

completely dominate, and in due time drive out the European from the whole American continent. As a matter of fact, however, the race problem seems to be in danger of settlement by the drastic laws of Nature. The emancipated negro seems incurably idle and hopelessly vicious, and in consequence neglects the most simple laws of hygiene. Recent investigations, in 300 towns in the Southern States of America, have shown that the death rate of the negro is twice as great as that of the white population, while their birth rate is considerably lower. The general physique of the race is also reported as materially lower than it formerly was. It is argued, in fact, that emancipation has brought in its train the most serious evils. Formerly, a negro was well fed, and, as a general rule, the hard work which he had to do in the open air was that for which nature had intended him, and conducted both to his good health and freedom from disease. It is becoming evident that whereas the negro formerly was almost exempt from Consumption, the race is now suffering very largely from lung diseases. At the same time, it has been conclusively shown that the negro can be regenerated. The recent annual report of the Army Medical Department contains a special reference to the coloured soldiers of the United States, and proves that under proper discipline and efficient sanitary regulations, the health and the physique of the negro regiments excelled that of their white comrades. This is the more remarkable because, before the institution of new regulations, the disease and death rate amongst the same coloured troops was greatly in excess of that which was found amongst the white troops of the United States.

#### BURNS.

WE recently described, in this column, the antiseptic treatment of Burns as carried out on the Continent. We purposely described the solution of carbolic acid, with which the injured part was dressed, only as "strong." As a matter of fact, it would be difficult to be more precise, because no two practitioners probably use exactly the same strength of lotion; and indeed to do so would be absurd, seeing the great differences which exist in the severity and extent of burns. Generally speaking, a much stronger solution could be employed when the skin is not destroyed, than would be safe if the deeper tissues were exposed.

### The Best Methods of Surgical Sterilization.\*

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WHILE surgical sterilization is open to improvement and does steadily improve, it is to be regretted that the best methods of attaining this desirable end are matters of dispute among the three principal schools. Thus while (1) the English school teaches chemical sterilization which means the destruction of non-spore bearing pyogenic bacteria only, the (2) German school advocates the extermination of all surgical bacteria, spore-bearing or not, pyogenic or not, by the aid of heat, and (3) the French school aims at both surgical and bacteriological sterility.

If the Englishman is right, his method is certainly the quickest and the simplest, as all that he requires is a cold solution of carbolic acid; but the German, if he is right, has the sympathy of the majority of Surgeons, and needs sterilizers for boiling water or for ordinary steam, which the Englishman has no use for. If, however, the Frenchman, with his expensive and cumbersome high-pressure sterilizers be the only one who is really right, surgical sterilization will never become popular outside of hospitals.

In surgical work we aim not only at sterility, but also at atoxicity or cleanliness, and while it is of some importance to remove chemic impurities of all kinds by washing, scrubbing, scraping and shaving and to secure at least three-fourths sterility by mechanical sterilization, we must also insist upon complete destruction of our real enemies; as the surgical failures through imperfect sterilization are invariably due to sepsis *i.e.* to the action of pyogenic, not spore-bearing bacteria. And though we have once or twice heard of a patient dying from anthrax or tetanus, where do we ever hear that a patient succumbed to tubercular infection or vibriosis through faulty sterilization?

The real question is:—Will killing the less resistant pyogenic bacteria suffice (English) or is it necessary to destroy and remove all known surgical bacteria and their spores (German) or must bacteriologic sterility (French) be obtained?

#### CHEMIC STERILIZATION.

Has for its stronghold not surgical sterilization, but antiseptic surgery, which forgiving many minor surgical sins and glossing over gross mistakes cripples, without destroying bacteria, thus giving nature time until the chemicals are disposed of in the organism, to organise the defence and prepare for the offensive.

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