

Light Portable Gasoline Hammer

John P. Peterson, Supt.
Bergen County Mosq. Exter. Comm.
Hackensack, New Jersey

The need of a small, compact portable pile driver for use in constructing tide gates for mosquito control has long been recognized by mosquito control engineers.

During the construction of a large gate by this commission last winter, several types of the Drop Hammer Driver were considered, but due to war conditions it was almost impossible to rent, borrow or buy such equipment.

In planning our schedule of operation we ran across a light machine that seemed to have just what we wanted, plus. This unit known as the Barco Portable Gasoline Hammer was purchased and used on the job from Nov. 1941, to Feb. 1942, doing several kinds of work that we had not planned for in addition to driven 3" X 10" planks thru 36" to 48" of clay, we used it to tamper the clay fill between the sluice boxes and to pack solid clay under the

floor of the spill ways and boxes. We also found it of great help in cutting thru the frozen ground in preparing our coffer dams.

In keeping a straight line ahead of our power shovel, on canal work, this unit was found to be very practical.

During the past summer, while installing ditches we used a sharp blade for cutting cedar stumps and roots under water.

Some 10 or 12 tools come with the standard machine and many others can be made by the local Blacksmith, we have in mind a tooth edged blade that will cut tough sods, replacing the old hand saw method.

Description of the type of hammer used in Bergen County is as follows:

The Hammer is a single acting two cycle engine with free running piston which is propelled downward by explosion of the gasoline charge in the combustion chamber and returned by spring action. The piston acts as the hammer, striking an anvil which transmits the blow to the tool. The piston is always at the upper end of the cylinder when idle and the Hammer is started by pushing down on the starting plunger on top of the cylinder. The suction caused by the up-stroke admits air and gasoline through the mixing valve into the chamber below the piston. A second down-push of the starting plunger compresses the gas and the compressed gas passes through holes in the piston and through the by-pass into the upper combustion chamber. A cam on the piston operates the circuit breaker, for igniting the gas at the proper time and the two cycle principle is repeated with operation of the Hammer. Many of the details of construction and operation are shown in the instruction book furnished with the Hammer.

The Barco Portable Gasoline Hammer is an air cooled, two cycle, single cylinder, hard hitting, gasoline

driven hammer, ruggedly built to withstand the most severe service. It operates efficiently in any season of the year and at any altitude.

All models use low test or "regular" gasoline and lubrication is obtained by mixing oil with the gasoline. The normal fuel consumption of the model H-6 is one quart of this mixture per hour of operation. Smaller models use somewhat less. The gasoline tank attached to the Hammer has a capacity of two quarts, or sufficient for at least two hours of continuous operation. Electrical energy is supplied from a coil and battery and a storage battery is recommended wherever recharging facilities are available.

Standard 6 volt storage batteries are used, preferably of not less than 110 ampere hour rating, at the 20 hour rate. When circumstances require it, a 9 volt dry battery may be substituted.

Regular equipment for all models include a battery carry frame, coil container and coil, and 25 feet of cable from hammer to battery. The battery is not included unless specifically requested.

Weight, hammer only, with gas and oil Model H-6, 96 lbs.

Speed, strokes per min. 1100-1500

Batteries used 110 ampere hour 6 volt wet battery or a 9 volt dry battery.