

lining. Watch carefully that no grease works out from the rear axle. If it does, it can be easily cleaned with waste.

Section V

To Adjust Messenger Carbureter

The motor should be started, throttle opened, and the spark retarded. Then cut off the gasoline supply, by screwing down the needle valve, until the motor starts to miss, owing to too weak a mixture. Then gradually increase the supply until you strike a point at which the motor will run at its maximum speed. The spark should then be advanced and the motor speeded up to make sure that at high speed it runs without missing. After the needle valve has been adjusted so that the motor runs at its maximum speed with throttle opened and spark advanced, you may find that upon closing the throttle and retarding the spark, that the motor may run either too fast, too slow, or may stop altogether. This is remedied as follows:

The Messenger Carbureter

Is provided with a valve that controls the amount of air when the throttle is closed. This air valve is locked in place by a small set screw working on a quadrant. If too little air is admitted, the mixture will become too rich and the engine will stop. If too much air is admitted, the mixture will become too weak and the motor will run too fast. To ascertain the proper point, the throttle should be closed and the spark retarded. Then loosen the small set screw on the quadrant, and so adjust the arm that the motor runs slowly with regular explosions. You may find after striking this point, that when you open the carbureter suddenly, the motor will choke for a few seconds, after which it will pick up and regain its speed. When this occurs, it is a sign that the air valve has been shut off a trifle too much. The remedy is to give it a trifle more air by moving the arm on the quadrant. After everything is adjusted and the needle valve set, it is a good scheme to file a notch on handle of the needle valve, showing its normal position, for then if for any reason the position of the needle valve be changed, you can always put it back to its original position.