

Twolite headlamps which are supplied in two types—a two bulb type A-13005-C for cars without cowl lamps and a single bulb type A-13005-D for cars with cowl lamps. These lamps are nickel plated. Black enamel headlamps listed under part Nos. A-13004-C and D are furnished for trucks and commercial jobs.

The new Twolite headlamps have created an entirely new standard of lighting efficiency. Their design and workmanship is unexcelled by any headlamp regardless of price.

The new lamps are supplied with 6-8-volt double filament double contact gas filled bulbs. Both of the filaments are 21 candle power. The lower filament provides a beam which gives exceptionally brilliant road illumination for high speed driving. The upper filament provides a downward tilting beam which illuminates the entire road surface close to the car. These filaments provide the maximum in lighting efficiency for both city and country driving.

The A-13005-C two bulb headlamp has a separate 2 candle power bulb mounted in the upper part of the reflector for parking purposes.

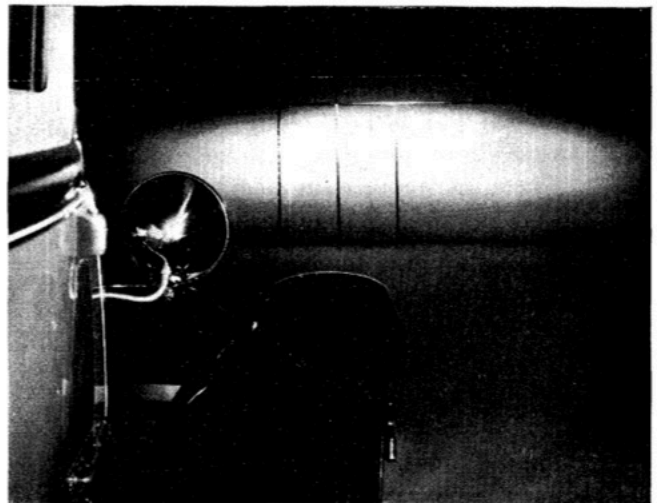
In addition to the standard 21 candle power Twolite bulbs we are also releasing through service (in those States in which the law permits) a 32-21 candle power bulb A-13007-D. This bulb gives a driving light of greater beam intensity than the standard bulb.

#### OLD STYLE HEADLAMPS CANNOT BE CONVERTED INTO THE NEW TYPE

Due to the difference in the spacing of the filament in the bulbs, the old design A-13004 and 5-AR and BR headlamps cannot be converted into the new Twolite type by installing new lens and bulbs. The new headlamp bulbs have the filaments equally spaced above

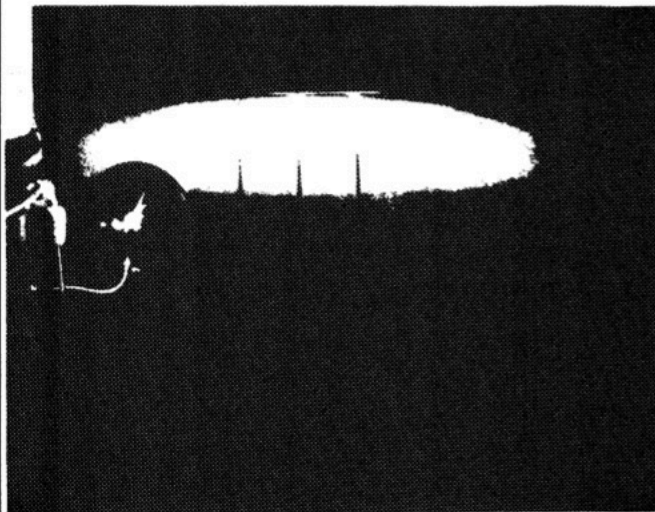
### NEW TWOLITE HEADLAMPS

The A-13004-A and A-13005-A Ford headlamps formerly used on the Model "A" have been superseded by the new design Ford



*Right Headlamp Properly Focused and Aligned*

Fig. 650



Both Headlamps Properly Focused and Aligned

Fig. 651

and below the central axis of the bulb while on the old style "H" headlamps the major filament was located directly on the central axis of the bulb.

If an owner desires to replace old style headlamps with the new design, it will, in addition to replacing the lamps, be necessary to replace the headlamp wiring and switch. Figs. 653 and 654 show the new wiring diagram.

### INSTRUCTIONS FOR FOCUSING AND ALIGNING

Ford Twolite Headlamps with A-13060-B Ford Twolite Headlamp lens and A-13007-C, 21-21 c. p. and A-13466, 2 c. p. bulbs must be properly focused and aligned.

The lamps are correctly adjusted at the factory when they are assembled to the car. Where replacements are required it will of course be necessary for dealers to make **adjustments** for the owner. This is done as follows:

Align and focus headlamps with empty car standing on a level surface in front of a white wall or screen 25 feet from the front of the headlamps. This wall must be in semi-darkness or sufficiently shielded from direct light so that the light spots upon it from the headlamps can be clearly seen, and must be marked off with black lines as shown in cuts.

### Focus

1—It is important that lens be installed in door with the word "top" at top of door and with all lettering reading properly from front.

2—Turn on upper beam.

3—Focus by means of screw at back of lamps, first one lamp and then the other, adjusting the bulb filament at the focal center of the reflector to obtain an elongated elliptical spot of light on the wall, with its long axis horizontal (see Fig. 650). In focusing, adjust the bulb to obtain as good contrast and as well-defined cut-off across the top of the spot of light as possible.

With lamps thus focused for the upper beam the lower beam will be in satisfactory position.

No **adjustment** is necessary for the small bulb for parking light.

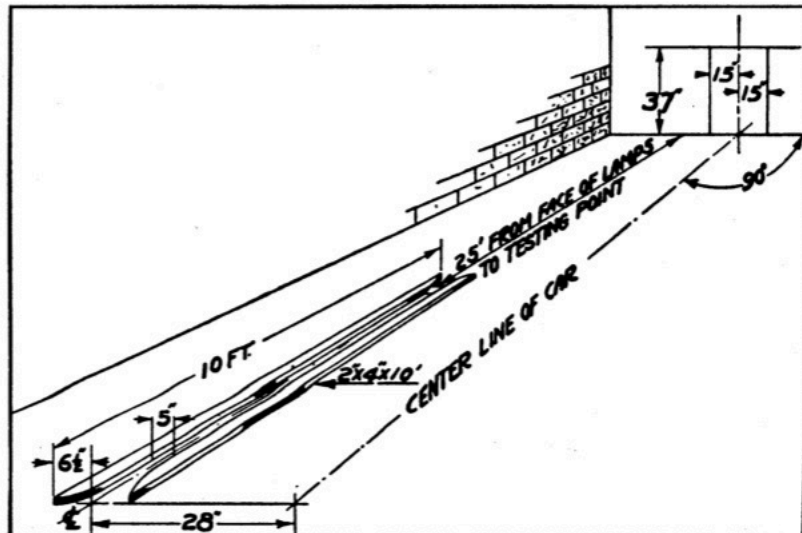
### Alignment

1—Headlamps are aligned by moving lamps after nut at bottom of bracket has been slightly loosened.

2—The tops of the bright spots on the 25-foot wall are to be set at a line 37 inches above level of surface on which car stands. (See Fig. 652.) With tops of bright spots thus set for empty car, the headlamps comply, under all conditions of loading, with the requirements of the various states.

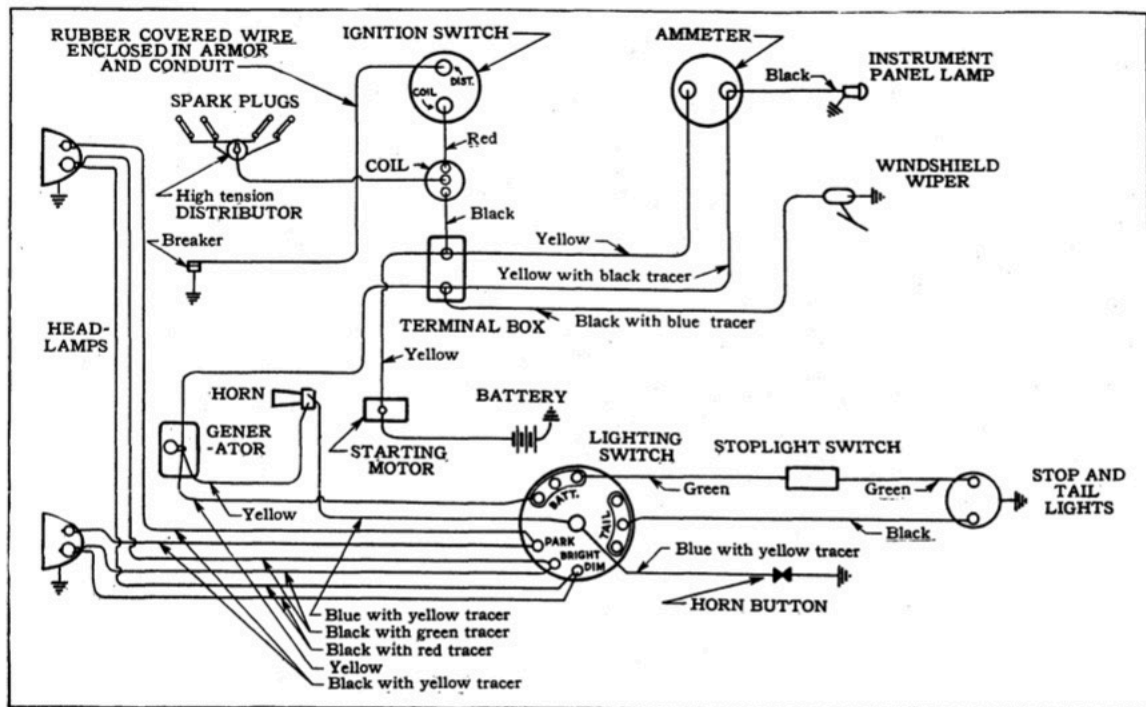
3—The beam of light from each headlamp is to extend straight forward; that is, the centers of the elliptical spots of light must be 30 inches apart.

Proper alignment of headlamps is readily checked by means of a horizontal line on the



Shop Layout for Focusing and Aligning New Design Headlamps

Fig. 652

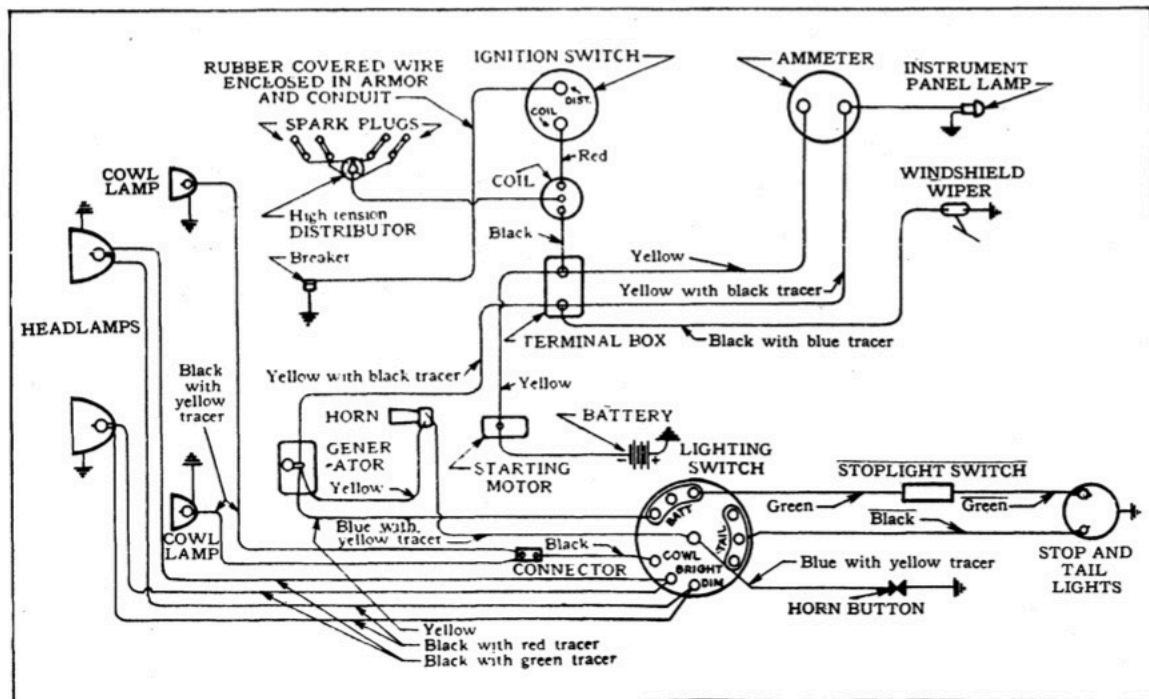


Model "A" Wiring Diagram—Cars not equipped with Cowl Lights

Fig. 653

wall in front of the car, 37 inches above the level surface on which car stands, and two vertical lines 30 inches apart, each one 15 inches from center line of car. Proper alignment of car relative to marks on the wall may be readily provided by use of wheel guide

blocks for one side of the car, as shown in cut. If it is impossible to tie up the floor space required by these blocks, marks painted on the floor may be used to show where one set of wheels should track and where the car should be stopped.



Model "A" Wiring Diagram—Cars equipped with Cowl Lights

Fig. 654