

atmosphere of these islands the whole year round, including both the day and the night, it contains on the average about 82 per cent. of the total amount of moisture possible; taking the daytime alone about 76 per cent.; and the noon hours only about 72 per cent. Adding the other percentages he quotes together, and striking a mean, we find that during the summer months (May to September) and during the hours of 9 a.m. and 6 p.m., the proportion is about 70 per cent., and during the midday hours of those months 64 per cent. Judging from these observations, and not to exaggerate our thesis, we shall probably not err greatly if we admit that the air we breathe in our rooms should contain 65 per cent. of the total moisture possible to be truly healthy.

Let us revert to our little 11 ft.-square parlour and study the actual facts. It will be remembered that we found 7,000 cubic feet of fresh air per hour necessary for its proper ventilation and to keep it sweet and wholesome. For the sake of clearly understanding our subject, we will assume an outside temperature of 32 deg., and that the air is fully saturated with moisture, that the thermometer inside is at 62 deg., and that, as is usual, there is no provision made for adding moisture. What is the result? To be fully charged with moisture at 32 deg., a pound of air must contain 0.00379 lb. of vapour of water; to be in the same condition at 62 deg., it must hold 0.01179 lb., so that to be saturated to the extent of 65 per cent., it should contain 0.00866 lb., or 0.00487 lb. more than it had on entering our parlour. In short, by heating it, we have reduced our 7,000 cubic feet of air from full saturation to one of 32 deg. only, or to less than half what Nature teaches as necessary! A cubic foot of air at 32 deg. weighs 0.0807 lb., and our 7,000 feet have a total weight of 565 lb., each of which requires the addition of 0.00487 lb. of water, or altogether about 2½ lb. (say a quart roughly). Now if this is the condition of the air in an ordinary dwelling in winter, can we wonder at people complaining of feeling parched and getting all sorts of throat and lung affections! The marvel is that they thrive as well as they do.

Here and there we may find a pan of water placed on the table or elsewhere as a remedy, but that is merely offering an insult to nature. A pound avoirdupois contains 7,000 grains, and water, exposed to air at 62 deg. and saturated 65 per cent., would evaporate at the rate of 74 grs. per sq. ft. and per hour. To get the 19,250 grains we require, the pan should therefore have an area of 260 square feet or rather more than double that of the room itself! Fortunately, the rate of evaporation rises rapidly if the temperature of the water be raised, so the seemingly impossible is, nevertheless, easy of achievement. Thus, water at 100 deg. yields 954 grs., at 150 deg. 6,452 grs., and at 200 deg. as much as 25,016 grs. per sq. ft. and per hour.

Therefore, a pan kept at the latter temperature and measuring 9 in. by 12 in. would completely answer our purpose in the case under study. Though probably not intentionally arranged, it may be mentioned, that the "King Sol" independent fire-place referred to last week has a space beneath a grated and hinged lid, which would just receive such a pan, and the work of keeping the air in condition could be done by its means without having any unsightly dishes, kettles, or open saucepans in view. Of course, in large buildings, such as schools, asylums, &c., where the heating and ventilating installations are quite elaborate, and often include large fans driven by steam power, the question of moistening the air is not quite lost sight of, but it is a curious fact that, in most cases, the air is water-screened *before it is warmed*, and even if effectually saturated by this process (which is very doubtful) its hygrometric state after being heated must evidently be far from what it should be, to judge from the investigation we have just made. The trouble is, that when these apparatus are designed, the heating engineer knows that he is in competition with several others, and that if he properly moistens his fresh air he will want more heating surface, which will increase his price and, perhaps, put him out of the running. Mr. Architect knows nothing of the matter, has possibly never heard of a hygrometer, and is certain not to test the air with one, and so the whole thing is either left out of consideration or else done in such a way as to be utterly ineffective.

(To be continued.)

International Nursing News.

Mrs. Bedford Fenwick, Hon. President, and Miss L. L. Dock, Hon. Secretary of the International Council of Nurses, have been elected Honorary Members of the German Nurses' Association, in gratitude for sympathy extended during the early days of its organisation.

The City Financiers' Nursing Scheme.

The Royal British Nurses' Association has appointed five delegates to attend the inquiry of the Board of Trade and to present the objections of the Chartered Corporation to the Incorporation of the Society for Promoting the Higher Education and Training of Nurses.

The Directors of the South Charitable Infirmary and County Hospital, Cork, have forwarded a Resolution to the Board of Trade opposing the granting of a licence to the Society for Promoting the Higher Education and Training of Nurses.

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