

into the auditorium of a church would be to run a system of piping along the ceiling of the basement, have as many branches as there are rows of seats, and cut an opening in the floor under each seat and, as the duct runs along, it is reduced in size and the last rows of seats would not then get any more air than the first ones, providing the system was designed properly.

I wonder if it would be interesting for the members to know of the application of a ventilating system to a large departmental store. We have been called upon at different times to look into this matter and it requires very serious thought; first, for the reason that the larger the building the more air they require and such a building is generally located in a district in the city where the land values are the highest, and to take an air shaft running from the top of the building down to the basement to allow for the passage of 100,000 to 250,000 cubic feet of air per minute, it would require some space and the necessary space would, in all probability, be worth quite as much as it would be necessary to spend on the necessary apparatus to properly ventilate such a building. Consequently, if we can save such space to the owners we can cut down the cost of ventilating considerably. Then, assuming a case of installing such a mammoth air shaft as would be necessary and the installing of a large fan in connection with the system and necessary distributing piping throughout the rest of the building, it would be rather an extravagant proposition. We have determined that the only satisfactory way then would be to install what we term a unit ventilating system; that is, a lot of comparatively small fans, heaters and air washer units can be installed at different intervals in the basement of a building and air can be taken in through windows above the sidewalks at several different points, and no opening will require to be very large, and the windows are not destroyed then for their service in lighting, you will then really only occupy a small amount of floor space and if you have a high ceiling in a basement, you can get a unit that would be sufficiently small so as to really not occupy any floor space, that is to say, if a basement is 14 feet high you could install an apparatus that would not be over 7 feet high, including foundations, and have 7 feet in the clear then to work in, and with units like this scattered about it would not be necessary to have a lot of obsean G. I. distributing ducts on the ceilings.

Ventilating an hotel is quite an interesting proposition. Usually we figure to blow air into the various rooms of an hotel building excepting into the bath-rooms, sculleries, kitchen, etc. Out of these rooms we plan, of course, to exhaust the foul air, as, for instance, in a bath-room, the outside air will flow