April 21, 1925. 1,535,022

C. M. JENKINS

MOTOR HOISTING HITCH

Filed Nov. 23, 1923 2 Sheets-Sheet 1

Fig. 1.

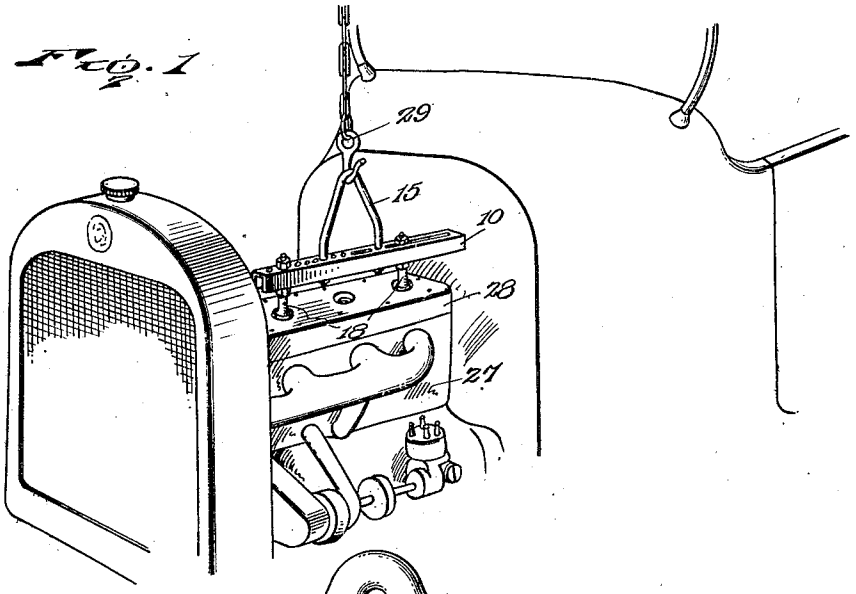
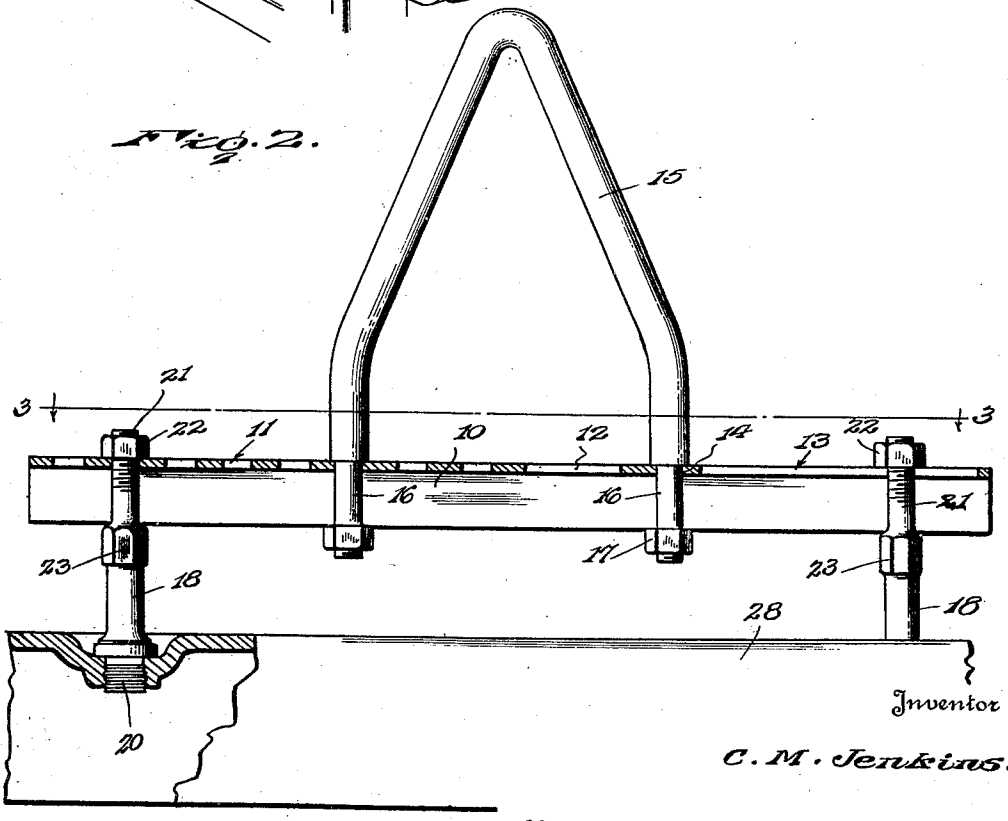


Fig. 2.



Inventor

C. M. Jenkins.

By Lacey & Lacey, Attorneys

April 21, 1925. 1,535,022

C. M. JENKINS

MOTOR HOISTING HITCH

Filed Nov. 23, 1923 2 Sheets-Sheet 2

Fig. 3.

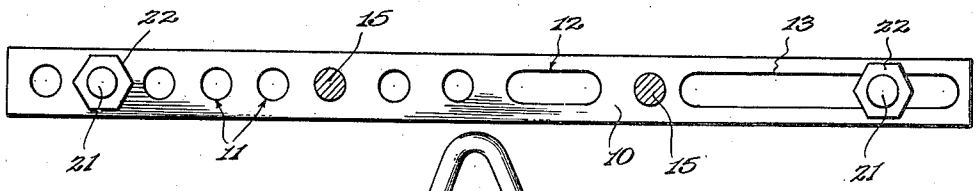


Fig. 4.

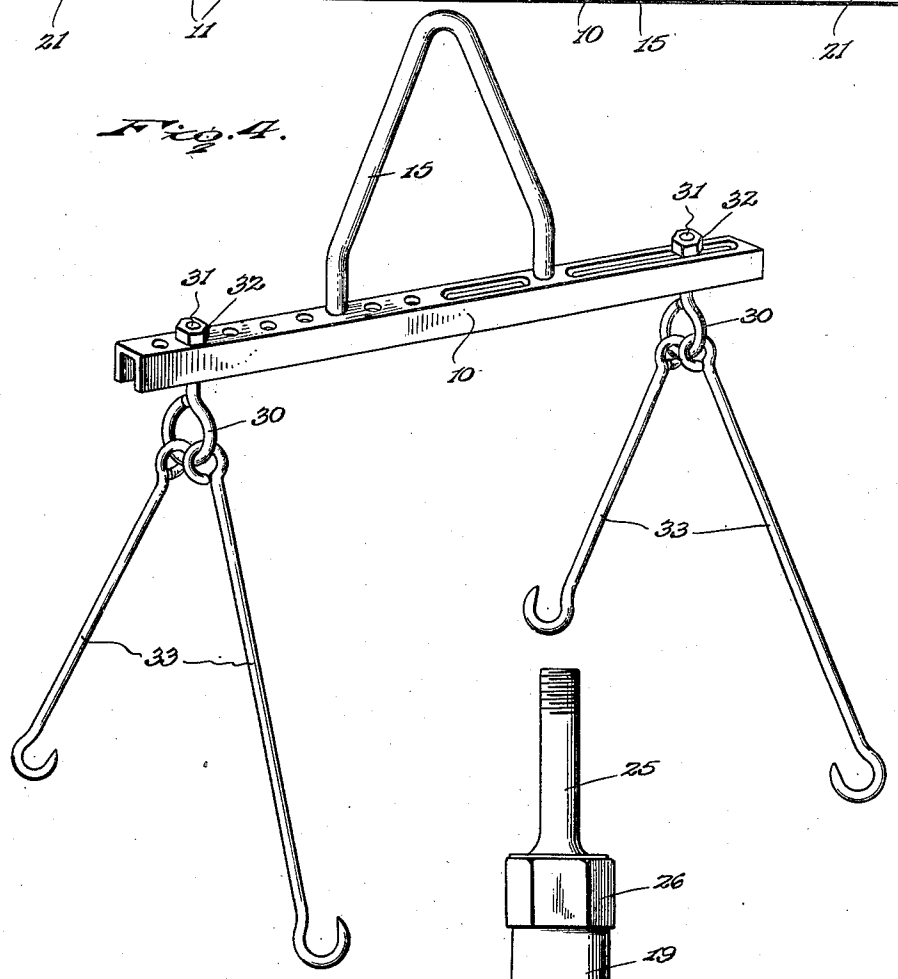


Fig. 5.

Inventor

C. M. Jenkins.

By

Lacey & Lacey, Attorneys

Patented Apr. 21, 1925. 1,535,022

UNITED STATES PATENT OFFICE.

CLOYED M. JENKINS, OF DODGE CITY, KANSAS.

MOTOR-HOISTING HITCH.

Application filed November 23, 1923. Serial No. 676,659.

To all whom it may concern:

Be it known that I, CLOYED M. JENKINS, citizen of the United States, residing at Dodge City, in the county of Ford and State of Kansas, have invented certain new and useful Improvements in Motor-Hoisting Hitches, of which the following is a specification.

This invention relates to an improved hoisting hitch particularly adapted for use in garages and repair shops for lifting engines from the frames of motor vehicles or removing the cylinder head blocks from the engines, and seeks, among other objects, to provide a device which will materially facilitate and lessen the labor involved in the work indicated.

The invention seeks, as a further object, to provide a device which may be readily attached to a cylinder head block or which may be attached to the motor block itself with equal facility for removing the cylinder block in the first instance or for removing the motor block in the latter instance.

The invention seeks, as a further object, to provide a device embodying means whereby the object to be lifted may be approximately balanced upon the device.

And the invention seeks, as a still further object, to provide a device which may be readily employed in connection with engines of different makes and sizes.

Other and incidental objects will appear hereinafter.

In the drawings:

Figure 1 is a perspective view showing my improved device in use,

Figure 2 is a longitudinal sectional view through the device, a portion of a cylinder head block being also shown,

Figure 3 is a sectional view on the line 3—3 of Figure 2, looking in the direction of the arrows,

Figure 4 is a perspective view particularly showing the anchoring hooks employed, and

Figure 5 is a detail elevation showing one of the anchoring plugs employed.

In carrying the invention into effect, I employ a preferably channel shaped body bar 10 which is provided at one end portion thereof with a series of spaced openings 11 in the top wall of the bar while at the opposite end portion of the bar said wall is formed with a slot 12 as well as a slot 13, the former slot being somewhat shorter than the latter slot. Between the slots 12 and 13 the bar is further provided with an opening 14 similar to the openings 11 and detachably connected to the bar is an upstanding shackle 15. At its ends, the shackle is provided with reduced studs 16, one of which is engaged through one of the openings 11 while the other of said studs is engaged through the opening 14, and threaded upon the studs are nuts 17 securing the shackle in position.

In conjunction with the body bar 10, I further provide a plurality of anchoring plugs such as shown at 18 in Figures 1 and 3, as well as shown at 19 in Figure 5. The plugs 18 are each provided at their lower ends with a threaded terminal 20 while at their upper ends said plugs are each formed with a reduced shank 21 threaded to accommodate a nut 22 and at the base of said shank is formed a preferably hexagonal wrench receiving portion 23. Similarly, the plugs 19 are each provided at their lower ends with a threaded terminal 24 somewhat larger, however, than the terminals 20 of the plugs 18 and formed on each of the plugs 19 at their upper ends, is a threaded shank 25 at the base of which is a hexagonal wrench receiving portion 26. The terminals 20 of the plugs 18 are, as shown in Figures 1 and 2 of the drawings, threaded to engage in the usual spark plug openings of an engine cylinder head block, the engine of a conventional motor vehicle being indicated at 27 and the cylinder head block of the engine at 28. Accordingly, after the spark plugs of the engine have been removed, a pair of the plugs 18 may be engaged in two of the spark plug openings thus vacated, when the body bar 10 is slipped over the shanks 21 of the plugs and the nuts 22 applied to said shanks for connecting the bar therewith. In mounting the plugs upon the cylinder head block, the plugs will preferably be positioned in a pair of spark plug openings so located that when the block or engine is lifted, the block or engine, as the case may be, will be approximately balanced upon the body bar. For such reason, as well as for the reason that the spark plug openings of the cylinder heads of different engines may vary in spacing somewhat, it becomes necessary to form the body bar 10 to accommodate the variation in the spacing of the plugs. Accordingly, the bar is provided with a series of the openings 11 to selectively receive the shank of one of the plugs of a pair, as shown

in Figure 2, while the slot 13 is provided to freely receive the shank of the other plug of the pair so that after the bar is positioned over the shank of the first plug. the slot 13 will accommodate the shank of the other plug regardless of the exact position of the latter plug with respect to the first plug. Furthermore, this construction provides an arrangement whereby the body bar may be adjustably positioned longitudinally with respect to the plugs after the plugs have been engaged with the cylinder head while also, the shackle 15 may likewise be positioned longitudinally of the bar. The slot 12 is, of course, designed to serve a purpose similar to that of the slot 13 and, in this connection, it is to be noted that even though the shank of one of the plugs is accommodated by a slot in the bar, the shank of the other of the plugs, in being engaged through one of the openings in the bar, will secure the bar against longitudinal movement with respect to the plugs. Having connected the body bar with the cylinder head block, the hook, as conventionally illustrated at 29, of a suitable hoist or crane may be engaged with the shackle 15 for lifting the cylinder head block from the engine in the event said block has been previously detached from the engine block or, in the event the cylinder head block has not been detached from the engine block, for lifting the entire engine from the frame of the vehicle. Plugs similar to the plugs 18 and having terminals corresponding to the terminals 20 but of larger or smaller diameter, may, of course, be provided to suit the requirements of different engines and for engines employing removable intake and exhaust valve cages, I provide the plugs 19. The terminals 24 of the plugs 19 are of a size to fit in the cage openings of the cylinder head block of such an engine so that after the valve cages have been removed, the plugs 19 may be engaged with the cylinder head for removing the head or removing the entire engine.

In some instances, it is conceivable that it might prove inadvisable or impracticable to lift an engine by means of the plugs 18 or by means of the plugs 19, such for instance, as a very heavy engine, or an engine having an uneven upper surface such as an eight cylinder engine, and as shown in Figure 4, I accordingly further provide, in conjunction with the body bar 10, an anchoring means accommodated to such a situation. A pair of eye bolts 30 is provided. These eye bolts are formed with shanks 31 engageable through the slots and openings of the body bar and are threaded to accommodate nuts 32 for connecting the bolts with the bar while to the eye of each of said bolts is freely connected a pair of elongated anchoring hooks 33. As will be appreciated, the pairs of hooks 33 may be engaged with projecting ledges, shoulders or other projecting parts at the sides of an engine when the hook 29 of the hoist may be engaged with the shackle 15 for lifting the engine. It will accordingly be seen that I provide a device adapted for a wide range of use.

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

1. A hoisting hitch including a body bar, and anchoring means for connecting the bar with an engine and formed with portions to be accommodated in the spark plug openings of the engine engaged therewith.

2. A hoisting hitch including a body bar, and anchoring means for connecting the bar with an engine and formed with portions threaded for engagement in threaded openings of the engine.

3. A hoisting hitch including a body bar, and anchoring plugs for connecting the bar with an engine at the spark plug openings of the engine, the bar being provided with means whereby the shackle may be adjustably positioned longitudinally of the bar.

4. A hoisting hitch including a body bar, anchoring plugs for connecting the bar with an engine and having shanks to extend through the bar, and means upon the shanks of said anchoring means detachably connecting said anchoring means with the bar.

5. A hoisting hitch including a body bar having spaced openings to selectively receive anchoring means and further provided with a slot to also receive anchoring means, a shackle for the bar, and companion anchoring means for connecting the bar with an engine, one of said anchoring means being engaged through one of said openings and the other of said anchoring means being engaged through said slot.

6. A hoisting hitch including a body bar having spaced openings to selectively receive anchoring means and further provided with a slot to also receive anchoring means, companion anchoring means for connecting the bar with an engine, one of said anchoring means being engaged through one of said openings and the other of said anchoring means being engaged through said slot and a shackle for the bar having spaced ends one selectively engageable through said openings and the other engageable through said slot for connecting the shackle with the bar.

7. A hoisting hitch including a body bar, and anchoring plugs for connecting the bar with an engine, said plugs being formed with threaded terminals for engagement in threaded openings of the engine.

In testimony whereof I affix my signature.

CLOYED M. JENKINS. [L. S.]