

**CALIFORNIA HARVESTING MACHINERY.**

BY FRANK COVEY, M.E.

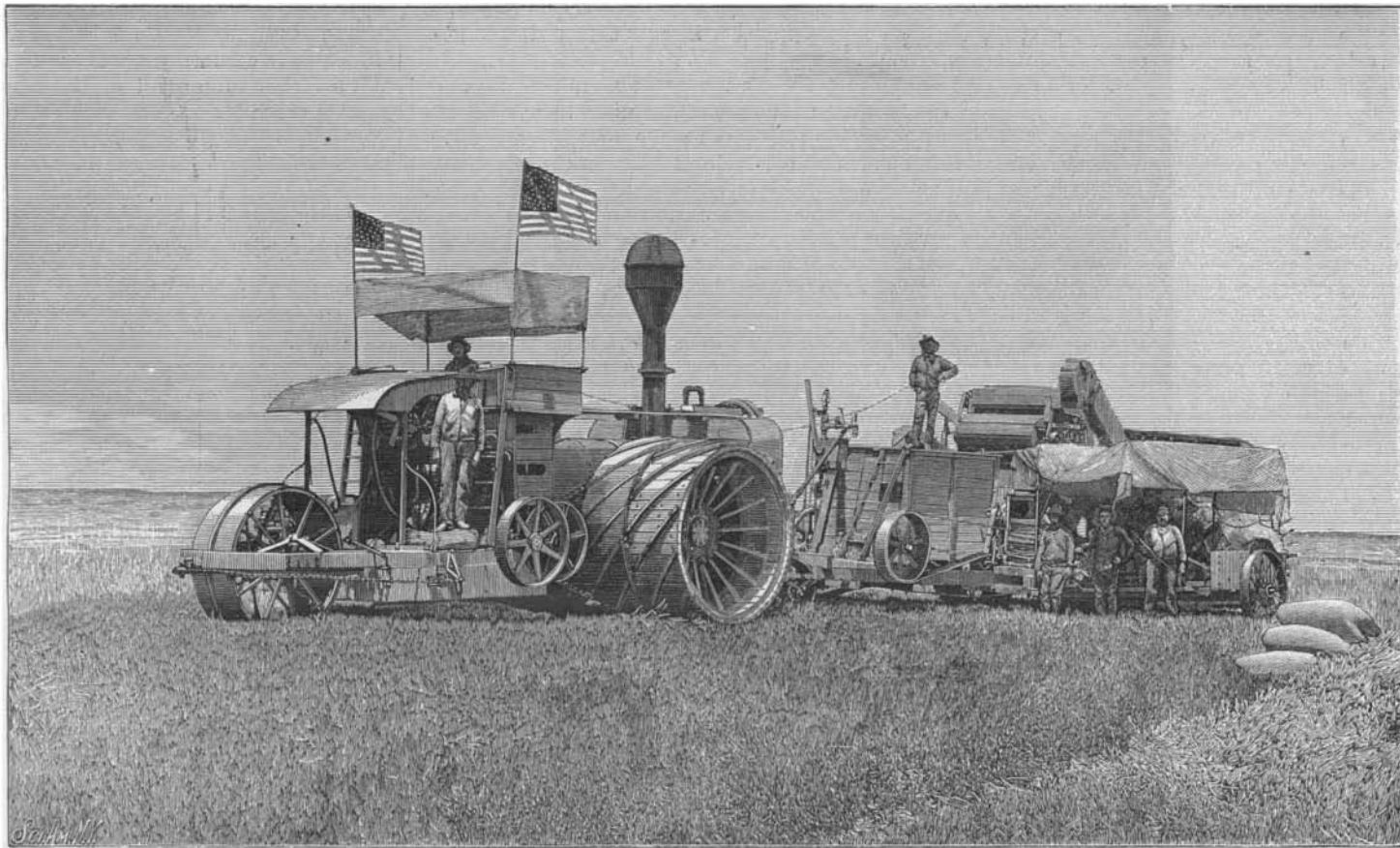
The accompanying illustrations show a right and left side view of the Laufenberg traction engine and combined harvester as used in the great wheat fields of California and the Pacific coast States.

The harvester cuts a swath 28 feet wide and thrashes,

are used in the auxiliary engine on the harvester, and with this plan the steam power harvester has been made a complete success. While the horse power machines are still in the majority, yet for extensive harvester work, where large acreage is to be dealt with, the steam rig will undoubtedly become the favorite, the separator capacity thereby being increased. The

**A Motor Carriage Exposition.**

The executive committee of the Massachusetts Charitable Mechanic Association have set apart over 20,000 square feet as space for a motor carriage exposition at the Twentieth Triennial Exhibition, which will be held in their exhibition building, Boston, Mass., from October 10 to December 3. No charge will be made for



**A GREAT TRACTION ENGINE AND HARVESTER USED IN THE WHEAT FIELDS OF CALIFORNIA.**

cleans, and sacks the grain as it moves along. It would seem that a machine cutting a strip of grain 28 feet wide would be handling straw fast enough to satisfy almost anyone, but the Laufenberg machine has been built to cut a nice little swath of 52 feet and sack the grain, completely cleaned and ready for market. While the combined harvester is not a new feature in the handling of crops on the coast, only recently, and not until the traction engine became a success in the field, did they ever attempt a cut wider than 18 feet; 16 feet being the standard machine, requiring from 30 to 40 head of stock to handle them.

In the machine shown herewith an auxiliary engine is located on the front end of the harvester to operate the thrashing and separating machinery and is furnished steam from the boiler of the traction engine. The engine and boiler of this monster outfit are also a departure from the stereotyped plan usually met

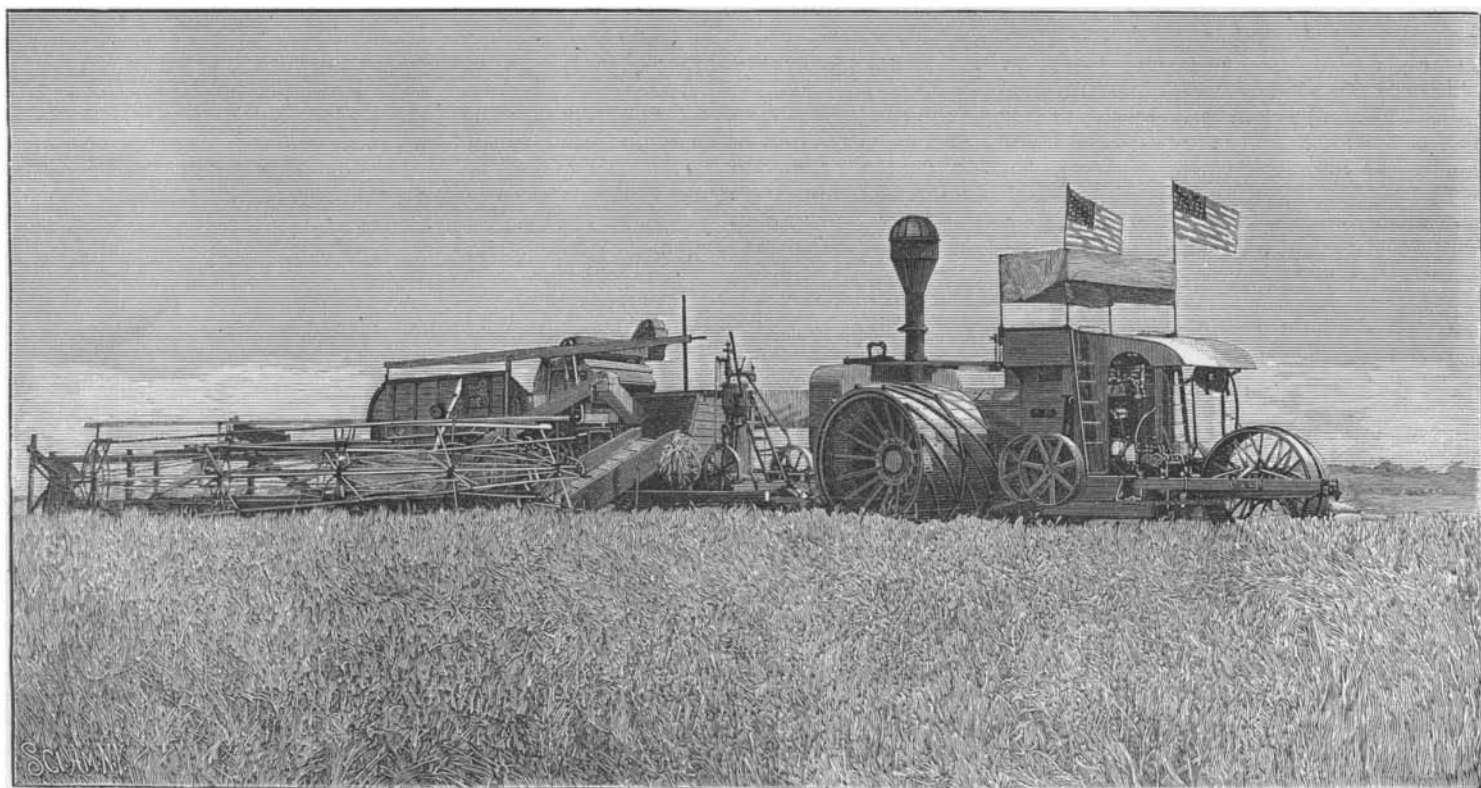
cylinder of the machine shown in the cut is 40 inches and the separator or shoe is 56 inches wide. It would seem that the small boiler used to supply the three 9 by 10-inch engines would be hardly equal to the task, but, from its peculiar construction and adequate steaming qualities, it more than supplies the demand. It is a 40-inch shell boiler, but Mr. Laufenberg claims it to be—which undoubtedly is correct—a compartment boiler, the shell extending back into or over the fire box, and the flues are so constructed that as a steamer it is a marvel.

The extension wheels are put on to carry the heavy machine over soft or sandy ground, this particular engine having been built especially for use on tule or reclaimed swamp land. When the writer visited the ranch to obtain data regarding this monster of California farming, they were cutting, thrashing, cleaning, and putting in sacks at the rate of three sacks per

space, but each exhibitor will pay an entrance fee of \$5. Every facility will be furnished exhibitors for the care of their vehicles, and fuel will be provided for exhibition races. If a sufficient number of contestants can be procured, a race and general contest will be held at Charles River Park, and prizes amounting to a considerable sum will be offered. Competing vehicles will be divided into three classes—steam, hydrocarbon, and electric. Boston, with its splendid roads and its beautiful suburbs, is an ideal place for the introduction of the motor carriage, so that no such opportunity has ever before been offered motor vehicle manufacturers in this country.

**Possible Extension of the Subway.**

The success which has attended the operation of the completed subway system in Boston is so great



**HARVESTER CUTTING A SWATH 28 FEET WIDE.**

with in traction engine construction, there being two upright stationary engines, one on each side, and bolted to the main frame, instead of being attached to the boiler, as usual in engines of this character. The cylinders are 9 by 10 inches, and combined they are capable of developing 60 horse power, and either may be run independently of the other. The same patterns

minute of barley, each sack weighing one hundred and fifteen pounds, requiring two expert sack sewers to take the grain away from the spout, sew the sacks, and dump them on the ground. Seven men constitute the whole crew, including engineer and fireman. The machine is the property of Brant Brothers, of Union Island, near Stockton, California.

that citizens are desirous of having it extended. The Rapid Transit Commission has sufficient power to extend the subway to East Boston, if it is thought desirable. In that case, of course, a tunnel would have to be built under the harbor, but the government will not oppose the construction of such a tunnel if it is desired to build the subway.