lamp, of no greater weight than may be borne on a finger, and so contrived that the light will fall at the point required, without assailing the eyes of the patient, is not yet devised. Complicated and costly beds, quite out of the reach of any middle class family, and therefore available only for the wealthy, or the fortunate inmates of hospitals, alone meet the requirement of cleanliness without discomfort. The like is true of nearly all the apparatus for the relief of pain by change of posture, and for securing immunity from pressure, or steadiness in a particular position. The rich and the poor are provided, but not the multitude in narrow circumstances with small and inelastic financial resources.

The stage of convalescence is in many respects the most trying of all. It is then that petty annoyances, such as arise from noises, draughts, smoke, foul vapors, bad or ill managed light, . improperly cooked food, nauseous remedies administered in uncleanly and uncomfortable cups or glasses, knives, forks, and spoons that turn over with a clatter, things that fall or are readily knocked down, irritating wall papers, hard, lumpy, or too soft beds, burdensome or cold bedclothes, beds that can only be put in order with labor and confusion. There is scarcely an article or piece of apparatus for the sick chamber which is not obviously susceptible of improvement, and would not repay the thought expended upon it, if placed within reach of families with small incomes, who feel the cost of comfort in sickness. "None of these matters are beneath the consideration of the medical practitioner. In no small proportion of cases they are relatively of high moment. It is neither wise nor safe to leave the care of such details to nurses, whether trained or domestic. The physician should be able to direct those in charge of the sick what to provide, where to obtain all necessary appliances, and how to use them when at hand. This is a matter of more than common importance, and it is with the view of reminding the profession and the producers of special apparatus-efficient and inexpensive-of the conspicuous part their enterprise should play in minimizing the discomforts of the sick, we bring the subject under notice.-Lancet.

Poisonous India-Rubber Toys.—A. F. Taylor, Ph. D., of Andover, Mass., sends us the following note :—

Prof. B. Tollens, in the Journal of the Berlin Chemical Society, of November 13, 1876, calls attention to the injuriousness of many of the articles manufactured from caoutchouc, which, among other impurities, contains a very large per cent. of zinc oxide. In the rubber nipples of milk bottles for children, this has often been found to be the case, and so much attention has been called to this fact that the manufacture of these nipples containing zinc oxide has to a great extent ceased.

But more recently suspicions have been aroused concerning the quality of children's toys, dolls, animals, etc., made from rubber. One case, in which a child, having one of these dolls, had had it for some time in its mouth, grew sick, and the doll, laid in vinegar, became covered with an incrustation (without doubt zinc acetate), led to direct investigation. In 0.7325 gramme of such a doll 0.4446 gramme zinc oxide was found, or 60.58 per cent. Another portion gave, after being subjected to a red heat, 62.64 gramme of ash, yellow while hot, white on cooling. In the ash besides the zinc were traces of lime, iron, and phosphoric acid. From another doll which had been warranted "harmless," 57.68 per cent. of ash were obtained, consisting almost wholly of zinc oxide.

It is not at all improbable that the sickness of the child, become covered with a thin white film of kaolin.

particularly the severe vomiting, was caused by the zinc oxide, and it is to be wished that the manufacture and sale of such articles containing zinc oxide should be prohibited. *Boston Jour. of Chem.* xi, 87.]

Rapid Transit in Paris.—Paris is traversed by nine great highways of travel in the direction of east to west, while three only serve as means of communication in the direction of north and south. To relieve the latter, Mr. Louis Heuzé proposed the construction of an elevated railway, which at the same time is to serve as a connecting link between the different depots of the great railways which centre in Paris. The designs, as published in the *Recue Industrielle*, are decidedly more ornamental than those of the Gilbert Elevated Railway, which they approach most in character.—*Iron Alge.*

A New Grate Bar is attracting attention in England. The bar is of an angle section, the top portion, which forms the grate on which the fire rests, being provided with a number of diagonal slots, giving a uniformly distributed admission of air throughout the whole grate surface. This arrangement facilitates the complete combustion of the fuel, smoke being entirely prevented and the whole of the heat-producing portion of the coal consumed in the furnace. The bars are so light in section that they cost no more per square foot of fire grate surface than ordinary fire-bars, while at the same time they are much more durable. The bar seems designed on sound common sense principles.—Iron Age, March 14.

The Proper Speed for Circular Saws.—The Lumberman's Gazette says: "Nine thousand feet per minute—that is nearly two miles per minute—for the rim of a circular saw to travel may be laid down as a rule. For example: A saw, 12 inches in diameter, 3 feet around the rim, 3000 revolutions; 24 inches in diameter, or 6 feet around the rim, 1500; 3 feet in diameter, or 9 feet around the rim, 1000 revolutions; 4 feet in diameter, or 12 feet around the rim, 600 revolutions; 5 feet in diameter, or 15 feet around the rim, 600 revolutions. The rim of the sa⁻⁻ will run a little faster than this reckoning on account of the circumference being more than three times as large as the diameter. Shingle or some other saws, either rivect to a cast-iron collar or very thick at the centre and thin at the rim may be run with safety at a greater speed.—The Millstone.

Improved Propagation by Cuttings.

Peter Henderson described last winter, in the Agriculturiet, an improved mode he was then using for the propagation of geraniums. His object was, in the first place, to avoid the exhaustion of the parent plants by the removal of cuttings abruptly; and, secondly, to make sure work. He takes the young shoot which is to be used as a cutting, and snaps it short, leaving it hanging by a small portion of the bark.



This shred is sufficient to sustain the cutting, without any material injury from wilting, until it forms a callus, which precedes the formation of roots. In from eight to twelve days it is detached and potted in two and three inch pots. It is rather less shaded and watered than ordinary cuttings, and forms roots in

about eight to twelve days more. Last fall Mr. Henderson propagated about 10,000 plants of the tricolor class without losing one per cent. With the common method he thinks he would have lost fifty per cent. This mode is applicable to the abutilon, begonia, carnation, cactus, lantana, oleander, etc., by using young unripened shoots. If the shoot does not break, but simply bends to a knee, a knife may be used for cutting about two thirds through.

Cleopatra's Needle is likely to decay in the British climate. The Luxor red syenite obelisk has suffered more in 36 years in Paris than in as many centuries in Egypt. It has become covered with a thin white film of kaolin.