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J. L. DAHL

AUTOMOBILE HORSE OR SUPPORT

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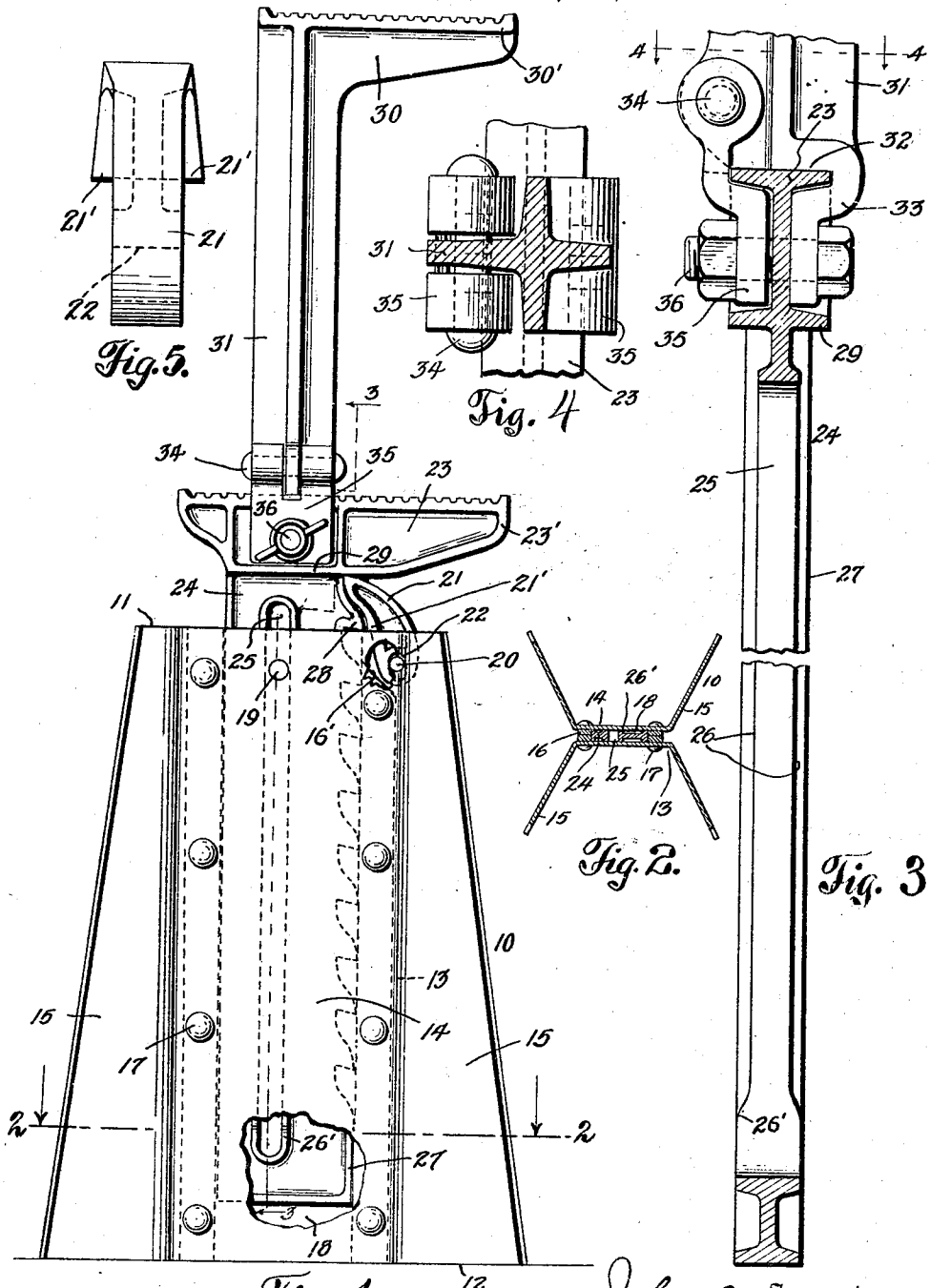


Fig. 5. Fig. 4 Fig. 2. Fig. 3

Fig. 1

Witness

Wils & Goodactive

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By his Attorney Wm. H. Beeler

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UNITED STATES PATENT OFFICE.

JOHN L. DAHL, OF TEANECK, NEW JERSEY, ASSIGNOR TO THE GARAGE UTILITIES CO., OF HACKENSACK, NEW JERSEY, A CORPORATION OF NEW JERSEY.

AUTOMOBILE HORSE OR SUPPORT.

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To all whom it may concern:

Be it known that I, JOHN L. DAHL, a citizen of the United States, residing at Teaneck, in the county of Bergen and State of New Jersey, have invented certain new and useful Improvements in Automobile Horses or Supports, of which the following is a specification.

This invention relates to supporting devices and has particular reference to what is known in the automoblie practice as a horse, an implement of variable height adapted to be placed under any desired portion of an automobile running gear or chassis for supporting it temporarily in elevated position as for the removal, inspection, or repair of a wheel.

Among the objects of the invention is to provide an implement of the nature set forth in which there is a relatively stationary base or pedestal with which co-operates a vertically adjustable head of peculiar construction and adaptability and movable means acting between the head and the pedestal for holding the head elevated according to the height of the device supported thereon.

Another object of the invention is to provide a peculiarly constructed and operated extension member for the head or what may be called an auxiliary head detachably but rigidly connectible to the main head.

With the foregoing and other objects in view the invention consists in the arrangement and combination of parts hereinafter described and claimed, and while the invention is not restricted to the exact details of construction disclosed or suggested herein, still for the purpose of illustrating a practical embodiment thereof reference is had to the accompanying drawings, in which like reference characters designate the same parts in the several views, and in which—

Figure 1 is a side elevation of the principal part of the improvement and with the auxiliary head attached.

Fig. 2 is a horizontal section on the line 2—2 of Fig. 1, on a reduced scale.

Fig. 3 is a vertical section through the main head and auxiliary head connection, on the line 3—3 of Fig. 1.

Fig. 4 is a horizontal sectional detail on the line 4—4 of Fig. 3.

Fig. 5 is an edge elevation of the locking pawl.

Referring now more specifically to the drawings, the pedestal above referred to comprises two main portions 10 formed preferably from sheet metal each substantially of channel section and in the form of a trapezoid having upper and lower parallel edges 11 and 12. From the form of this element it is obvious that there is practically no waste of material when stamping the same from a large sheet of metal. The pedestal plates 10 are each bent along vertical parallel bending lines 13 so as to form a central flat body portion or web 14 and two wing or brace portions 15 arranged at an oblique angle from the body portion 14. When assembling the pedestal the two body portions of the plate members are placed in rather close spaced relation, filler or spacer strips 16 being employed, the same being fixed rigidly and permanently together as by means of vertical series of rivets 17 passing through the flat portions of the members and the filler strips. Thus there is formed a straight guide way 18, rectangular in cross section. Spanning said guide way near its upper end is a fixed pin 19, and pivoted loosely on a pin 20 extending across the space between the plates close to the bending lines 13 on the outside of the adjacent filler strips 16, is a pawl 21, the pin 20 passing loosely through a slot 22 in the pivoted end of the pawl. The free or point end of the pawl extends over the guide way 18, the swinging of the pawl being provided for by cutting off the upper ends of the adjacent filler strips as shown at 16′.

The main head above referred to comprises an enlarged horizontal portion or carrier 23 formed integral with a straight shank 24 fitted movably in the guide way 18. This shank in outline corresponds to the cross section of the guide way and is provided with a longitudinal slot 25 arranged slightly off the center of the structure and through which the pin 19 projects, thus preventing the undesired withdrawal of the head from the pedestal. The walls bounding the slot 25 are flanged at 26, the width of the flanges 26 being somewhat less than the edge flanges 27, except near the lower end of the slot where the flanges 26 widen out at 26′ so as to snugly fit or fill the transverse space between the body portions 14 of the plates to give additional stiffness between the head and the pedestal, especially

when the head is adjusted to its maximum height and at which time the greatest rigidity is necessary. One edge portion of the shank 25 is provided with a series of teeth 28 with which the point of the pawl is adapted to co-operate selectively according to the desired height of the head, and when the weight is thus secured upon the pawl the resistance through the pawl is borne by means of shoulders 21′ extending laterally from the point portion of the pawl and co-operating with the upper edges 11 of the pedestal plates, thus relieving the direct weight of the load from the pivot pin 20. The pin 20 serves to hold the pawl pivotally to the pedestal and prevents the lateral spreading of the adjacent end of the pawl away from the series of teeth while in holding position. When the pawl is in engagement with the lowest tooth of the series the thickest portion 26′ of the shank is closed up to the top of the pedestal. The carrier 23 may be formed in any suitable manner, but preferably as is shown in Fig. 3 of I-beam construction in cross section and reinforced vertically with suitable ribs or flanges. One of the important features of this part of the device is that the carrier 23 extends at one end 23′ well outward horizontally from the vertical center of the pedestal and lies practically above the side portion of the base of the pedestal. The purpose of this lateral extension 23′ is to enable the carrier to be inserted between the truss rod and the axle housing when the machine is intended to be supported at the housing. Moreover, the entire upper surface of the carrier is adapted for the support of any weight that may be brought conveniently upon it. The carrier includes also shoulders 29 which may rest directly upon the edges 11 of the pedestal when the pawl is thrown outward around its pivot.

The auxiliary head is constructed as shown in Figs. 1 and 3 and comprises a carrier 30 with lateral extension 30′ and a vertical shank 31 of cross shape in horizontal section, having four ribs or flanges radiating from a common center. The effective base or lower end of this member rests flat at 32 upon the top of the carrier 23, while the rigid structure of the shank 31 is carried around to and against the side of the carrier 23 in the nature of a fixed jaw 33. Pivoted at 34 through the lower end of the flange on the opposite side of the shank from the fixed jaw 33 is a movable jaw 35, the otherwise free end of which lies on the side of the carrier 23 from the fixed jaw 33, and a fastener such as a bolt 36 is passed through both of said jaws and through said carrier when the auxiliary head is to be used. Thus the weight or load borne by the auxiliary head is sustained directly upon the top of the main head, rather than upon the bolt 36, making an exceedingly strong as well as rigid equipment even for maximum elevation.

The apparatus herein described is exceedingly strong and reliable and will last practically indefinitely when used in the manner illustrated.

Claims:

1. The herein described horse or support, comprising a pedestal, a main head adjustable vertically therein, an auxiliary head having longitudinal webs, a fixed jaw on one side of the auxiliary head fitting against the side of the main head, a movable jaw fitting against the other side of the main head, a pivot pin projecting through one of said vertical webs and connecting the movable jaw thereto, and a clamping bolt projected through both jaws and through the main head and rigidly securing said parts together.

2. In a horse or support, the combination with a head having a shank, of a pedestal therefor constructed in two main portions of sheet material, each portion being substantially of channel shape, the web of one portion being located adjacent to the web of the other, said pedestal comprising also spaced filler strips between said webs to provide a guideway for said shank, said web portions of said pedestal being secured together against said filler strips by fastening means passing therethrough and through the webs.

3. The herein described horse or support comprising, in combination, a pedestal having a vertical guideway, a load supporting member including a shank slidable vertically in said guideway and having along one edge a series of teeth, and a pawl mounted movably in one side of the top of the pedestal and co-operating with any selected one of said teeth, said pawl including laterally extending shoulders integral therewith for direct engagement with the upper portions of the pedestal on opposite sides of the guideway for sustaining directly on the pedestal the load borne upon the load supporting member.

In testimony whereof I affix my signature.

JOHN L. DAHL.