

REFERENCES

- Mechanical Equipment of Buildings*, by Harding and Willard, Vol. 1, second edition, 1929.
Theories and Practices of Centrifugal Ventilating Machines, by D. Murgue, translated by A. L. Stevenson.
Mechanical Engineer's Handbook—Kent.
Mechanical Engineer's Handbook, by Lionel S. Marks.
Constructive Mechanism and the Centrifugal Fan, by George D. Beals.
Coal Miners Pocket Book, published by McGraw-Hill Book Co.
The Fan, by Charles H. Innes.
Mine Ventilation, by J. J. Walsh (A.S.H.V.E. TRANSACTIONS, Vol. 23, 1917).
Fan Blower Design, by H. F. Hagen (A.S.H.V.E. TRANSACTIONS, Vol. 28, 1922).
The Centrifugal Fan, by Frank L. Busey.
Section X, A.S.H.V.E. Code of Minimum Requirements for the Heating and Ventilation of Buildings (Edition of 1929).

Chapter 33

SPECIAL APPLICATIONS OF HEATING AND VENTILATION

Including certain references to subjects treated in previous issues of THE GUIDE.

1. CLOTHING FACTORY PRESSING ROOMS (VENTILATION OF)

IN the men's garment manufacturing industry there are used large batteries of clothes pressing machines. These usually have large heated areas filled with high pressure steam, and the heaters and the piping which serves them and the jets of steam used on some of the machines for direct application to the cloth, bring about a man-cooling problem of considerable extent. The following solution has been found reasonably satisfactory for use during warm weather:

1. Mechanical exhaust ventilation of about 2,000 cu. ft. per minute per machine, with gravity inlets through ducts, doors, windows, etc.
2. Mechanical supply ventilation taking air from out-of-doors, delivered horizontally directly toward the face and breast of each operative through an adjustable nozzle of about one-half square foot area at a velocity of about 800 lin. ft. per minute. This nozzle should be about 2 ft. from the man.
3. The inlet to the mechanical supply ducts should be taken if possible from the north or shady side of the building, or from a shaded court, never from above a sunny black roof, since the normal out-door air will gain considerable heat when drawn into the building over such a surface.

2. COLD STORAGE WAREHOUSES (VENTILATION OF)

Fruit and vegetables are alive until they begin to decay and if they are to remain alive and well they must be given an ample supply of air and favorable humidity conditions. Conclusive demonstration has been made of the necessity of controlled ventilation for rooms in which fruit and vegetables are stored, even though the temperature in such rooms may be kept very low. It is possible to obtain well developed proprietary systems of ventilation for cold storage warehouses, and as the volume of air to be changed may be comparatively small, the cost for extra refrigeration due to ventilation is trifling, and often is more than compensated for by the improved interior air circulation and the elimination of air-stratification.

Warehouses for fruit storage where no refrigeration is employed should have many doors and windows, which may be opened during the night in warm weather, and closed during the day. The product should be piled in such manner as to allow very free air circulation between the