greatly reduced. These engines, by using superheated steam and condensing give a h.p. for from 10 to 12 lbs. of steam per h.p. hour.

The locomobile, another German engine, is always made compound whether a condenser is used or not. This engine is set up on top of the boiler and is built up to 500 h.p. The high pressure cylinder is in the uptake and the steam is superheated before entering it. The steam is again sent through a re-heater on its way from the high pressure cylinder to the low pressure. These engines are guaranteed to give a h.p. for 12 lbs. of steam per h.p. at high pressure, and when used condensing have been operated at from 8 to 9 lbs. per h.p. per hour. In these engines all losses from cylinder condensation are eliminated and superheat up to about 600 degrees used. The many other uses that superheated steam is very useful for is in chemical factories and asphalt works, where high heat is required in vessels that it is difficult to make strong enough to withstand the pressure of saturated steam of a high enough pressure to furnish the required amount of heat.

Again where extra power is required and the boiler is not strong enough to carry a higher pressure, superheat will supply the deficiency and save the cost of a new boiler. In cases where the pipe lines are long for the transmission of steam for power, superheat sends the steam forward for 1,000 feet or more before all the extra heat is lost and the engine receives dry steam for its operation.

There is almost no end to the usefulness of steam thus treated and very few instances where it will not pay for the cost of installation.

I understand that one of the American engine builders have just started to manufacture an engine of the locomobile type, they call it the Buckeyemobile. They are making these engines up to 200 h.p. copied entirely after the German pattern. They advertise results and have been running for over eight months. The figures they give are as follows:

Engine cylinder 9½ and 19-inch diameter, stroke 18-inch.

Speed 205 revs., indicated h.p. 128, water per h.p. hour 9.78 lbs.

Speed 205 revs., indicated h.p. 163, water per h.p. hour 10.8 lbs.

Speed 205 revs., indicated h.p. 200, water per h.p. hour 9.9 lbs.

There is an illustration of the engine in this week's *Power*, and any of you who take this paper can look it up.

In each case, respectively, the coal consumption per indicated h.p. is: 1.62 lbs., 1.6 lbs., 1.95 lbs.