13 inclusive, the thickness of the castings is made \( \frac{1}{2} \) in.
less throughout, whilst for principals, Nos. 1 to 4 inclusive, the webs of the castings are made \( \frac{3}{4} \) in. and the flanges \( \frac{1}{2} \) in. thick where rivetted, and \( \frac{1}{2} \) in. thick at other parts. In the case of principals Nos. 2, 3, and 4, one end of each rib comes opposite a portion of the station wall through which an opening is made to give access to the staircases, and each of these principals is therefore provided, on one side of the station, with a standard of a special form. One of these standards is shown by Fig. 25, and from this it will be seen that the wrought-iron portion is omitted, and the casting increased in height to 6 ft. The foot is also increased in length to 7 ft. \( \frac{1}{2} \) in., so that it spans the staircase, as shown in Fig. 25, this horizontal portion being 2 ft. deep. The webs of these special standards are \( \frac{3}{4} \) in. thick, and the flanges \( \frac{1}{2} \) in. thick where they are rivetted to the ribs, and \( \frac{1}{2} \) in. thick at other parts. The width of the flanges is 12 in., except at that part which rests on the outer side wall, where the width is increased to 18 in.

Each standard is held down by three 1\( \frac{3}{4} \) in. square bolts, which pass down through the side wall, to a washer-plate imbedded in it, and are secured by a cotter below, as shown in Fig. 13. In erecting the roof, the standards were set with an inclination towards from the top, of from \( \frac{3}{4} \) in. in the case of the shortest to \( \frac{1}{2} \) in. in that of the longest, and a temporary wooden packing piece was then placed between the cover of each standard and the toe of each principal, of such thickness that it, together with the overhang just mentioned, equalled \( \frac{1}{2} \) in. Thus the thickness of the packing varied from 1 in. in the case of the short to \( \frac{3}{4} \) in. in the case of the long standards; and when the principals were completely rivetted up the packing pieces were removed, the principals sprung into place, and the covers rivetted. The inner sides of the standards are flush with the inside of the side walls of the station, and they are each covered by an ornamental cast-iron bracket and pendant of neat design, extending from the springing of the arched rib to within about 5 ft. of platform level, as shown in Fig. 13. The spaces between the outside of the arched ribs and the side walls of the station are also filled with ornamental brackets of cast iron, these brackets and the others just mentioned being shown to an enlarged scale by Figs. 11 and 12, Plate XXXIII.

The side walls of the station are of brick, and the lower parts are built in panels, the thickness at the panels being 14 in., and between them 2 ft. 3 in. Above the string course the thickness of the walls is 14 in., and this portion is pierced by a series of side lights on each side of the station. At the points where the walls form the piers for the long standards supporting the principals, their thickness is increased to 6 ft., as shown on the left-hand side of Fig. 13, and they are founded on a bed of concrete 8 ft. wide. On the north-eastern side of the station the external ground is considerably above rail level, and here the side wall is backed with concrete 3 ft. 9 in. thick, the top of the concrete being sloped off and protected by a layer of asphalt \( \frac{3}{4} \) in. thick. A series of 4 in. drain pipes are provided at the back of the concrete, these being arranged in a similar manner to those of the side retaining walls at other portions of the line.

The purlins by which the principals and rafters are connected longitudinally are of two kinds; the common purlins, of which there are four lines on each side of the centre, being constructed as shown in Fig. 18; and the lattice purlins, one of which is carried along each side of the roof at the level of the gutter, being made in the manner represented by Fig. 17. Each common purlin consists of a T-iron, \( \frac{4}{3} \) in. by \( \frac{4}{3} \) in., by \( \frac{1}{2} \) in. trussed by an iron rod \( \frac{1}{2} \) in. in diameter. The ends of the T-iron are secured to the principals by a pair of 4 in. by 4 in. by \( \frac{1}{2} \) in. angle irons, to which the ends of the truss rods are also cottered, as shown in Fig. 18. The lattice purlins, shown in Fig. 17, are 4 ft. deep, and are each composed of a top angle iron 3 in. by 3 in. by \( \frac{1}{2} \) in., a bottom angle iron 3 in. by 3 in. by \( \frac{1}{2} \) in., and an intermediate lattice brace of flat bars, each \( \frac{3}{4} \) in. by \( \frac{3}{4} \) in. The lattice purlins are laid flat on the outside of the principals.

The roof is lighted by the skylights of the raised central lantern, and by side skylights which extend, for a width of about 17 ft. on each side, the whole length of the roof, except the two end bays. The remainder of the roof is covered with zinc laid upon \( \frac{3}{4} \) in. tongued and grooved boarding, liners, \( \frac{3}{4} \) in. thick, being interposed between the boarding and the principals and rafters. The construction of the side skylights is shown by Figs. 23 and 26, as well as to a smaller scale by Fig. 13, and from these views it will be seen that the space between the lower edge of the lower skylight on each side and the surface of the roof is left open for the purposes of ventilation. The glass with which the skylights are glazed is rough plate glass \( \frac{3}{4} \) in. thick, and those sash bars which come opposite the principals and rafters are 2 in. by 2 in. by \( \frac{3}{4} \) in., the intermediate ones being \( \frac{3}{4} \) in. by \( \frac{3}{4} \) in. by \( \frac{3}{4} \) in. The gutter carried along each side within the parapet wall is of cast iron, and is 6 in. deep by 9 in. wide. It is carried by \( \frac{3}{4} \) in. and angle irons reaching from the walls to the principals and rafters respectively, and is provided at each bay with a \( \frac{3}{4} \) in. drain pipe. The end of one of the gutters is shown in elevation and section by Figs. 8 and 9. The construction of the central lantern is shown by Figs. 7, 10, 13, 19, and 20, the two figures first mentioned being respectively an end elevation and section of the open end of the lantern.