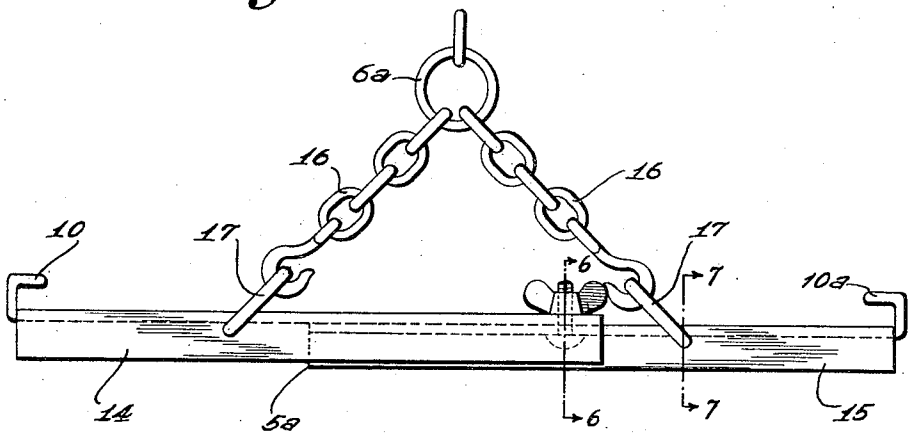
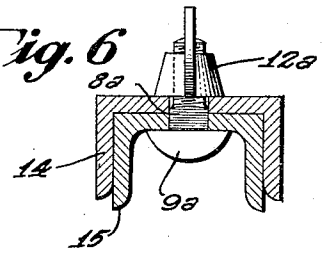


Fig. 6



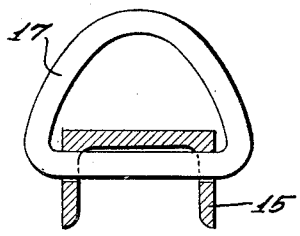


Fig. 7

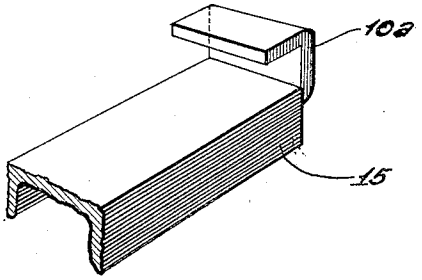


Fig. 8

INVENTOR.
Edgar M. Butler
BY Jas. H. Griffin
ATTORNEYS.

Patented June 17, 1924. 1,498,150

UNITED STATES PATENT OFFICE.

EDGAR M. BUTLER, OF BROOKLYN, NEW YORK.

MOTOR-CAR-LIFTING DEVICE.

Application filed March 22, 1922. Serial No. 545,716.

To all whom it may concern:

Be it known that I, EDGAR M. BUTLER, a citizen of the United States, residing at New York city, borough of Brooklyn, in the county of Kings and State of New York, have invented a certain new and useful Motor-Car-Lifting Device, of which the following is a specification.

This invention is a motor car lifting device for use more particularly in garages, though also applicable for employment when it is desired to lift the forward portion of the car for the purpose of towing the same.

It frequently becomes necessary to elevate the front of a car to permit more ready access to the under side of the car or to take the weight off of the front wheels if it is desired to tow the car after an accident to the front wheels and for other reasons familiar to those skilled in the art.

It has been the practice to accomplish this result by hooking chains over the goose necks of the chassis frame or over the front springs, but as many of the latest style cars are provided with splash guards extending across the front of the chassis between the goose necks, lifting of the car by the use of such chains invariably damages or bends the splash guards, causes the enamel to be chipped therefrom, and distorts the guards, so that the lifting of the car by the use of chains as heretofore practiced is not feasible. For the want of better means to accomplish the end desired, many mechanics prefer to first release the guards from the goose necks before attaching the lifting chains, but this not only occasions considerable loss of time, but requires that the guards be slightly bent out of shape before the chains can thereafter be secured to the goose necks or springs.

With the foregoing considerations in mind, the object of the present invention, is to provide a convenient and highly efficient lifting device which may be easily and expeditiously associated with the forward part of the car to enable the lifting thereof without damage to the splash guard or necessitating the releasing or removal thereof.

The lifting device of the present invention may partake of different forms, but in its preferred practical embodiment is in the form of a rigid yoke of sufficient length to extend across the front springs in a transverse direction. The opposite ends of the yoke carry adjustable spring hooks which may be brought into engagement with the springs from the underside thereof and secured in position so that they cannot inadvertently become detached or slipped off. The yoke is preferably provided intermediate its ends with a hoisting ring adapted to be engaged by the hook of suitable hoisting tackle, by means of which the car may be lifted. The advantage of this construction is that the car may be safely hoisted and when in lifted position will be securely maintained against inadvertent falling, so that workmen may safely work beneath the car or the car may be towed without fear of breaking loose and becoming further damaged.

Features of the invention, other than those specified, will be apparent from the hereinafter detailed description and claims, when read in conjunction with the accompanying drawings.

The accompanying drawings illustrate different practical embodiments of the invention, but the constructions therein shown are to be understood as illustrative, only, and not as defining the limits of the invention.

Figure 1 is a front view of a car showing the hoisting device of the present invention associated therewith.

Figure 2 is a front view of the hoisting device detached from the car, but showing the springs of the car with which the hoisting device cooperates in section.

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

Figure 4 is a plan view of one end of the hoisting device shown in Figure 2.

Figure 5 is a front elevation of a modified form of hoisting device embodying this invention.

Figures 6 and 7 are sections on the lines 6—6, 7—7, respectively, of Figure 5; and,

Figure 8 is a fragmentary perspective of one end of the hoisting device shown in Figure 5.

Referring to the drawings and more particularly to Figures 1, 2, 3 and 4, 1 designates goose necks of a motor vehicle chassis frame, beneath which are disposed the two front springs 2. The splash guard 3 extends between the goose necks and below the radiator 4 and is of different shapes in the different makes of cars. The structure described is that of a conventional car and is substan-

tially the same in all cars employing splash guards.

The lifting device of the present invention as shown in Figures 1–4 is in the form of a rigid metallic yoke 5 preferably bowed upwardly intermediate its ends and provided at its center with a lifting ring 6, with which the hook of suitable hoisting tackle 7 is adapted to be engaged. The yoke as shown best in Figure 3 is of substantially channel cross section and adjacent its opposite ends is longitudinally slotted as shown at 8 in Figures 3 and 4, and through these slots 8 extend threaded shanks 9 of rigid spring hooks 10. The spring hooks 10 may be conveniently made in the form of castings and are positioned for adjustment longitudinally of the yoke on the upper edge thereof. Flanges 11 extend along one margin of the upper edge and engage with one side of each of the spring hooks, so as to preclude rotary movement of said hooks on their threaded shanks 9. By virtue of this arrangement, the spring hooks may be adjusted longitudinally of the yoke to vary the span between them and may be locked in any desired position by means of wing nuts 12, which thread on to the lower ends of the threaded shanks 9 and engage with the lower edge of the yoke.

In applying the lifting device described to a car, the wing nuts 12 are first loosened and the spring hooks drawn apart, whereupon the yoke is brought into a position to underlie the front springs 2 and to engage with the under surface of said springs. The spring hooks are then manually shifted toward one another, so as to hook over the outside edges of the springs 2 after the manner illustrated in Figure 2, whereupon the wing nuts 12 are tightened to firmly secure the yoke to the springs. The hoisting tackle 7 may thereafter be operated for the purpose of lifting the car without fear of the yoke becoming released from the car and permitting the car to fall.

It will be apparent that in the construction shown, the yoke will rest firmly on the under side of the springs and will be free from engagement with the splash guard 3, so that damage to the splash guard during lifting in the manner described cannot occur.

The yoke 5, as shown in Figures 1 and 2 is bowed upwardly intermediate its ends and while this is the preferred construction, it is not necessarily the exclusive one, since the yoke might be made straight or of other shapes if preferred.

In Figures 5–8, I have illustrated a modified form of the present invention wherein the yoke 5^a is made straight and is composed of two sections 14 and 15. These sections are of channel cross section as clearly shown in Figure 6 and are in telescoping relation to one another. The spring hooks 10^a are formed rigid and integral with the respective sections 14 and 15, as shown in detail in Figure 8, and the adjustment between these hooks is accomplished through adjusting the screws 14 and 15 telescopically. These sections may be locked in adjusted position by a carriage bolt 9^a and an associated wing nut 12^a. The carriage bolt is passed through a squared opening in the section 15 and extends through a slot 8^a in the section 14. The slot permits of adjustment of the sections, but they may be locked in any position by simply screwing down the wing nut. The hoisting tackle is adapted to be secured to a hoisting ring 6^a, which is connected by chains 16 to rings or shackles 17, which pass through apertures in the flanges of the respective sections 14 and 15, after the manner clearly shown in Figure 7, so that the lifting strain is properly distributed throughout the two sections of the yoke.

The manner of applying the construction of Figure 5 will be apparent from the foregoing detailed description thereof, since it will appear that the wing nut 12^a will be loosened to permit the spring hooks 10^a to be engaged with the springs of the vehicle and thereafter this nut again tightened prior to the lifting of the vehicle.

The foregoing description sets forth in detail two specific constructions embodying the present invention. I am aware, however, that the invention is capable of modification without departing from the spirit and scope of the invention which is to be understood as broadly novel as is commensurate with the appended claims.

I have hereinbefore referred more particularly to the use of the device of this invention for lifting the forward part of a car, yet it will be understood that it may be employed to lift the rear portion of a car.

Having thus fully described the invention, what I claim as new and desire to secure by Letters Patent is:

1. A lifting device for motor vehicles embodying a rigid yoke with which hoisting tackle is adapted to be associated, gripping members associated with the opposite ends of the yoke and adapted to engage and grip parts of the car to be lifted, and means for rigidly securing said gripping members to the yoke to preclude inadvertent shifting of said members.

2. A lifting device for motor vehicles embodying a rigid yoke with which hoisting tackle is adapted to be associated, spring engaging hooks associated with the opposite ends of the yoke, and means for rigidly maintaining the spring engaging hooks in spaced relation after they have been brought into engagement with the springs of the car to be lifted to preclude inadvertent disengagement of the hooks from the springs.

3. A lifting device for motor vehicles embodying a rigid metallic yoke with which hoisting tackle is adapted to be associated, car engaging members mounted for adjustment longitudinally of the yoke and at each end thereof, and means for rigidly securing said members to the yoke to preclude from movement on the yoke after they have been brought into engagement with parts of the car.

4. A lifting device for motor vehicles embodying a rigid metallic yoke provided at its center with a ring adapted to be engaged by hoisting tackle, and longitudinally slotted adjacent its opposite ends, spring engaging hooks mounted to slide longitudinally of the yoke and having threaded shanks extending through the slots in the yoke, and wing nuts associated with the threaded shanks for the purpose of clamping the spring hooks tightly in position after they have been engaged with the springs of the car to be lifted, so as to preclude inadvertent disengagement of the hooks from the springs.

5. A lifting device for motor vehicles embodying a rigid metallic yoke provided at its center with a ring adapted to be engaged by hoisting tackle, and longitudinally slotted adjacent its opposite ends, spring engaging hooks mounted to slide longitudinally of the yoke and having threaded shanks extending through the slots in the yoke, wing nuts associated with the threaded shanks for the purpose of clamping the spring hooks tightly in position after they have been engaged with the springs of the car to be lifted, so as to preclude inadvertent disengagement of the hooks from the springs, and guides associated with the yoke for precluding rotary movement of the spring hooks on the axes of their associated shanks.

In testimony whereof I have signed the foregoing specification.

EDGAR M. BUTLER.