

## NEW LOCOMOTIVES MAKE PYGMIES OF THE OLD

Passengers who have noted with relief that on the larger railway systems trains do not start with the tremendous jerk that was prevalent a few years ago but few of them are aware that the easy start is due to one of many major improvements recently effected in the steam locomotive. This particular device is called a "booster" and is really a separate engine, driving a set of small drivers to the rear of the main driving wheels, a report of the Engineering Foundation says. This permits an easy start, and the booster is cut out automatically when the speed exceeds 15 miles an hour. It is like starting an automobile on low gear.

Another quality of the modern locomotive is its endurance. Formerly they were designed for runs averaging about 150 miles, necessitating division points and expensive layovers at some such interval. Continuous runs of 825 miles are now made by oil burning locomotives, and runs of over 500 miles with coal burners.

Everyone thinks he knows all about the steam locomotive because it has been with us so long; but today we have a new locomotive, a power plant on wheels which has achieved an output in some cases of 13.5 pounds of steam per indicated horsepower hour, a record which puts the steam locomotive in the class of efficient non-condensing power plants. Locomotives are in service with power and flexibility enough to enable them to haul 10,000 tons at 18 miles an hour on level track, or to pull 4,500 tons on a ten minutes clearance ahead of a limited express, scheduled at 49 miles an hour for 90 miles without a stop.

## SPOTS ON VENUS AROUSE INTEREST OF ASTRONOMERS

Bright and dark spots on the surface of the planet Venus have been noted by European astronomers during the recent favorable approach of the planet to the earth. A bright spot was seen near the south pole and a dark band crossed another bright area in the northern hemisphere. The latter was thought to be the shadow of an upper cloud on a lower one.

Conclusions as to the time of the planet's rotation on its axis, a question about which there has been much dispute, were discordant. Prof. A. Nissen, reporting in a German astronomical journal concluded that it was 23 hours and 56 minutes, but Dr. W. H. Steavenson saw no motion while he watched the spot and favored a longer period.

Albany is raising a fund for the erection of a statue to Joseph Henry, pioneer American scientist.

A recent health survey of several hundred fifth grade children showed that more than one-third got less than ten hours sleep and that another third drank no milk.

The first telephone and the first railway in China were each put to use in Shanghai.