

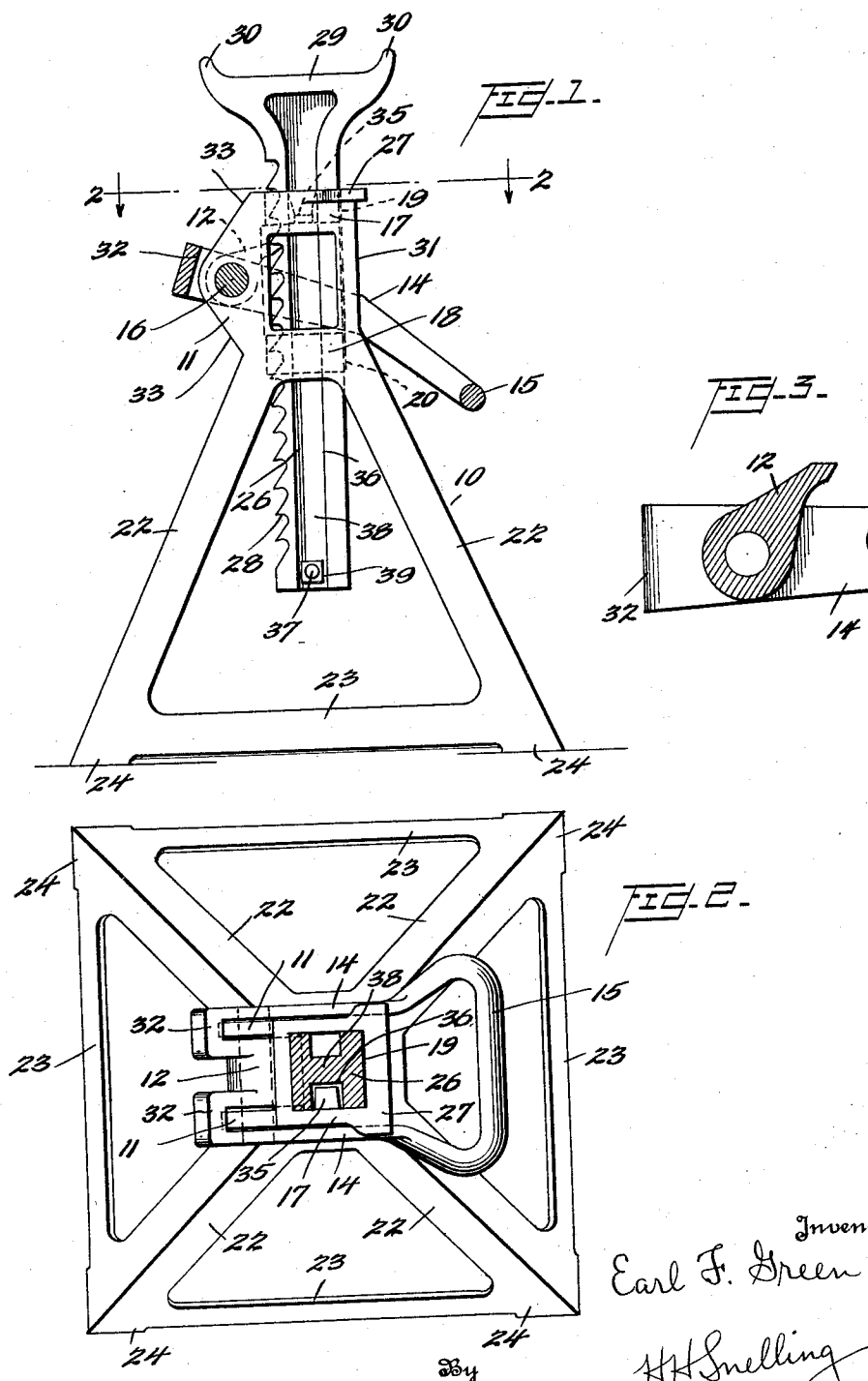
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TRESTLE

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TRESTLE

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This invention relates to trestles and has for its object the simplification of such trestles particularly those intended for holding automobiles while being repaired or serviced. A further prime object of the invention is the provision of a unitary handle and pawl casting by means of which the trestle can expeditiously be carried away by a single motion which simultaneously drops the rack.

In ordinary garages a great number of jacks are required because the mechanics will raise a car by a jack or jacks which they leave in place to serve as trestles. Where the garage is very small and only one car is handled at a time there is no objection to the practice but where there is a volume of business it is extremely convenient to employ trestles not only because they are much more rigid than a jack but primarily because of the relatively great expense of the elevating jacks and the saving that is naturally had by reducing the number of jacks required.

Adjustable stands or trestles are themselves well known and old and it is quite customary for these adjustable stands to employ a base, a rack vertically slidable in the base, a pawl to engage the rack, and often means of some kind connected to the pawl to lift it out of engagement with the customary rack or ratchet teeth, the pawl frequently being spring pressed. The present invention therefore is limited to details, primarily of the integral pawl and handle.

In the drawing:—

Figure 1 is a side elevation with the rear arm of the handle broken away.

Figure 2 is a top plan view.

Figure 3 is a central vertical section through the pawl.

The body 10 of the trestle is formed of a single casting the top of which is a hollow parallelepipedon each of the six faces of which is a rectangular open frame, each of the two sides being extended to provide parallel ears 11 which form the pivotal support for a one-piece member consisting of a pawl 12, the two arms 14 and the transverse cross piece 15 of the handle, this member, which is a casting, being pivoted to the two ears 11 preferably

by a single pivot pin 16 passing through the arms, the ears, and the pawl.

The top face 17 and the bottom face 18 have alined rectangular openings 19 and 20 and the bottom face 18 forms the top piece of a hollow four-sided pyramid, the four sloping bars 22 of which are angle pieces and the four bottom members 23 of which are flats, the plan of the bottom being square in outline as is the top of the base, but I prefer that only the four corner portions 24 shall touch the floor or other support.

The alined holes 19 and 20 quite snugly receive the rack 26 there being just sufficient play to enable the rack to have proper vertical movement. This closeness of fit is highly advantageous because it enables the trestle to form a substantially rigid support for the automobile. The reinforcing top flange 27 extends across the entire front and a portion of the sides to strengthen the casting at this edge.

The rack 26 like the body 10 is a one-piece casting, the stem being H-shaped in cross section with the ratchet teeth 28 on one of the two parallel flanges and the saddle or head 29 being of conventional type with the usual retaining ledges 30.

By having the axis of the pivot in the location shown in the drawing we have an advantage of great importance because the center of gravity of the handle portion of the pawl casting is about in line with the front face 31 or beyond the plane of its outer surface so that the pawl 12 automatically goes into engagement with the ratchet teeth 28.

The cross piece 15 of the handle is always held at a very convenient location and in raising the handle the mechanic performs two simultaneous operations, he releases the pawl allowing the rack to fall and he lifts the entire trestle because the flat sides 32 of the short transverse pieces or lugs which connect the pawl on either side with the arms 14 engage the sloping rear face 33 of the ears 11, and in this way the handle 15 forms the most convenient means possible for the transporting of the trestle from place to place. In order to reduce the strain on the handle caused by lifting the trestle the arms may be

proportioned to engage the reinforcing flange 27 when the handle 15 is raised and the flange will thus act as a fulcrum in tipping the jack when it is desired to move it to another position. This expedient allows a much lighter handle than if only the lugs 32 were used and furthermore prevents all possibility of the hand of the operator being injured by coming in contact with the falling rack 26 which is released on upward movement of the handle 15. While it is most convenient to transport the trestle by means of the handle I provide a lug 35 integral with one of the side faces to extend inward into the central rack receiving space, the lug being sufficiently short and narrow to fit in the slot or groove 36 of the rack 26 between the web and flanges, and I insert a bolt 37 thru the web 38 after assembly and then apply a nut 39, preferably hammering over the bolt threads to prevent loss of the nut. On raising the rack by its saddle the bolt engages the lug and the entire trestle may be carried in this way.

In operation the car or other thing to be elevated and held raised is first lifted in ordinary manner by a jack but to a position slightly higher than wanted. The trestle which is carried by its handle 15 is slid under the axle or other portion of the car and the handle dropped. The rack is now raised by hand almost into engagement with the portion to be held and at such time the weight is transferred to the trestle by the lowering of the jack which is now free for other work.

It will be noted that in raising the rack the pawl acts precisely as a spring pressed pawl would, allowing free movement of the rack upward but preventing movement downward. To release the load it is necessary that the lifting jack again be used, this being the usual practice with trestles of all kinds.

What I claim is:

1. A trestle consisting of a base, a rack vertically slidable in the base and having ratchet teeth, a pawl pivoted to the base to engage said teeth, and transporting handle means so connected to the pawl and pivoted to the base as to free the pawl from the teeth on upward movement of the handle and to transport the trestle upon still further movement of the handle, said handle being on one side of said rack and said pawl being on the other side, and means on the base for preventing the handle from engaging the rack in any position.

2. A handle-pawl assembly for a trestle consisting of a pivoted pawl, a handle parallel to the pivotal axis of the pawl and connected thereto by a pair of arms extending from opposite sides of the handle to the pawl to form a substantially rectangular frame to receive in the opening thereof a rack support.

3. In an automobile trestle, a base consisting of a standard having a vertical opening therethru, a rack snugly slidable within said

opening, a pawl engaging the rack teeth, and means extending on opposite sides of the standard forming arms pivoted with and connected to the pawl, lugs on said arms, and means connecting the free ends of the arms to form a handle by which the pawl may be moved and by which the lugs are moved into contact with the base after the pawl is disengaged so that the entire device may be thereafter tipped and transported by means of said handle.

4. The device of claim 3 in which the transverse handle portion connecting the arms is on the opposite side of the device from the rack teeth, and forms a transporting bail for the trestle.

5. The device of claim 3 in which the transverse member connecting the arms is on the opposite side from the rack teeth and the pawl is pivoted on an axis to one side of both the teeth and the transverse handle.

6. In an automobile trestle, a base having a sloping side, a pawl pivoted to the base adjacent the sloping side, a handle for moving the pawl, and a transverse member connecting the pawl and handle, said transverse member being so located that when the handle is lifted to free the pawl the transverse member will engage the sloping side of the base whereby the pawl handle becomes the handle for the base.

7. A handle-pawl assembly for a trestle consisting of a pawl, a transverse handle portion and a pair of spaced arms extending from the handle portion to the pawl to form a hollow frame to receive in the opening thereof a rack support, said pawl being fixed with respect to said arms.

8. A handle-pawl assembly for a trestle consisting of a pawl having pivoting means, a transverse handle portion parallel to said pivoting means and a pair of spaced arms extending from the handle portion to the pawl pivoting means to form a hollow frame to receive in the opening thereof a rack support, said pawl extending into said opening and in the same direction as said arms and being fixed with respect to said arms.

In testimony whereof I affix my signature.

EARL F. GREEN.