March 14, 1950 F. K. ROOT ET AL 2,500,872

PAINT BAKING APPARATUS

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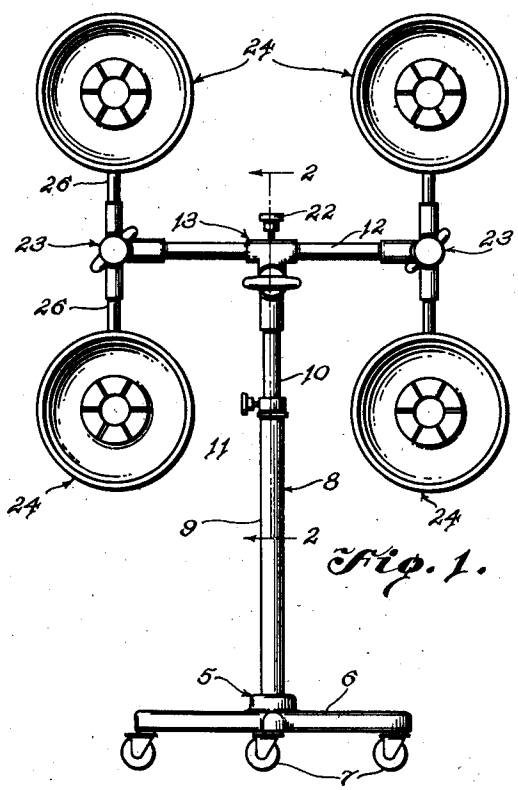


Fig. 1.

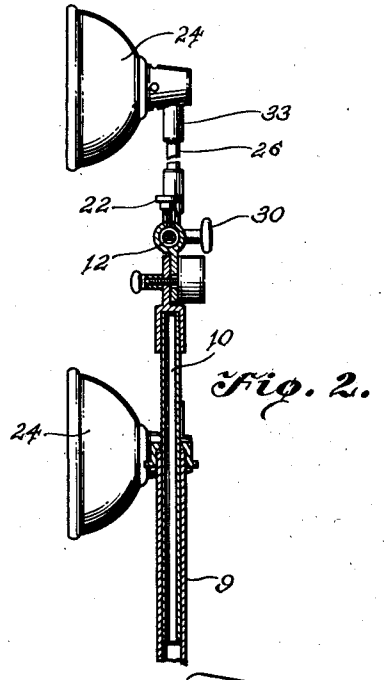


Fig. 2.

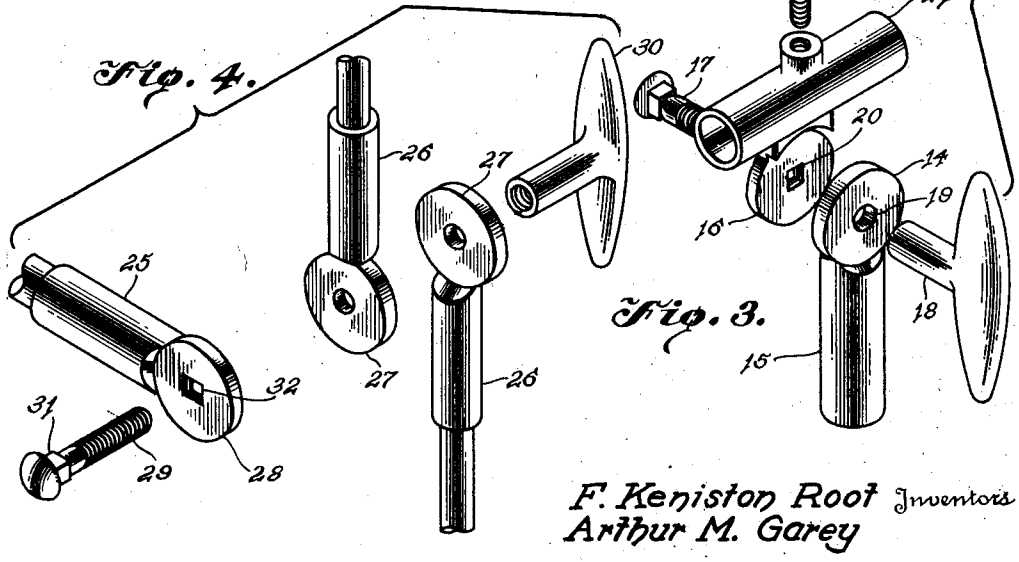


Fig. 4.

Fig. 3.

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PAINT BAKING APPARATUS

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3 Claims. (Cl. 219—34)

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This invention relates to apparatus for, and the process of, drying painted surfaces of limited area and irregular contours.

More specifically, the invention has reference to the use of infra-red carbon lamps or infra-red heat generators, as now generally employed in the automotive trade, for drying or baking of painted or enameled surfaces, respectively, to automobile bodies.

The primary object of the present invention is to provide an apparatus whereby infra-red lamps or heat generators may be used to better advantage for baking enamel finish or drying painted surfaces in a given area or areas of an automobile body incidental to either initially finishing the body or repairing the finish. The invention resides in the provision of a mobile stand or pedestal provided for the mounting thereon of one or more infra-red lamps or generator of the type hereinbefore alluded to and in a manner as will permit of a wide range of adjustment of such lamps or generators to the end that such lamps or generators may be employed with maximum efficiency in the drying of painted surfaces to such areas of the automobile body and parts thereof such as fenders, etc., as are generally very limited and irregular in contour, and because of which the drying of painted finish thereon, especially in repair work, has been heretofore practically impossible to accomplish with any degree of satisfactory results, especially where the available working space, as in a garage, is limited.

The invention, together with the stated and other objects as will readily present themselves to those skilled in this art, is to be further understood from the following detailed description of the accompanying drawing in which is illustrated what is presently considered the preferred embodiment of the invention, and wherein:

Figure 1 is a front elevational view of drying or baking apparatus embodying the invention;

Figure 2 is a fragmentary vertical sectional view taken substantially on the line 2—2 of Figure 1;

Figure 3 is an exploded view of a bracket forming part of the invention; and

Figure 4 is an exploded view of a cross-arm-supported bracket forming part of the invention.

Referring now in detail to the drawing, it will be seen that the mobile pedestal of the invention is designated generally by the reference numeral 5. This pedestal 5 comprising a base 6 mounted on casters 7 and a standard 8 rising from the base 6.

Standard 8 is longitudinally or vertically extensible, consisting of telescoping sections 9, 10; section 10 being rotatably and vertically adjustable with respect to the relatively fixed section 9, and is secured at the desired adjustment by screw 11 in a manner clearly obvious.

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A cross-arm 12 is mounted on standard 8 and is laterally and rotatably adjustable relative thereto. For so supporting the arm 12 is a bracket 13, detailed in Figure 3.

Bracket 13 embodies a plate 14 that is secured on the upper end of standard section 10 through the medium of an integral socket 15 sleeved on and secured to the mentioned standard in any desired manner. Complementing plate 14 is a plate 16 that is rotatable relative to the plate 14 and is secured at the desired position of angular adjustment by a screw bolt 17 and a hand-nut 18. As shown, bolt 17 is accommodated in apertures 19, 20 provided in the plates 14, 16, aperture 20 being non-circular and complementing the non-circular shank portion of bolt 17 to retain the mentioned plate and bolt against relative rotation. Manifestly with nut 18 threaded home on bolt 17 plates 14 and 16 are frictionally engaged in a manner to secure sleeve 21 carried by plate 16 at the desired angle to the horizontal.

Cross-arm 12 has a rotatable and sliding working fit in sleeve 21 and is secured at the desired adjustment relative to sleeve 21 through the medium of thumb screw 22.

On each end of arm 12 is a bracket 23, detailed in Figure 4, for supporting the heaters or driers 24.

Each bracket 23 embodies a fixed or attaching arm 25 and a pair of arms 26 which are adjustable angularly relative to each other and to the arm 25. Arms 26 are pivotally connected to each other and to arm 25 through the medium of apertured plates 27, 27 formed integral with arms 26 and apertured plate 28 formed integral with arm 25, the mentioned plates being disposed in aligned facial contact and receiving a pivot screw bolt 29 on which is threaded a hand nut 30. Plates 27 are rotatable about the bolt 29 as an axis, bolt 29 being held relatively stationary by reason of a non-circular shank portion 31 fitting the non-circular aperture 32 of plate 28. Manifestly by threading nut 30 home on bolt 29 the plates 27, 28 are secured against relative rotative movement whereby the heaters or lamps 24 of each pair are secured at the desired position of angular adjustment or working position.

As indicated a source of heat is carried by each of the bracket arms 26. This source of heat, herein previously referred to and indicated by the

reference numeral 24 is an infra-red lamp or infra-red heat generator embodying a reflector and either a carbon filament lamp bulb or infra-red heat generator of known construction and which has been found to be admirably adapted for use in the process of drying enamel or painted surfaces and as more fully disclosed in U. S. Letters Patent No. 2,057,776, dated October 20, 1936, and entitled "Paint baking apparatus."

The lamps 24 are mounted on the terminals of arms 26 as at 33 and are connected to a source of electric current supply, when the apparatus is in use, through the medium of an electric cord (not shown) connected to the lamps, in a manner readily apparent to those experienced in this art, and equipped for plugging into a conventional outlet.

The baking apparatus of this invention is capable of being readily positioned with reference to the repaired panel, area, or part of the automobile body, and, as can be seen by the foregoing, many adjustments may be had, and each of the heating units, or lamps, is secured individually and separately at the desired position of adjustment from any of the other lamps so that practically any adjustment can be made as may be required to obtain the best results and as the attendant circumstance of use may dictate.

The apparatus contemplated by this invention is simple and with regard to similar devices now known or in existence, is more flexible in that it permits of a wide range of adjustment of the heating units with reference to each other and to the surface treated, presents a structure that more readily lends itself to quantity production, and is more practicable for use in garages, service stations and the like, where working space is generally very limited.

While the invention has been described in detail in its present preferred embodiment, it will of course be understood that such has been done for purpose of illustration only and not by way of limitation, and therefore only such limitations are to be imposed thereon as may reasonably come within the scope of the appended claims.

What we claim is:

1. A paint baking apparatus comprising a support including a cross-arm, and a pair of heating units on each end of the cross-arm and pivoted thereto and to each by a common pivot transversely disposed with respect to the longitudinal axis of the cross-arm.

2. An apparatus for drying or baking enamel or a similar surface finish upon a given area, or areas, of a motor vehicle body for purposes of repairing the finishing, comprising a mobile adjustable supporting having a plurality of carbon filament lamp bulbs mounted thereon and arranged in pairs, each pair of bulbs having a common pivot about which the bulbs of a pair are movable as a unit for lateral and angular adjustment relative to the support and individually for angular adjustment relative to each other and to the support whereby a wide range of adjustment of the bulbs collectively and individually is available to the operator to meet such conditions of use as limited available working space and the number, locale and contours of the surface areas to be refinished, and a reflector associated with each bulb for directing a beam-like flood of rays from said bulb.

3. A support for heaters of the type employed for drying and baking enamel on motor vehicle bodies comprising a pedestal including a vertically adjustable standard, a bracket having a socket sleeved on the upper end of said standard, and a sleeve pivotally mounted on said socket, a cross arm rotatably and slidably fitted in said sleeve, means for securing said cross arm at the desired position of adjustment relative to said sleeve, and a bracket on each end of said cross arm embodying an attaching arm sleeved on said cross arm, a pair of heater supporting arms pivotally secured to said attaching arm, and means for securing said heater supporting arms at desired positions of angular adjustments relative to one another.

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