

the basement floor, the baggage between the waiting room floor and the basement being handled by means of elevators.

There are 51 through trains, 34 originating and 35 terminating trains handled at this station per diem. The trains terminating are broken up with yard engines and each tenant company has its own engines which take its train to its own separate sorting and storage yard.

Another large through terminal is that of the Pennsylvania Railroad at Harrisburg, Pa. (Fig. 7). At this station there are 52 through trains, 47 originating and 45 terminating per day, and practically all of these are through main line trains, as there is very little suburban business. This station is a terminal of four divisions of the Pennsylvania Railroad and of the Cumberland Valley Railroad, the latter having independent stub tracks. Engines are changed on all through trains here; cars are frequently added to or taken from the trains. The switches are all operated by means of an interlocking plant.

There are four pairs of tracks placed at 12 feet 2½ inches centres, with platforms between each pair. Two of these platforms are 22 feet wide, and the remaining ones are 15.8 feet, 33.9 feet and 37 feet in width, with lengths of 765 feet to 850 feet. The platforms are reached by means of stairways and an overhead bridge at the waiting room level.

tain amount of switching and making-up of the through trains is done, putting on and taking off Pullmans, etc.

There are six through tracks and four stub tracks in this terminal, spaced alternately 20 feet and 28 feet between centres, except where the train shed columns are situated on the platforms, where the spacing is 34 feet. The platforms are divided into passenger and trucking platforms, the former being 20 feet wide and the latter only 11 feet. They vary in length from 550 feet to 750 feet and are 9½ inches above the rails.

The engine house is over ¼ mile away from the station and the car storage yards are over ¼ mile away. All the trains are handled and made up in the terminal and yards by switch engines.

The station building itself is placed at the end of the stub tracks and the through tracks pass to either side of the station, except one which passes through the lower part of the building.

The waiting rooms and general accommodation in the station is on the street level, above the tracks, and the passengers reach the platform from a balcony with stairways to

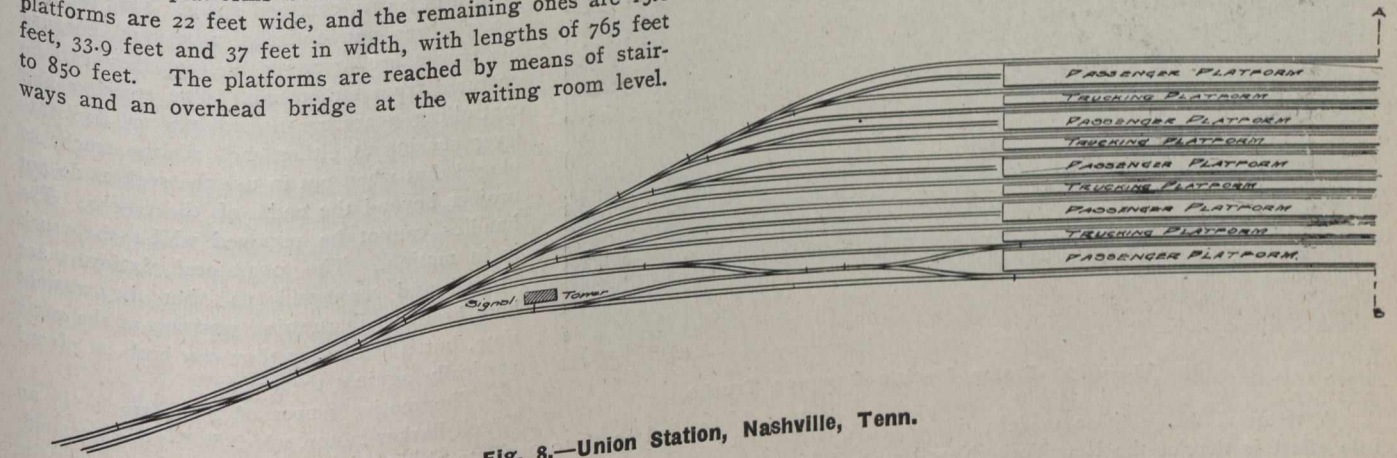
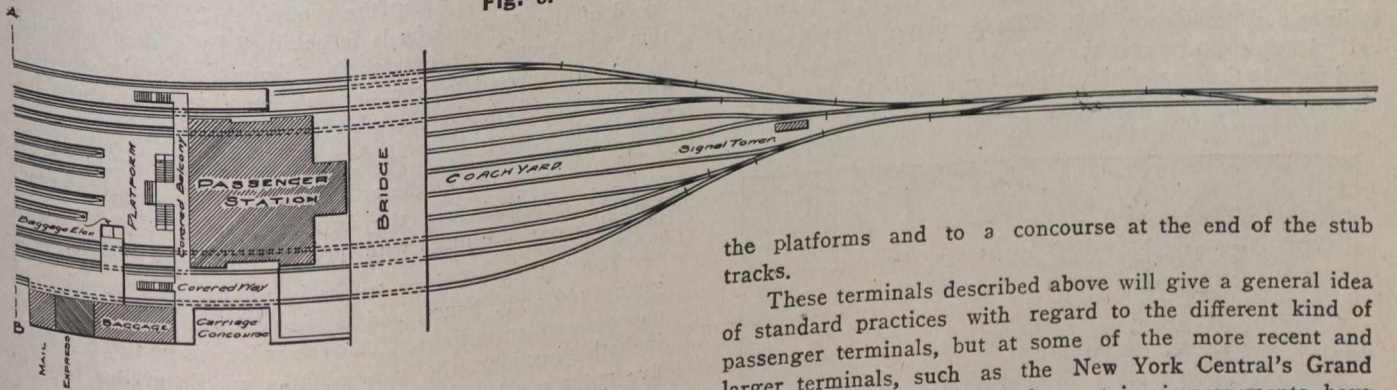


Fig. 8.—Union Station, Nashville, Tenn.



the platforms and to a concourse at the end of the stub tracks.

These terminals described above will give a general idea of standard practices with regard to the different kind of passenger terminals, but at some of the more recent and larger terminals, such as the New York Central's Grand Central Station in New York, certain improvements have been introduced.

There are a number of problems, however, which the designer has to solve apart from difficulties due to the local conditions. For instance, he has to decide on the relative merits of handling baggage through subways and elevating to the platforms, or handling the trucks on special trucking platforms (as at the Nashville Union Station) reserved solely for this purpose, or as is more commonly done in the older terminals, to have the regular platforms wide enough to enable the baggage to be handled in the same platform as the passengers without causing inconvenience and delay either to the passengers or to the baggagemen.

The track layout at a terminal has been given much more serious consideration in recent years than formerly, with the result that the double ladder has been developed.

Another overhead bridge is provided for the baggage and express service, the trucks being lowered to the platforms by means of elevators.

The engine house at this terminal is about ¼ mile away from the station and the car storage yard is about 650 feet west of the station yard. The cars are handled between the engines and the storage yard by switching engine.

Another type of terminal commonly met with is the combined through and dead-end terminal, having a number of stub tracks and also a number of through tracks. A typical example of this kind is illustrated in Fig. 8, showing the layout of the Union Station at Nashville, Tenn., owned by the Louisville and Nashville Terminal Company and leased to the Louisville and Nashville Railway and the Nashville, Chattanooga & St. Louis Railway jointly.

There are 10 through and 26 originating and 26 terminating main line trains daily and no suburban trains. A cer-