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G. R. CULLINGWORTH.
PORTABLE TRAVELING CRANE.

APPLICATION FILED NOV. 15, 1905.

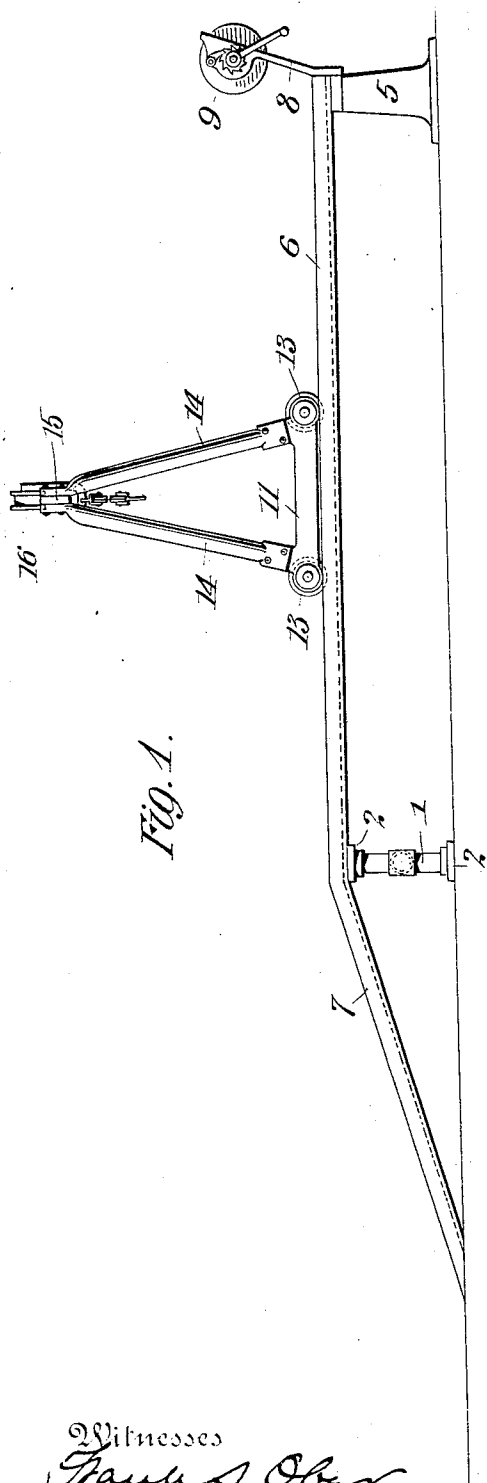


Fig. 1.

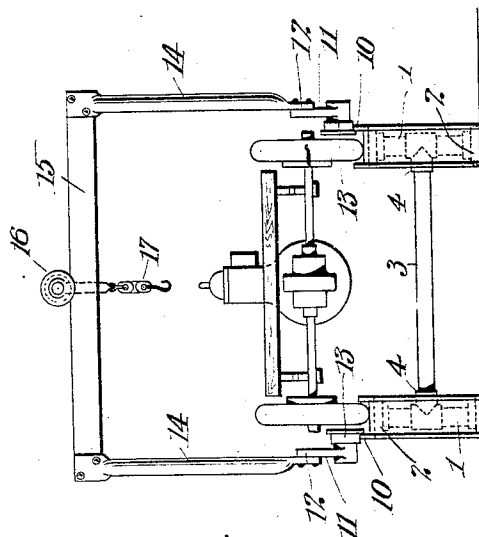


Fig. 2.

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PORTABLE TRAVELING CRANE.

No. 824,342.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, GEORGE R. CULLINGWORTH, a citizen of the United States, residing at Mount Vernon, in the county of Westchester and State of New York, have invented certain new and useful Improvements in Portable Traveling Cranes, of which the following is a full, clear, and exact description.

My invention relates to a portable traveling crane for automobiles and similar apparatus from which it may be desired to remove the engine or to repair some of the heavy parts.

The widespread use of motor-vehicles necessitates their repair in many local shops and garages which are not fitted with traveling cranes in the manner of general machine-shops; but on account of the heavy nature of motor-vehicle repairing a traveling crane of some sort is at times almost indispensable.

It is the purpose of my invention to provide a simple and cheap construction of traveling crane especially adapted for the assembling or repair of motor-vehicles and which is adaptable for use in garages or rural repair shops where expensive machinery is not available.

A further object of the invention is to provide a device of the above character in which the motor-vehicle shall be raised from the floor so as to permit ready access to the parts beneath.

With these and other objects in view my invention consists in the construction, combination, location, and arrangement of parts, all as will be hereinafter more fully described, as shown in the accompanying drawings, and finally pointed out in the appended claims.

In the drawings, Figure 1 is a side elevation of a device embodying the principles of my invention, and Fig. 2 is a front elevation of the same.

The principal difficulty in the repair of automobiles is due to the non-accessibility of the parts. The chassis is usually so close to the ground that it is extremely uncomfortable to get beneath the car to repair the parts and the difficulty of removing the engine without a crane is very great. In the device embodying my invention I raise the automobile-chassis off of the floor on channel-irons, and I employ the same channel-irons for guiding a small and specially-constructed traveling crane which is adapted for all purposes of automobile repair.

Referring to the drawings and to the various reference-signs appearing thereon, in which like parts are designated by the same reference-signs, wherever they occur, 1 denotes standards, which are conveniently formed of gas-pipe, with flange-couplings 2 thereon. 3 indicates a cross-brace, also of gas-pipe, which may be conveniently secured to the uprights 1 by ordinary T-couplings 4. The use of the above-described materials is of course not essential to my invention, but forms a convenient supporting-frame for the channel-irons, presently to be described.

5 indicates a support which may be of cast-iron in order to give sufficient rigidity against lateral displacement, and between the support 5 and each of the uprights 1 I suspend channel-beams 6, which are also conveniently bent downward at their forward ends to form inclined ways or guides 7.

8 indicates a standard upon the base 5, in which is journaled a small windlass 9, of any convenient or preferred construction.

Upon the outside vertical flanges 10 of the channel-beams 6 I arrange and guide carriages which constitute the supports for my portable traveling crane. 11 indicates these carriages, and I prefer to form them of a single piece of metal having lugs 12 thereon.

13 indicates flanged wheels, which are journaled at the ends of the carriages 11 and are of a form to roll upon the flanges 10 above referred to.

14 indicates struts or standards, which are bolted to the lugs 12 and project diagonally upward therefrom, being firmly bolted to each other and having a rigid cross-beam 15 at their upper ends.

16 indicates a trolley which can be moved back and forth upon bar 15, and 17 indicates a hoisting-tackle of any desired sort.

In operation the motor-vehicle chassis to be repaired is arranged at the bottom of the inclined ways or guides 7 and the windlass 9 is then tackled onto the motor-vehicle, by which it is drawn up the ways 7 and onto the channel-beams 6, which are sufficiently broad to accommodate any usual gage of wheels. The traveling crane is now moved over the engine or any other part which is to be repaired and the tackle 17 operated to raise the part. The chassis may now be removed and the engine lowered to the floor or the traveling crane may be moved along the channel-beams, carrying the part with it, un-

til a convenient place is found to operate upon the part. If desired, the traveling crane may be entirely lowered down the ways or guides 7 onto the floor, the windlass 5 9 being effective to prevent the crane from upsetting in this action. At all times the motor-vehicle is accessible from beneath for any necessary repairs, so that by my device a motor-vehicle is made accessible at all points. 10 While I have described the invention with particular reference to the use of channel-irons as the main supporting ways or members, it is evident that supporting beams or ways of other forms can be used. For ex- 15 ample, supporting-guides having flat upper surfaces could be used, the guiding-wheels 13 in this case having their flanges so positioned as to be guided by the outside edges of such guides or ways. I do not desire, therefore, 20 to be limited or restricted to the use of channel-beams for this purpose.

What I claim is—

1. A portable crane comprising a pair of channel-beams adapted to receive the wheels 25 of an automobile, carriages having flanged rollers guided by the outside flanges of said beams, and a crane supported from said carriages.

2. A portable crane comprising a pair of 30 guiding-beams, inclined ways or guides therefor, a windlass, and a traveling crane moving on said guiding-beams and arranged to move over an automobile placed on said beams.

3. A portable crane comprising a base, a 35 pair of uprights, a pair of guiding-beams supported between said base and said uprights, inclined ways for said beams, and a traveling crane arranged to move on said beams, said

crane being capable of movement past a ve- 40 hicle resting upon said beams.

4. The combination of two channel-beams, a portion of which are bent to form an in- 45 clined way, a crane thereon, suitable supports for the channel-beams, and a windlass, said crane being capable of movement past a vehicle resting on said beams.

5. In a portable crane, a base, a pair of up- 50 rights formed of gas-pipe, a cross-brace of gas-pipe, pipe-couplings for connecting said parts, a pair of channel-irons resting on said base and uprights, inclined ways or guides therefor, and a traveling crane having flanged 55 rollers moving on the flanges of said channel-beams.

6. In a portable crane, a pair of channel- 60 beams, a pair of carriages having flanged rollers guided to move on the flanges of said beams, lugs on said carriages, a pair of in- clined struts bolted to said lugs, a beam con- 65 necting said struts, and a hoisting-tackle de- pending from said beam.

7. In a portable crane, a base, a pair of up- 70 rights formed of gas-pipe, channel-beams connecting said parts, inclined ways or guides for said channel-beams, a pair of carriages having flanged rollers moving on the flanges of said beams, inclined struts supported by said carriages, a trolley-beam connecting said struts, and a hoisting-tackle depending from said trolley-beam.

In witness whereof I subscribe my signature in the presence of two witnesses.

GEORGE R. CULLINGWORTH.

Witnesses:

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