

are to be held together by means of $\frac{5}{8}$ inch rivets $3\frac{1}{2}$ inches apart. It is to be placed on masonry prepared for it, and is to resist an inside pressure of 20 lbs. per square inch.

22nd. RACKS.—These racks are to be formed with wrought iron strips, 3 inches by $\frac{5}{8}$ inch length, 12 feet 6 inches, with additional parts 9 inches long at each end, put at right angle; these strips are to be placed $2\frac{1}{2}$ inches from centre to centre. They are to have an inch hole in the middle of their length and one hole of $\frac{3}{4}$ inch diameter at the upper part, and 2 holes $\frac{3}{4}$ inch diameter in the lower part. They are to be put together in 4 sections by means of 4 bolts $\frac{3}{4}$ inch diameter, and to keep the strips at their respective distances; there is to be placed on each of said bolts between the strips small pieces of gas pipe one inch inside diameter, $1\frac{1}{2}$ inch long. These 4 sections are to form a total length of 22 feet, and are to be placed at the same distance on top and bottom, and there to be secured by 8 inch wood screws $\frac{5}{8}$ inch diameter, to timbers secured into the walls in the position shewn on the plan.

23rd. WASTE PIPE.—This pipe is to be in cast iron, 12 inches inside diameter, $\frac{5}{8}$ inch thickness of metal; it is to be put on an inclined position as shewn on the plan. At one extremity there is to be a round flange 21 inches outside diameter; at a distance of 20 feet from the said flange there is to be another flange of 18 inches outside diameter, with $\frac{3}{4}$ holes to bolt to other parts. This length is to be made in two pieces, and may be joined with bell-mouth joint. At the flange, of 18 inches diameter, there is to be bolted a cast iron valve seat for throttle valve 12 inches diameter; said seat to be 18 inches long, and to have a flange on each end 18 inches diameter, provided with bolt holes, $\frac{3}{4}$ inch diameter, 6 inches apart and bolts. It is to be bored out true, and a throttle valve, carefully turned and fitted, with a wrought iron stem, and stuffing box, and small lever. To this valve seat there is to be bolted an additional length of 12 inches pipe of 42 feet 6 inches of straight pipe, and 6 feet of a curved pipe as shewn on the plan; the joints of this last pipe can be made with bell-mouth joints.

24th. HEAD GATES.—These head gates are four in number; they are to be made in cast iron, and are to be of the kind called "wicket gate." Each is to be 4 feet wide by 5 feet high in the clear, and are to be provided with a strong cast iron frame, the sides of which are to be in the shape of angle iron, 9 inches by 9 inches, thickness of metal 1 inch. The bottom and top are to be made in the shape of a T, of which both parts are to be 9 inches by 9 inches. On this bottom and top part there is to be a slightly projecting rib $1\frac{1}{2}$ inch wide, which is to