C. A. ARNHOLM.

ENGINE RACK.

APPLICATION FILED JUNE 27, 1914.

1,131,027. Patented Mar. 9, 1915.

Fig. 2

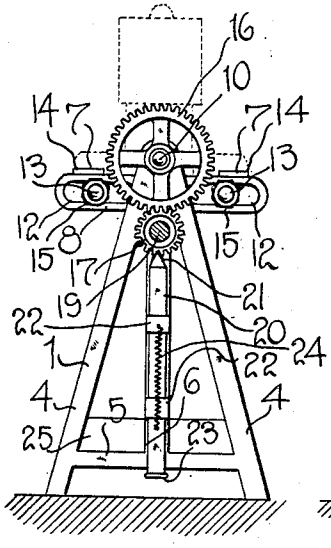


Fig. 3

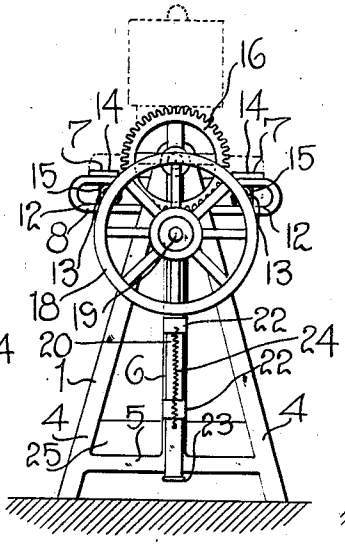


Fig. 4

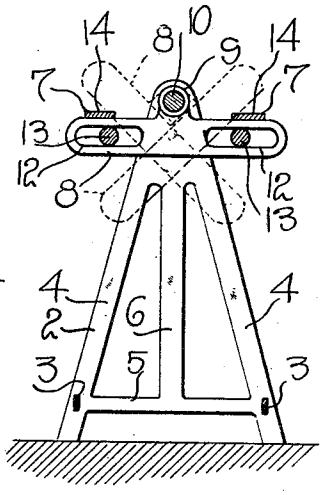


Fig. 1

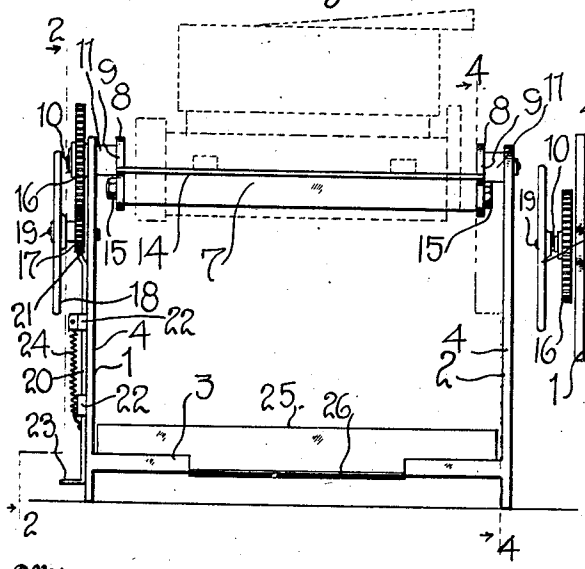
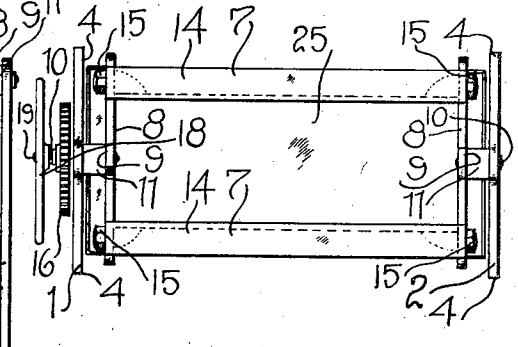


Fig. 5



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UNITED STATES PATENT OFFICE.

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ENGINE-RACK.

1,131,027. Specification of Letters Patent. Patented Mar. 9, 1915.

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To all whom it may concern:

Be it known that I, CHARLES ARTHUR ARNHOLM, a subject of the King of Denmark, residing at St. Albans, in the county of Franklin and State of Vermont, have invented certain new and useful Improvements in Engine-Racks, of which the following is a specification, reference being had to the accompanying drawings.

This invention relates to new and useful improvements in motor and machine stands and more particularly to what is known as a gasolene engine rack, the main object of the invention being the provision of a support, whereby the work of assemblage or dismembering an engine, particularly of the internal combustion type, such as is generally used for automobiles may be greatly facilitated and the parts of the invention brought into convenient position for inspection and repairs or for any purpose whatsoever, thereby enabling the work to be performed in a thorough manner which is not generally the case, particularly where the nature of the work is such as to require the workman to operate in close quarters or cramped position.

Another object of the present invention is the provision of a stand or support of the above character which is of novel form and adjustable so that the parts to be operated on may be brought into lateral or vertical position or to any convenient point found most suitable to the workman.

Another object of the present invention is the provision of a device of the above character which will possess advantages in points of efficiency and durability, is inexpensive to manufacture and, at the same time, is simple in construction and operation.

With the above and other objects in view, the invention consists in the novel features of construction, combination and arrangement of parts as will be hereinafter referred to and more particularly pointed out in the specification and claims.

In the accompanying drawing forming a part of this application, Figure 1 is a side elevation of an engine rack constructed in accordance with my invention. Fig. 2 is a sectional view taken on the line 2—2, Fig. 1. Fig. 3 is an end elevation. Fig. 4 is a sectional view taken on the line 4—4, Fig. 1; and Fig. 5 is a top plan view.

In carrying out my invention, I provide a supporting frame which comprises the two end members 1 and 2 which are suitably connected at their lower ends by means of the longitudinal rods 3, thus securely retaining the frames 1 and 2 in an upright position. Each of the frames 1 and 2 include the divergent side pieces 4 which are integrally connected at their upper ends and are connected at their lower ends by means of the transverse bar 5. The end members are each provided with a central vertical bar 6, the upper end of which is formed integral with the two side members, while the lower end of said bar is formed integral with the transverse bar 5. The movable frame 7 includes the transverse end bars 8 which are provided with a perforated lug 9 adapted to be mounted upon the inwardly projecting shafts 10, the outer ends of which are mounted within the upper ends of the end members 1 and 2.

Mounted upon the shafts 10 and disposed between the perforated lugs 9 and the upper ends of the members 1 and 2, are the sleeves 11 which are adapted to retain the bars 8 in a normally operative position. The ends of the bars 8 are provided with elongated openings 12 in which are slidably mounted the ends 13 of the side bars 14, said side bars being preferably annular in form and provided with the reduced threaded ends 13 upon which the nuts 15 are mounted to retain said bars in various adjusted positions. From this it will be apparent that the bars 14 may be readily adjusted laterally with respect to each other to accommodate various sizes of gasolene engines to be mounted upon the rack.

Mounted upon the outer end of one of the shafts 10, is a gear wheel 16 which is adapted to mesh with a pinion 17 formed integral with a fly wheel 18, said pinion and fly wheel being mounted upon a shaft 19 which is supported by the end frame 2. The gear wheel 16 is retained against movement by means of a reciprocating latch bar 20, the upper end of which tapers into a point 21 adapted to be engaged with the teeth of the pinion 17 to retain the same against rotary movement. The bar 20 is slidably mounted within suitable guides 22 carried by the central member 6 of the end member 2 and the lower end of the bar is extended outwardly at right angles, as shown at 23 to form the foot piece whereby

the device may be readily actuated by the foot of the operator when it is desired to release the gear 16 and permit rotation of the frame 7.

The pointed end 21 of the bar 20 is normally retained into engagement with the pinion 17 by means of a coil spring 24, one end of which is secured to the uppermost of the guide members 22, while the other end thereof is secured to the bars 17, adjacent the foot piece 23, so that upon downward movement of the bar 20, the spring will be placed under tension, so that the tension of said spring will return the bar to its normal locking position, after the same has been released. It will be apparent from the above that when it is desired to rotate the frame member 7, the foot lever 23 is pressed downwardly to disengage the pointed end 21 of the bar 20 from the pinion 17 and thus release the frame member 7, so that it may be rotated to any desired position. It will also be apparent that the side bars 14 may be quickly and readily adjusted to accommodate various sizes of engines.

Supported by the longitudinal rods 3 and arranged beneath the frame 7, is a drip pan 25, the longitudinal side edges of which are provided with downwardly projecting curved flanges 26 adapted to engage over the rods 3 to retain the drip pan 25 in its normal position between the end members 1 and 2 and beneath the frame 7. This drip pan 25 is arranged beneath the frame 7 to catch the oil and grease from the engine and also to catch the loose bolts and nuts or other parts of the engine which might be accidentally dropped therefrom. It will be noted that by having the curved flanges 26 formed upon the longitudinal side edges of the pan, the pan may be readily removed and cleaned and quickly placed back in position.

It will be apparent from the foregoing description taken in connection with the accompanying drawing, that I have provided a simple and durable engine rack, whereby engines of various types and of various sizes may be readily supported thereon, so that the assembling or dismembering of an engine, particularly of the internal combustion type may be greatly facilitated and the parts of the engine brought into convenient position for inspection and repairs. It will also be apparent that by having the side bars 14 laterally adjusted, it will accommodate all sizes of engines, it being understood that the length of the device is sufficient for any six-cylinder engine now in use. It will also be apparent that the device is extremely simple in construction and can be manufactured and placed upon the market at a comparatively low cost.

While I have shown and described the preferred form of my invention, it will be obvious that various changes in the details of construction and in the proportions may be resorted to for successfully carrying my invention into practice, without sacrificing any of the novel features or departing from the scope of the appended claims.

Having thus described this invention, what I claim is:—

1. A device of the character described comprising spaced uprights, shafts supported by said uprights, means for axially adjusting said shafts, bars pivotally connected to the shafts and spaced longitudinally thereof, the opposite extremities of said bars being provided with elongated longitudinally disposed slots, side bars engaged with the first named bars and provided with extensions disposed through the slots of the first named bars and means carried by said extensions and coacting with the first named bars for clamping the side bars against movement independently of the first named bars.

2. A device of the character described comprising spaced uprights, shafts supported by said uprights, means for axially adjusting said shafts, bars pivotally connected to the shafts and spaced longitudinally thereof, the opposite extremities of said bars being provided with elongated longitudinally disposed slots, side bars engaged with the first named bars and provided with extensions disposed through the slots of the first named bars and means coacting with the shaft for locking the shafts in their different axial movements.

In testimony whereof I hereunto affix my signature in the presence of two witnesses.

CHARLES ARTHUR ARNHOLM.

Witnesses:

JED B. SAFFORD,

BURDETTE H. START.