

## The Economy Engine News

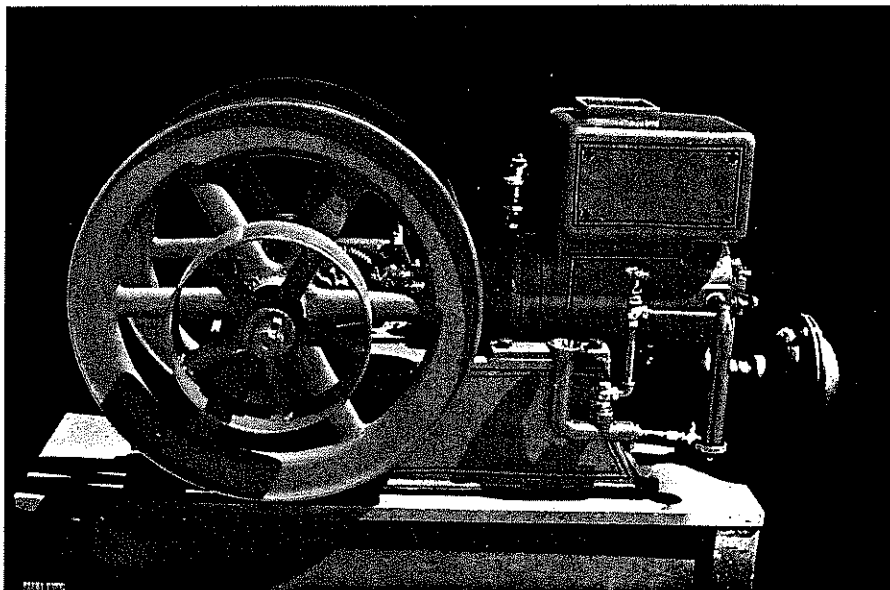
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Production of Economy engines began in Sparta, Michigan, by mid-1909. For the year prior to that, Economy engines were provided for Sears, Roebuck & Co. mail order by the Waterloo Gas Engines Company. At Sparta the model A was the first one produced. It would appear that the engine designer took several ideas from the Waterloo engine. The Sparta Economy had some unique features. One was the fuel system that was similar to that used on the Waterloo Economy. The fuel valve was more like a gate valve than a needle valve used on most systems. The fuel was metered by a small hole in the side of a  $\frac{1}{8}$  inch pipe that extended into the main air intake flow. The valve served more as on and off rather than an adjustment. A small petcock is positioned to allow a small amount of fuel into a cap that serves as an adjustable choke on the bottom of the air intake tube.

Another unique feature is the side rod latch on the 4 HP and larger sizes. The side rod can be latched so the exhaust valve is held open while cranking. Once the flywheels are spinning fast enough, the latch is released and, hopefully, the engine will start.

The fuel tank is unique in that it's cast into the base and requires no separate sheet metal tank common to most engines. The fuel fill spout is handy—it is funnel shaped at the top. That is fine until it rains and then water is funneled in around the plug cap and into the fuel tank if the cap isn't tight. If it is tight, then the question is, "How do you take out the plug without the water around it in the funnel running into the tank?"

Another unique feature is the comparatively complex governor/speed control mechanism. It was invented by Peter Holm and used on the Sparta Economy models A, B and C while the patent was pending. Sears saw fit to



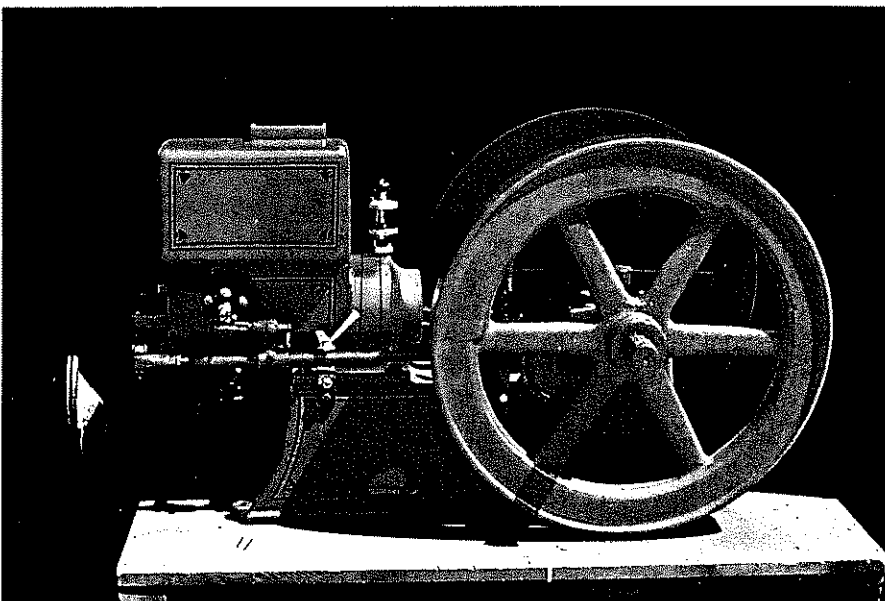
4 HP Sparta Economy Model A, fuel system side.

drop the use of this mechanism even before the actual patent was granted, and the mechanism disappeared from the market. For the next few years Sparta Economy engines had no speed adjustment other than tinkering with the governor springs.

Shown here is an example of a 4 HP Sparta Economy model A. It has a  $4\frac{1}{2}$  inch bore and 9 inch stroke. The compression appears to be higher than on other engines of that era and later. That makes it difficult to turn over by hand. That is likely why the side rod latch is

provided. The very design of the cam makes it impossible to retard the ignition when starting, further complicating the starting process.

Approximately 1200 of the Sparta Economy model A engines were produced, making these unusual engines somewhat scarce and hard to find. Luckily, an original color sales brochure still exists along with an original operators manual and parts book. The instruction book has more detail about the function of the various engine parts than any other that I've seen. ○



4 HP Sparta Economy Model A, ignition side.