

# THE NEW FOUNDRY AND PATTERN DEPARTMENTS OF THE B. F. STURTEVANT CO., HYDE PARK, MASS.

For several years the B. F. Sturtevant Co. has felt the excessive pressure of increased business and the necessity for much more extended facilities for manufacturing than those possessed by its old plant at Jamaica Plain, Mass. The fire

are of heavy plank covered with tar and gravel.

The arrangement of the buildings is the result of the most careful study and endeavor to simplify to the limit the matter of inter-transportation. Numerous spur tracks permit of ready handling of in-coming and out-going freight, while a complete system of industrial railways connects all departments. The industrial system is equipped with 12 pound T rails laid 24 inches gauge on centres.

Before the completion of the new power house, a temporary plant was established in the foundry building. This comprises a locomotive boiler, draft for which is produced by a Sturtevant induced draft fan, and two 75-K W Sturtevant generators driven by two Sturtevant 13x12 horizontal engines which furnish direct current at 220 volts. This is utilized both for power and for arc and incandescent lighting throughout the

plant. The entire transmission equipment including motors and bangers, is of Sturtevant manufacture.

The foundry and pattern departments which form the subject of this description, were the first to be put in operation prior

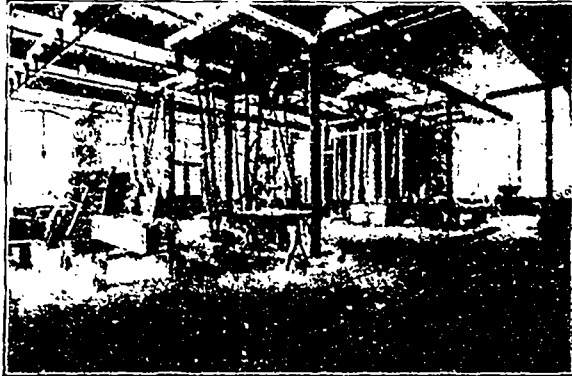
building. This room also includes the metal pattern makers' department equipped with the necessary machine tools. Adjacent thereto is the locker, wash and toilet room for the building.

Immediately above is the pattern shop abundantly lighted on three sides and equipped with a full complement of tools including one single and two double saw benches, two hand saws, a buzz planer and a double surfacer, five lathes, one of which is a 36 inches by 11 1/2 feet gap lathe, a drill press, a core box machine, numerous wood trimmers, etc. All the power machines are operated by two 10 h. p. Sturtevant motors, both being required for ordinary work, but one always serving as a possible relay in case of accident.

The benches which accommodate two men each and measure 2 feet 6 inches in width by 16 feet in length are so arranged along the sides of the building that the men all receive a left-shoulder light. Behind each bench is a working table 4 feet wide by 16 feet long. The benches are supported by cast iron legs of special design which were built by the Sturtevant Co.; the same design is used throughout the plant. They are equipped with Emmert vises and their tops are of heavy maple plank. A drying chamber for glued work is provided which receives warm air through the general heat flue from a Sturtevant heating apparatus below.

Around the pipe columns which support the floors of the pattern storage end of the building are clamped the pattern shelving brackets which are adjustable to any height. All patterns are consecutively numbered upon the drawings as made. When the patterns are delivered to the pattern storage department proper locations are assigned and records thereof made upon cards, one for each pattern.

These cards are filed in the order of the pattern numbers. Four figures with the addition of a letter are in every case sufficient to locate a pattern. A given location, for instance, may be 2125B; that is, it is upon the second floor, as shown by the first numeral, "2," it is in the twelfth row of shelves and the fifth division of that row as shown by the succeeding numerals "12" and "5"; and



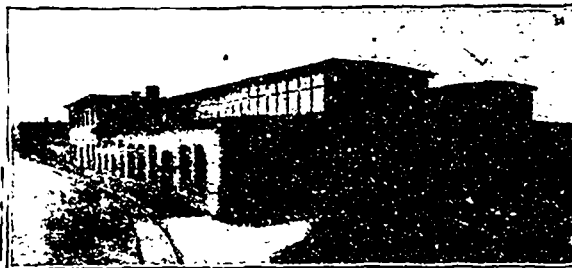
FLASK SHOP.

which visited this plant in 1901 had the effect of definitely settling the question of removal, and plans were immediately begun for a thoroughly modern manufactory at Hyde Park, about nine miles from Boston, where an abundance of skilled labor is always available.

The site selected was admirably adapted for the requirements; the tract of land contains over 15 acres and has a frontage of 1,300 feet along the freight yard tracks of the New York, New Haven & Hartford Railroad, near its station at Readville. The water supply is ample and the space for dumping waste is sufficient to meet all requirements for years to come.

The plant comprises a commodious four-story office building, measuring 45 x 125 feet; a three-story building 80 x 500 feet devoted to the manufacture of blowers, heaters and galvanized iron work; a building 80 x 250 feet of the same height, on the first floor of which all engines will be tested, stored and shipped, while the other floors will be utilized by the electrical department; a general machine shop measuring 120 x 500 feet, with 40 feet side galleries devoted principally to the building of engines; a forge shop 40 x 100 feet; a two-story building of the same floor area devoted exclusively to lockers, washing and sanitary facilities for the employees; a pattern and storage building 80 x 150 feet in ground plan; a foundry measuring 170 x 350 feet; a power house 80 feet square with detached fire and service pump house. All told the aggregate floor area of the buildings exceeds nine acres. Brick has been used for all walls.

the construction of such buildings as are equipped with travelling cranes, all upper floors are of plank with top course of maple, laid on heavy wooden beams and designed in the case of the principal buildings for carrying safe loads of 200 to 250 pounds per square foot. The roofs,

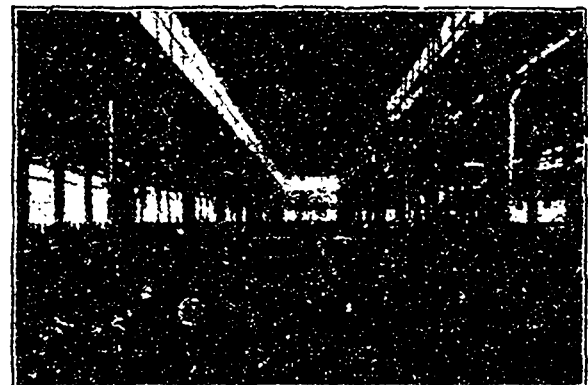


FOUNDRY AND PATTERN BUILDINGS.

to the removal of the entire plant from Jamaica Plain.

The pattern building is divided midway of its length by fire walls enclosing stairs, elevators, etc. One-half the building, with stories respectively 17 and 15 feet, is devoted to the flask and pattern making rooms, while the other half, provided with intermediate floors, making four in all, is utilized for pattern storage.

The flask-shop measuring about 60 x 80 feet, is equipped with hand cross cut and splitting saws, boring machine and lathe all driven by a 10 h. p. Sturtevant motor suspended from the ceiling. The industrial railway runs directly into this room from the foundry 40 feet and together with an over-head transfer truck reduces to a minimum the cost of handling flasks. The lumber for their manufacture is unloaded from cars directly in front of the



ONE OF THE CRANE-WAYS.