

CONTRIBUTED ARTICLES.

SLEEP IN THE TROPICS.

BY THE KIND COURTESY OF "*Capital*."

THE mosquito curtain is one of the greatest obstacles to ventilation at night. Its resistance to the passage of air may be easily proved by means of smoke. If filled with smoke the time required for its escape is the measure of the passage of air through the curtain. When roofed with calico the circulation is still slower, and when made of muslin instead of net circulation is all but arrested. Muslin is only used when sandflies are about which can easily pass through a net. The net furthermore interferes with the free upward escape of water vapour from the body. Mosquitoes and sandflies avoid air currents and in a moderate current the sleeper is safe if it can be depended on throughout the night. As information seemed lacking on the subject of the resistance of a net to the passage of air over a bed the writer tested it by experiment. He placed a screen at an angle of 45 degrees below a revolving ceiling fan changing the direction of the current from vertical to horizontal. A camp cot was placed in the way of the current so as to be traversed by it. A very sensitive anemometer gauge was used, reading in two-thousandths of an inch of water (0.0005) and alternate observations were taken with the curtain raised and lowered. An average of six readings shewed that the resistance of the curtain reduced the current by 57 per cent. or more than half.

Although the swinging punkha is not likely ever to disappear from India, it has been largely superseded by the portable rotary fan driven by a hot-air engine and a kerosene lamp. This machine is by no means perfect, and in incompetent hands the lamp may be a serious nuisance, still, when compared with the punkha cooly who falls asleep on duty it has the advantage of being continuous and also cheaper than any manual labour even at Indian prices. In the daytime when the temperature rises above 115 degrees this fan produces a hot blast that is far from refreshing. It seems to point to the need of an air cooler on the principle of the thermantidote through which the air should be blown.

Several attempts have been made to provide such a cooler but without success. In a damp climate cooling by the evaporation of water causes too great an increase of dampness and in a dry climate the results have so far been too small to be of value. An attempt was made in a large Bombay hotel to cool the air of several suites of rooms by means of coils of cold brine pipes through which air was blown. A satisfactory reduction of temperature was at once obtained but the cooling brought the air down to dew point, producing such a clammy atmosphere that the experiment had to be abandoned.

Sleeping out of doors has always been popular among people who live in the country or whose houses have suitable roofs or grounds for the purpose. A flat roof offers an ideal position as it is sufficiently private and is exposed directly to the sky. The roof should be kept as white as possible with lime-

wash so as to absorb as little heat as possible during the daytime. This heat will of course be radiated during the night. An experiment made with porous bottles of water placed on the ground and on the parapet of a flat roof shewed a difference in temperature of 4 degrees, that on the ground being 72 while that on the roof was 68 degrees, shewing a greater rate of cooling at the higher level. The sleeper out of doors should ascertain the usual movement of night winds, if any, and be prepared for them. The mean wave of daily temperature finds its maximum at about 2-30 P.M. and its minimum at sunrise when the temperature begins its upward course.

The castor oil tree is avoided by the mosquito, and its leaves, if distributed in a room will drive them away. Cheap kerosene applied with a rag to the underside of tables, shelves and other furniture will drive the insects away. Long after the odour of kerosene has ceased to be perceptible to human beings it is still effective against the mosquito. Even ants will not pass up the leg of a bed round which a cord or rag has been tied that has been wet with kerosene.

The terrace roof seems to be disappearing in India in favour of the tiled ridge roof, especially in the cities. Few architects seem to be able to make a water-tight flat roof, especially where the rains are heavy. From any lofty building in any large city it is possible to look down on acres of tiled roofs that, if terraced, would be a very valuable area for sleeping under the sky in hot weather and for relaxation at all times. The tiling of the roofs has been accompanied to a large extent in the cities by the enclosing of verandahs that were such a valuable adjunct to a house.

There are numerous precautions that may be taken against the mosquito in the absence of a net: extension pieces for the legs and arms of sleeping suits protect the feet and hands from attack by mosquito or sandfly, and a very light small towel put round the head and fixed with a safety pin under the chin seems to protect the head, as the space from chin to eyebrows does not seem to be attacked. Kerosene of the better quality rubbed on the skin is a well-known remedy as well as lemon grass and other essential oils. It is well when travelling to carry one of these remedies, for curtains in hotels or rest-houses are not always in good repair, and if there is only one opening the mosquito will find it.

It would be difficult to exaggerate the importance of sound repose in tropical countries. Few men enjoy perfect health for any length of time: their existence may be generally expressed by a considerable percentage below it and imperfect sleep is one of the commonest complaints in hot weather. Much of this discomfort might be avoided if reasonable precautions were taken in the matter of beds and ventilation. In a warm and moist atmosphere we are liable to produce a still moister envelope of air around us that interferes with cooling unless there is a current available to carry it away. This situation is very likely to happen in the night to those who sleep indoors unless the chamber is very freely open to the outer air or unless means are provided to produce a steady current of fresh air. To circulate the air in a closed room is gradually to increase its dampness and temperature. This very frequently happens when an electric suspended fan is used. If a fan of similar power

were fixed in a door or window opening so as to pass a constant current of fresh air through the room, the conditions of sleeping out of doors would be very nearly realised. But no one asks for such a fan, and a great many people still believe that the night air is less wholesome than that of the day, while the truth is just the contrary.

BRITISH NURSES AND THEIR FIGHT FOR PROFESSIONAL FREEDOM.

CAN any good thing come of war—such a war as this—big with frightfulness of every description? The answer is a clear and definite affirmative. That is the cheering, mitigating paradox, the partial compensation for the suffering, sacrifice and anguish of it all. Many good things have come out of this war, but the thing of fundamental importance, and which fires one's imagination is this: Freedom (which means opportunity) once given to any body of people, dormant faculties are immediately liberated, and great achievements for the public weal must follow. Without the work that women are doing in the furtherance of the war (much of which they were considered quite incapable of performing previously) the British would have been defeated in France, and, possibly, the Germans might have reached England. The most indispensable of all women's work at this time especially is perhaps that of the trained Nurses. Their devotion to duty, self-sacrifice and heroism, have been quite equal to that of the fighting men. I do not mean British Nurses alone. I am thinking in terms of Internationalism, and that brings me to my central idea. *Internationalism!* What is it but a great *Spiritual Alliance*, which has united the nations of the Allies in their struggle for Right against Might; reinforced by armies of Nurses. How thankful and proud we Nurses feel of our *own Spiritual Alliance*, which was founded long before the war, but it is the war which had made it a greater reality. We are no longer separate bodies of Nurses, we are Nursing Allies, we are an indivisible whole taking our part in the Nursing lines in the great war for the freedom of the world, the fight between the powers of darkness and light. It is a self-evident parable, just spoilt, however, by "the rift within the lute which by and by will make the music mute" unless—yes, unless it can be turned into harmony. We feel convinced that we shall have the sympathy—not only the Nurses of our Dominions and of our Allies—but those also of neutral countries who have understanding hearts. I should therefore like to place before them through the pages of this *Journal*, a brief statement of the struggle that has been forced upon British Nurses to secure and maintain their professional freedom. The movement for the organisation of the nursing profession by Act of Parliament was initiated about thirty years ago by Mrs. Bedford Fenwick, Editor of the *British Journal of Nursing*. The work it has entailed has been unceasing and strenuous, but very fruitful. The expenses have been borne by the Nurses themselves. All opposition