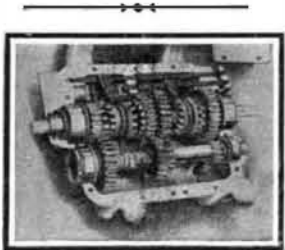


lever arms of these weights, as they lengthen out and approach each other under the action of centrifugal force or gravity upon the weights, is communicated directly to an indicating stem carrying pointers that travel over the scales of the instrument. Thus, the action of centrifugal force upon the balls of the governor part of the apparatus is communicated directly to the indicator, which makes it extremely accurate. An odometer is driven off the vertical shaft by means of a worm gear.



MOTOMETERS BEING TESTED AT AUTOMOBILE SHOW.

At the recent show the company exhibited three of these meters driven by one small electric motor through three flexible shafts terminating in pinions having 16, 32, and 64 teeth respectively. Consequently, the speeds registered on the different instruments should bear the relation 1 : 2 : 4. The fact that this occurred whether the motor was run at low or high speed, showed that the instruments were accurate at all speeds, no matter whether the speeds were high or low. To make the demonstration more complete, the revolutions of a fourth 16-tooth pinion were taken by a speed indicator, and these revolutions, counted by the investigator, were compared with a table giving the miles per hour that the indicator should show at any given R. P. M. of its gear wheel. So exact was the instrument found to be, that it agreed to the thousandth part, or within one-tenth of one per cent.



TRANSMISSION WITH JAW CLUTCHES.

SOME IMPROVEMENTS IN HONEYCOMB RADIATORS.

Several years ago the honeycomb type of radiator began to appear among certain cars of foreign make. This type of radiator has since become very popular, despite the fact that some prominent manufacturers at home and abroad still favor the use of tubes with radial fins or wings. The honeycomb radiator provides a very large radiating surface, over which the hot water flows in thin sheets. In one make copper tubes of square cross section are used, which are separated by



Attained Excellence

Built to satisfy the requirements of the tourist, the Peerless Limousine adapts itself to all conditions.

The most refined and exacting taste finds in this car every requirement perfectly filled. Luxurious comfort and adequate protection; richness of finish and appointments; ease of entrance and egress; safety and responsiveness of control; reliability, stability, durability.

Featured in the Limousine are all the improvements of our 1907 product. Several new features have been added to make the Peerless car still higher in quality and even more thoroughly reliable.

- 1. Drop frame, eliminating side sway.
- 2. Perfect balance.
- 3. Larger cylinders, more power.
- 4. Simple speed control.
- 5. Imported springs, three springs rear.

The new drop frame and its advantages.

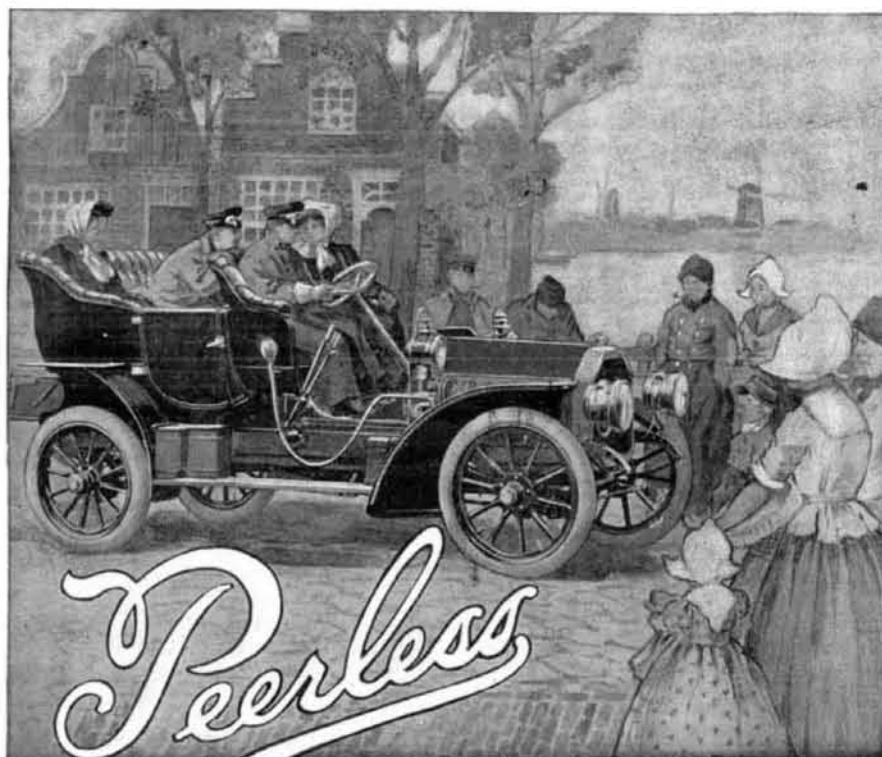


Road Clearance not reduced.

The drop frame is an original adoption of the Peerless, in America. With this frame, and without reduction of road-clearance, the bulk of weight is brought down nearer center of gravity. The result is a better balanced car, handled more easily and safely at high speed with greatly lessened possibility of skidding; a saving of wear and tear on machinery and tires, and giving added ease and comfort to passengers.

Our new illustrated book "P" showing new features in 1907 models sent upon request.

PEERLESS MOTOR CAR COMPANY, 2447 Oakdale Street, Cleveland, Ohio



vertical wires at each end, and then soldered together in a block. The water flows through the narrow vertical passages formed between the tubes, and the heat is carried off by the air flowing through the tubes. In another make horizontal as well as vertical wires are used for spacing the tubes, as shown in Fig. 1, so that radiation takes place equally from all sides.

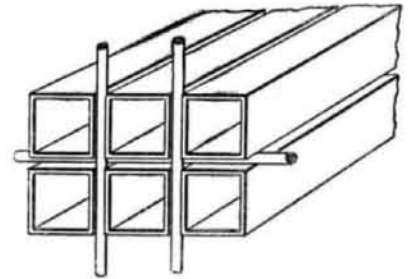


Fig. 1.—RADIATOR TUBES VERTICALLY AND HORIZONTALLY SPACED.

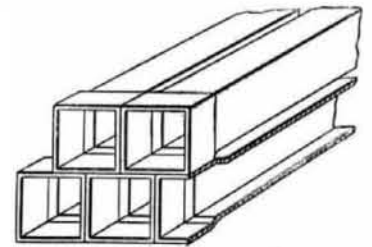


Fig. 2.—RADIATOR FORMED OF EXPANDED TUBES.

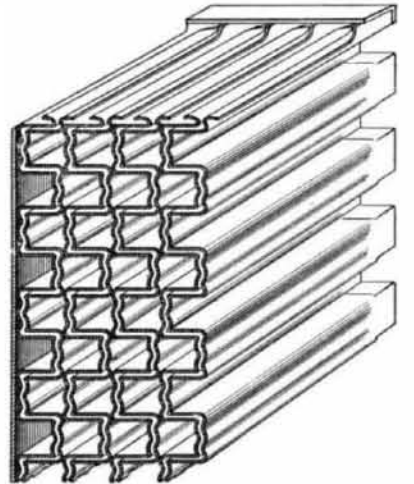


Fig. 3.—RADIATOR FORMED OF CORRUGATED METAL SHEETS.

In one of the domestic makes of honeycomb radiators, spacing wires are dispensed with. Instead the tubes are expanded at each end, so that when they are assembled both vertical and horizontal water spaces will be provided around each tube, as shown in Fig. 2. The rows of tubes are arranged to break joints in the vertical direction, so that the water is obliged to follow tortuous channels in flowing from top to bottom of the radiator. The tubes are then dipped in solder, to seal the water channels at the front and rear of the radiator.

A most ingenious domestic modification of the honeycomb construction is shown in Fig. 3. Square tubes, owing to their expense, are dispensed with entirely. In their place thin sheets of copper are used, these being pressed to form corrugations, the walls of which are rectangular. Alternate corrugations are made somewhat smaller, so that when two sheets are laid together, the smaller corrugations will fit into the larger ones. The corrugations are alternately expanded and contracted at the ends, so that when the sheets are laid together they will be spaced to form continuous but tortuous conduits. The sheets are then fastened together by crimping the cut ends of one sheet over the other. These conduits when assembled form air passages of square section, and when soldered together in a block they are identical in appearance with the European honeycomb radiators, but possess the advantage of a greater radiating surface, because the water is obliged to follow a tortuous course, as indicated in Fig. 3. Furthermore, the construction is far less expensive, owing to the fact that square tubes are not used.