be no interference with the movement of air throughout its entire path from the high velocity nozzles to the front of the theater. The ceiling should be smooth, without projecting beams or obstructing ornamentation. For large theaters, relatively high velocities can be used. These will work satisfactorily if adjustable outlets are used to avoid areas of local turbulence.

In small or medium size theaters, it is sometimes practicable to use side wall or front wall distribution. For the satisfactory operation of such a

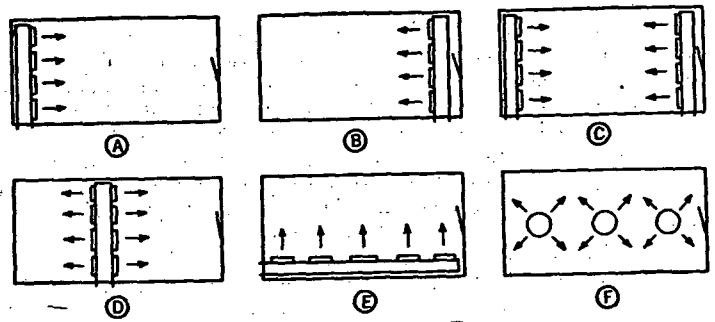

FIG. 17. SMALL STORE COOLING DISTRIBUTION

A. *Rear Wall.* High outlet velocity, satisfactory if properly designed; possibility of excessive air motion and drafts if used for wrong application.

B. *Front Wall.* High outlet velocity, results same as A.

C. *Front and Rear Walls.* Moderate room air motion, outlet blows should not impinge giving rise to downdrafts in center.

D. *Center.* Moderate air motion, no impingement of air streams. Good results.

E. *One Side.* Moderate room air motion; should blow toward exposed wall. Good results.

F. *Ceiling.* Low room air motion. Good results. Outlets should be selected of sufficient size to allow for blocking when not located in perfect squares.

system during the winter heating period, the returns should preferably be located at the floor level and near the front of the theater to prevent cold spots resulting from exposed wall convection or infiltration from exits.

For *multi-room buildings* diagrams shown in Fig 16 illustrate distribution methods for small rooms with exposed wall, such as offices, hotel (guest) rooms, hospital (patients) rooms, apartments, etc.

For *a small store* the cooling performance of various distribution methods is illustrated in Fig. 17.

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