Oct. 11, 1955 H. BERGER 2,720,036

COMBINED ROLL-ON LIFT AND ALIGNMENT MACHINE FOR AUTOMOBILES

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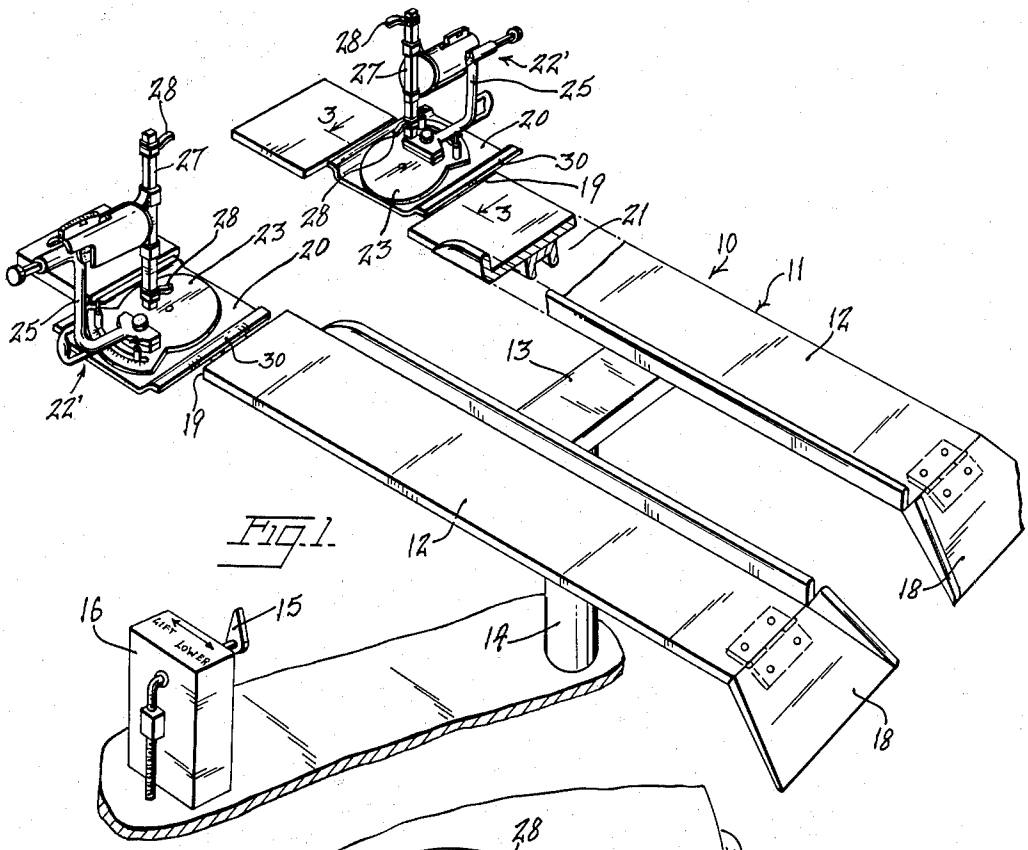


FIG. 1.

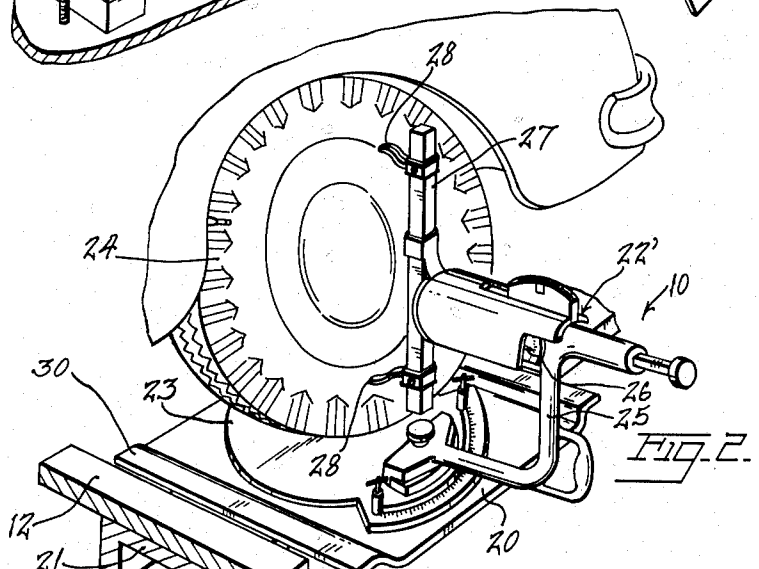


FIG. 2.

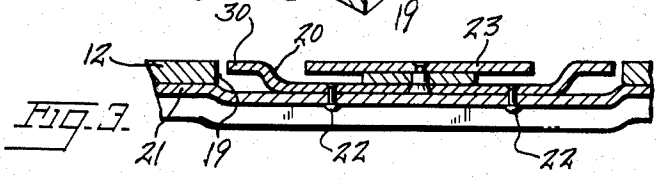


FIG. 3.

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COMBINED ROLL-ON LIFT AND ALIGNMENT MACHINE FOR AUTOMOBILES

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1 Claim. (Cl. 33—203.12)

This invention relates to roll-on lifts and alignment machines for automobiles.

It is an object of the present invention to provide a combination lift and alignment machine for automobiles which is adapted for any type of shops, including those which are too small for a lift and an alignment machine but big enough for a lift.

It is another object of the present invention to incorporate any alignment machine into any roll-on lift thereby making the front end of an automobile more accessible to the mechanic.

It is another object of the present invention to provide a combination lift and alignment machine whereby every car that pulls up on the lift for services of any kind will also be a potential customer for alignment, providing additional revenue for the shop.

Other objects of the present invention are to provide a combination lift and alignment machine bearing the above objects in mind which is of simple construction, inexpensive to manufacture, has a minimum number of parts, is easy to install and efficient in use.

For further comprehension of the invention, and of the objects and advantages thereof, reference will be had to the following description and accompanying drawings, and to the appended claim in which the various novel features of the invention are more particularly set forth.

In the accompanying drawings forming a material part of this disclosure:

Fig. 1 is a perspective view of a combination lift and alignment machine embodying the features of the present invention and shown partly broken away.

Fig. 2 is a fragmentary perspective view thereof showing the machine in operative use.

Fig. 3 is a fragmentary vertical sectional view taken along the line 3—3 of Fig. 1.

Referring now more in detail to the drawings, in which similar reference numerals identify corresponding parts throughout the several views, there is shown a combination lift and alignment machine, referred to collectively as **10** and including a roll-on type of lift **11**, substantially as illustrated.

The lift **11** includes a pair of laterally spaced, open-side runways **12** suitably supported on a cross member **13**, the cross member **13** in turn being supported by a column **14**. In the usual manner of such constructions, the column **14** extends downwardly through the floor of the shop where it is connected to a raising and lowering mechanism of any conventional type.

This mechanism, not shown, is actuated by a knob **15** carried by an indicator table **16** and in operative engagement with the raising and lowering mechanism whereby to control the latter.

Such control mechanisms and the lifting mechanism itself are well known to those skilled in the art and will not, therefore, be described in detail. Suffice it to say that upon movement of the knob **15** to the right, the runways **12** will be raised and upon movement of

the knob **15** in the opposite direction, the runways will be lowered.

The runways **12** are provided with hinged portions **18** to facilitate the movement of the car on to the runways, as will be obvious.

In the practice of the present invention, the runways **12** near their front ends are provided with cut-out portions **19**, as shown in Fig. 3, to accommodate plates or base members **20**, substantially as illustrated.

Beams **21** (see Fig. 1) of U-shaped cross-section are welded or otherwise secured to the undersurface of runways **12** on each side of cut-out portions **19** thereof and serve to support the base members or plates **20**, as shown in Fig. 3, the plates **20** being secured to the beams **21** by rivets, welding or bolts **22**, or by any other suitable means.

It will be noted that beams **21** dip downwardly directly below cut-out portions **19** (see Fig. 3).

Alignment gauges or testing mechanisms, referred to collectively as **22'** are mounted on each of the plates **20**, substantially as illustrated. These alignment gauges or testing mechanisms are of any conventional or well known type and include the usual turntables **23** rotatably mounted on the plates **20**, as shown in Fig. 3, and adapted to support the front wheels **24** of the vehicle, the usual standard **25**, indicator arm **26**, contact bar **27** and shoes **28**. The usual alignment tests and checks are made by proper manipulation of the gauges **22'** mounted on the front ends of the runways **12** on each side of the car, one for each front wheel. Different types of gauges **22'** may, of course, be employed. The detailed operation and construction of these alignment mechanisms are well known to those skilled in the art and will not, therefore, be described in detail.

In operation, the car **29** is driven on the runways **12** until the front wheels **24** come to rest on turntables **23**. The plates **20** at their lateral edges are integrally formed with upwardly extending portions **30** which lie flush with the upper surfaces of runways **12**, substantially as illustrated, and in approximately the same plane as turntables **23**.

The lift **11** is then raised in the usual manner by means of knob **15** and control table **16**, permitting the mechanic to inspect the automobile. Once in the aforesaid position, if desired, the alignment of wheels **24** can be readily checked by testing mechanisms **22'** without moving the car. Also, the raised position of the front portion of the car permits the mechanic to have greater access to the portions of the car which control the alignment of wheels **24**. The alignment testing mechanisms **22'** may then be used in the usual manner. After the wheels have been tested for alignment and the car checked in other respects, the runways **12** are again lowered and the car driven off.

It should now be apparent that there has been provided a combination lift and alignment machine wherein sections are cut-out from any roll-on type lift and replaced by plates upon which are mounted any alignment testing gauges for testing the alignment of the front wheels. It should also be apparent that there has been provided a combination alignment machine and lift of the above type which is adapted for any type of shops, including those which are too small for a lift and an alignment machine but which are big enough for a lift, permitting these shops to have a first-class alignment machine.

Finally, it should be apparent that there has been provided a machine of the above type wherein the front end of the automobile is made more accessible to the mechanic when aligning the wheels and which makes every car that pulls up on the lift a potential customer for

wheel alignment, resulting in greater revenue for the shop.

The present invention can be a combination of any type of roll-on lift, for example, one post hydraulic lifts or four post electric lifts, or any other lift powered by any other means upon which the wheels of the car rest combined with any type of alignment device.

While I have illustrated and described the preferred embodiment of my invention, it is to be understood that I do not limit myself to the precise construction herein disclosed and the right is reserved to all changes and modifications coming within the scope of the invention as defined in the appended claim.

Having thus described my invention, what I claim as new, and desire to secure by United States Letters Patent is:

A combination lift and alignment machine comprising a pair of laterally spaced, open side runways, a cross member fixedly connecting said runways, means for raising and lowering said cross member, said runways having hinged extensions to facilitate the movement thereon of a vehicle, said runways at the position normally occupied by the front wheels of the car having laterally aligned, substantially rectangular cut-outs extending to

the inner sides of said runways, supporting plates secured to the bottom of said runways on both sides of said cut-out portions and dipping below said runways providing a foundation below said cut-out portions, substantially rectangular plates positioned within said cut-out portions on said supporting plates, the lateral edges of said plates being upwardly bent and continuing substantially parallel to said supporting plates in spaced relation thereto and lying flush with the top surface of said runways, turntables rotatably mounted on each of said plates, the top surfaces of said turntable lying flush with the top surfaces of said runways and wheel alignment testing gauges carried on the top surface of each of said turntables.

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