standard construction, with concrete lower walls, surmounted by brick masonry and spanned by steel trusses. It adjoins the passenger car paint shop, to which it is very similar in design, and abuts on the midway, the second building from the north end. The roof structure is carried on through steel trusses spanning the building at 20 ft. centres. The central depth of the span is 10 ft., sloping to 7 ft. at the side walls. A 20 ft. monitor, 8 ft. deep, extends the length of the building, surmounted by a 24 in. copper ventilator over each section. There is a clearance of 20 ft. below the lower chord of the truss and the floor. The latter is composed of 3 in. pine, nailed to 4 by 6 in. sleepers bedded in 6 ins. of bituminous concrete.

Slightly west of the centre of the building, along the south wall, there is a lavatory room, 40 by 15 ft., and 10 ft. high, containing the usual lavatory conveniences, including lockers, etc. On a platform surmounting this room is the heating fan, reached by a ladder at one end. The heating duct from the fan passes down through one end of the lavatory room to a cross tunnel under the building, from which heating ducts branch off under the floor along each wall, with headers midway in each section.

Power table feed mechanism. 40 ft. travelling steel timber table. Roller stands, timber rolls, layout stops and ratchet clamps. Variable speed automatic feed to head with cross travel for timbers 24 by 21 ins. 16 in. gainer head with 2 to 4 ins. expansion. Motor driven.

P6. Automatic band rip saw. 5 in. blade ripping 28 ins. between saw and fence, and 14 ins. under guides. 8 in. power driven feed rolls with 48 by 46 in. table. Feed 20 to 120 ft. per min. Flexible coupling motor driven.

P7. Timber planer and sizer. Planer capacity to 20 by 16 in. timbers. 40 to 100 ft. per min. feed. Floor motor driven.

P8. Double automatic railway cutoff saw. Capacity 34 ins. wide, to cut 14 ins. by 12 ft. long. 36 in. saws. Floor countershaft with flexible coupling motor drive.

P10. Leclair gaining machine. Flexible countershaft, direct motor driven.

P11. Extra range vertical hollow chisel car mortiser. Universal boring attachment, with adjustable chisel ram and stationary timber bed. Capacity up to 18 by 20 ins., with 2½ in. square chisels. Countershaft with flexible couplings, motor driven.

P12. Large car rip saw. Capacity to rip 14 ins. thick with 36 in. saw. 82 by 52 in. iron table. Motor driven.

driven.

P18. Automatic railway cutoff saw. Saws up to 24 ins. Saw projection of 7½ ins. and cutting 22 ins. wide. Power feed to saw with foot control with three speeds of forward and quick return. Motor driven.

P19. Heavy four sided inside or outside moulder. 15 by 6 ins., cylinders to be of crucible steel forgings, to be four sided and to be slotted on each side. Four 9 in. rolls with spring pressure for feed. Motor driven.

P20. Automatic railway cutoff saw. To cut 20 ins. wide by 4 ins. thick, with table 66 by 23 ins. Power feed stroke with foot control adjustable to 20 in. length or less, with three speeds forward and quick return cushioned by air cylinder. Motor driven.

P21. Improved standard rip saw. To rip 16 ins. to inside flange and 22 ins. to outside flange. 22 in. saw to cut 7 ins. thick. Table, 72 by 39 ins., and to have parallel lift of 5 ins. and arranged for use of gang saws or cutter heads on the mandril. 16 in. saw. Motor driven.

P22. Improved standard rip saw. To rip 16 ins. inside flange and 22 ins. to outside flange. Saw to cut 7 ins. thick. 70 by 36 in. iron table, to have parallel lift of 5 ins. by screw and bevel gears, with self locking adjustable ripping fence and arranged for

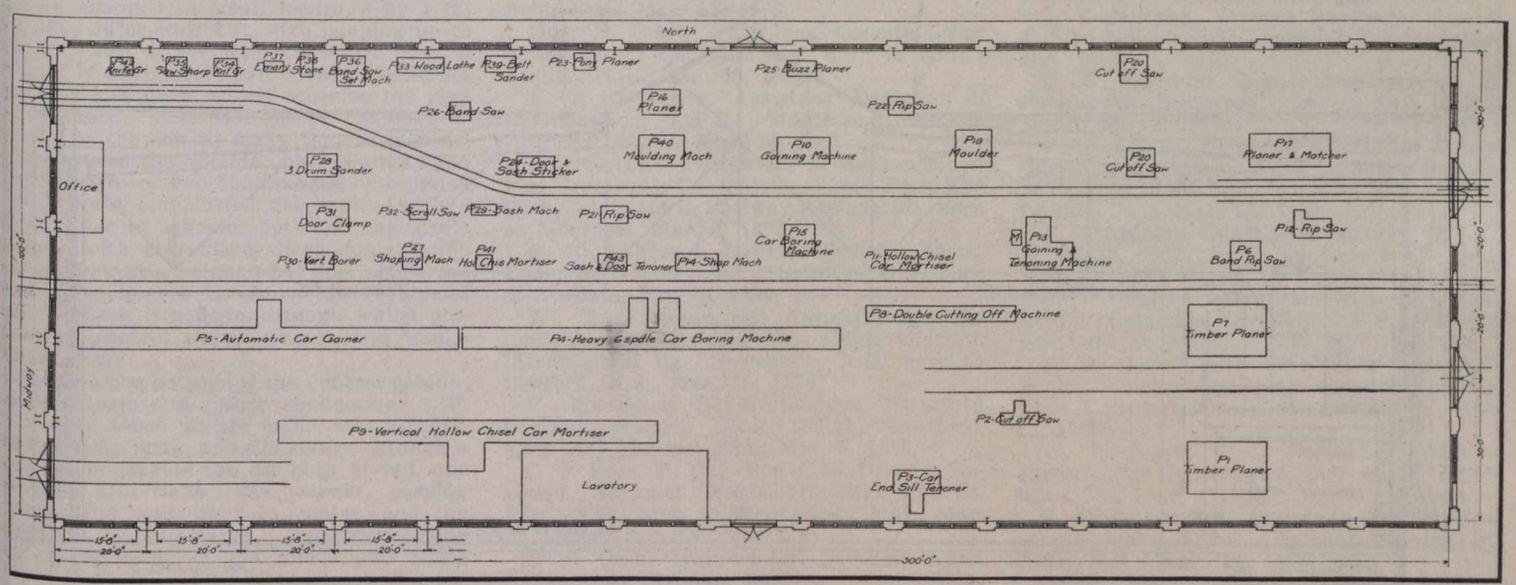

Fig. 8.—Plan and Machinery Location of Planing Mill.

The machine equipment of the building is most complete, and is as follows:

P1. Timber planer. Capacity up to 20 by 16 ins. Feed from 40 to 100 ft. per min. Floor motor driven.

P2. Automatic railway cutoff saw. Table 8 by 2 ft. To cut 12 by 16 ins. 36 in. saw. Floor motor driven.

P3. Vertical automatic car sill end tenoner. Single, double, or triple tenons without reversing timbers. Arranged with variable speed automatic power feed to 13 in. cutter heads with range for working 16 in. square timbers. Three 13 in. heads.

P4. Standard heavy six spindle car boring machine. Two universal and four vertical spindles with hand table feed, combined with extra range vertical hollow chisel car mortiser. Power table feed working to a 40 ft. travelling steel timber table. Boring capacity for 4 in. bits and 14 in. square timbers. Mortiser with adjustable chisel ram, direct geared feed and quick reverse, 18 in. stroke and 16 in. cross adjustment of tool plunger. Mortiser capacity for 3 in. square chisels and 18 by 20 in. timbers to 10 in. deep. Self contained countershaft arranged for motor drive with flexible motor couplings.

P5. Extra heavy automatic car gainer.

P13. Leclair combined gaining and tenoning machine. Heavy universal car tenoner for single, double or triple tenons, with gap frame to work 14 in. high timbers. Gaining attachment. Motor driven.

P14. Two spindle shaping machines. Spindles 26 in. centres. Knives drop below surface. Table 40 by 58 ins. Motor driven.

P15. Medium three spindle car boring machine. Capacity up to 2½ in. diam. and 14 in. deep. 3 fluted timber feed rolls connected to hand wheel, and one wedge screw clamp quick acting spindle carriage adjusting levers. Arranged for 14 in. bits and 12 in. wide timber. Complete set of bits 7-16 to 2 ins. Motor driven.

P16. Cabinet smoothing planer. Capacity from 1-16 to 6 ins. thick, by 30 ins. wide. Spring pressure feed roll control. Feed speeds from 15 to 40 ft. per min. Motor driven.

P17. Double cylinder four sided planer and matcher. 15 ins. wide and 6 in. opening with 3 pairs of 10 in. feed rolls, 6 bit round top and bottom cylinders, high speed steel cutters, 12 bit matcher heads, jointing attachment for all heads, and power driven grinder for top and bottom heads. Profiling attachment with jointer and grinder for same. Feed up to 200 ft. per min. Motor

use on gang saws or cutter heads on the mandril. 16 in. saw. Motor driven.

P23. Pony planer. Single cylinder 24 ins. wide, opening 6 ins., with two pairs of gear driven feed rolls, cylinder fitted with two knives and belt on each end. Motor driven.

P24. Combination door and sash sticker. Boring and grooving attachments. Top, bottom and outside arbors with ploughing and boring attachments on each square head. Knives, grooving saws, boring bits. Motor driven.

P25. Buzz planer. Cylinder 24 ins. wide, slotted on four sides, fitted with two knives. Table faced with steel plates next to cutter head. Cutter head vertical adjustment. Motor driven.

P26. 36 in. special band saw. To take 15 in. stock below doors, and equipped with safety doors. 29 by 33 in. table. Motor driven.

P27. Two spindle shaping machines. 26 in. centres, one piece frame. Knives capable of dropping below surface. Table 40 by 58 ins. Motor driven.

P28. Three drum sander. Drums 61 ins. wide. Paper applied spirally. Brush cylinder on finished work. Power hoist for upper feed roll frame. Change gears for variable