in the male sex than in the female. Atypical forms of the palate appear, however, to be more common in the latter than in the former.

HRDLICKA's observations lead him to believe that there is no one or any set of the abnormalities which run through such a number of subjects as to justify its being considered typical of the asylum children. White children of both sexes were found to possess, on an average, a decidedly larger proportion of inborn abnormalities than the negroes; but the latter acquire in early life a larger percentage of irregularities than do the white children. In the negroes both the pressure and traction force were found to exceed at all ages similar forces in the white children, though the average weight of the latter exceeds that of the former. On the whole, Dr. Hrdlicka does not appear to attach the significance which has been attributed by some to physical abnormalities, for he italicises the following statement: "As a matter of fact, there are very few abnormalities which we can observe in man that may be positively said to render the individual generally either decidedly inferior, or markedly superior, to his fellow-beings. No single physical abnormality (and but a rare combination of abnormalities) suffices of itself to stamp any individual as a human degenerate."

NOTES ON BOOKS.

CAPTAIN A. E. GRANT, I.M.S., has printed in book form his recent address as President of the Madras Medical Society on *Post-Graduate Instruction and Research* (G. A. Nateson and Co.), in connection with the Tata scheme for a research institute in India. Captain Grant's only fear is that the project may be unduly delayed, or even temporarily stranded, on the shores of neglect, by the sluggish tide of "official reports," "memoranda," "suggestion," "reference," *et hoc genus*. But he trusts that with the present energetic Viceroy at the helm, and a picked crew of skilled and devoted men under his guidance, the scheme may be carried through.

We have received the Calendar of the Punjab University, Lahore (Calcutta: Baptist Mission Press. 1899. Demy 8vo, pp. 820. Rs.2.), which contains full particulars with regard to the regulations, faculties, degrees, and diplomas of the University, together with a college directory, and the examination papers set during the year 1898-99.

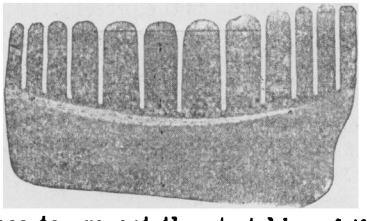
The Plague Inspector, by Lieutenant-Colonel W. G. KING, I.M S., is a book of over 160 pages, defining and explaining the duties of a plague inspector in India. It was written because something of the kind was asked for over and over again by plague supervisors to guide them in their work. Dr. King has accomplished the task he has set himself in a most satisfactory manner. The book is free from technical medical phraseology, and is written in a style that can be readily followed by laymen. It is divided into two parts. Part I begins with a short account of plague, a description of the plague microbe, with the favourable and unfavourable conditions for its vitality, the animals that suffer from plague, the incubation period of plague, the products of the plague microbe, mode of entry of the microbe into the system, and the mode of exit of the microbe from the body. Then follow the symptomatology of the disease, its mode of transmission, and the organisation for prevention of spread, the regulation of passenger traffic by sea, and the regulation of importation of articles from infected areas or country. The duties of the sanitary inspector with reference to plague are carefully and minutely gone into, and includes arrangements for home segregation, removal to hospital, house to house inspection, formation of health camps, and disinfection. Part II. refers more to the general duties of a sanitary inspector, and deals more especially with conservancy and sewage disposal. We hope the labour which Lieutenant-Colonel King has expended on this manual will bear fruit, and that full advantage will be taken of the knowledge he has placed within the reach of those engaged in sanitary work in India.

A Manual of Pharmaceutical Testing, by BARNARD S. PROCTOR, F.I.C., gives such directions for testing as will show the quality of pharmaceutical chemicals with such reagents and appliances as are to be found at the dispensing counter. The object of the author has been to enable the pharmacist in the simplest, speediest, and most inexpensive way to be able to decide whether an article is fit for use. In many instances the *British Pharmacopœia* tests are sufficiently simple and satisfactory for the purpose, but in a considerable number of cases other and simpler methods of attaining the required object are given. The second edition, (crown 8vo, pp. 200, 2s. 6d.; London: *Chemist and Druggist* Office, 1899) has been brought into line with the *British Pharmacopœia, 1898*, and up to the requirements of the day by additions and emendations made by the editorial staff of the *Chemist and Druggist*.

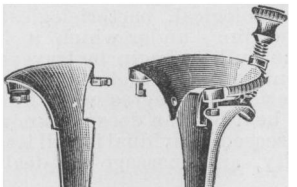
REPORTS AND ANALYSES
AND
DESCRIPTIONS OF NEW INVENTIONS
IN MEDICINE, SURGERY, DIETETICS, AND THE ALLIED SCIENCES.

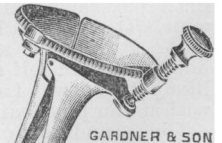
MEDICAL AND SURGICAL APPLIANCES.

Arch Support for Flat Foot.—Mr. F. H. DAVIES, M.B., has submitted to us an arch support for flat feet. It consists, as seen in the illustration, of a thin plate of steel in two planes, one of which is deeply dentated, and forms a lateral support for the arch of the foot; it fits in between the os calcis and the ends of the metatarsal bones. The plate is covered with leather when in use. It is claimed that the springs individually yield to pressure, and thus accommodate themselves to the under-surface of the arch, but collectively offer sufficient resistance to prevent the stretching of the ligaments. The flat part of the steel plate, being under the outer part of the foot, is fixed, and acts as a fulcrum from which the springs play. This spring plate is an endeavour to combine the advantages of the elastic rubber pad with the firm support given by a Whitman's brace, and as such it will probably be of service in cases of early flat foot with slight bony displacement.



A Modified Duplay's Nasal Speculum.—Dr. G. SANDISON BROCK (Rome) writes: In the removal of nasal polypi from the deeper parts with the aid of the ordinary Duplay speculum, I have experienced difficulty in manipulating the snare from not being able to remove the speculum from the handle of the instrument. To obviate this, Messrs. J. Gardner and Son, Edinburgh, following my suggestion, have made for me a modification of the Duplay by dividing its wide anterior ring in a vertical direction, so as to render the two blades readily separable when desired, the parts of the ring when the speculum is in use being secured in position by a gate at one side and by a bayonet joint at the other (see figure).

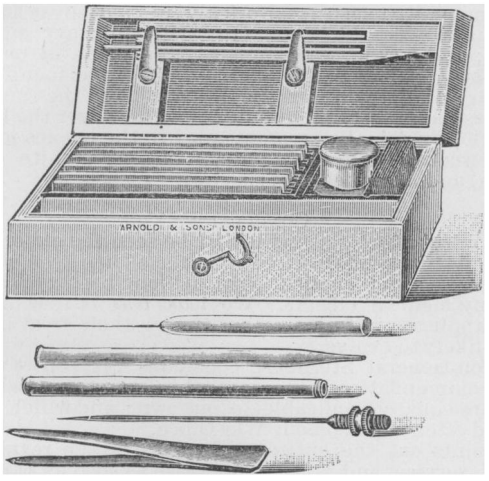




Professor Ferreri, of Rome, to whom I gave one of these modified Duplay speculums a year ago, tells me he has found it very useful, and describes it in his recently-published book on operative treatment in diseases of the nose, ear, and throat. I therefore venture to bring it to the notice of your readers.

A Modified Nasal Speculum.—Dr. G. Hunter Mackenzie (Edinburgh) writes: The Duplay nasal speculum has two disadvantages—it is difficult to clean thoroughly, and when in use is apt to be in the way during an operation. Thus, in the removal of certain varieties of polypi after the speculum has been used to facilitate the fixing of the snare, it would be an undoubted advantage if, during the actual operation, it could be removed from the nose. To overcome these disadvantages I have had the instrument modified by the addition of a couple of screws, so that it can be readily separated into halves, and when operating freed from the snare at the will of the user. After a fair experience I am certain that the modification is an improvement on the ordinary instrument. It has been made for me by Messrs. Young and Son, Forrest Road, Edinburgh.

The Microscopist's Companion.—Mr. Frederick Pearse, F.R.C.S.Eng., writes: The accompanying illustration depicts a small case which Messrs. Arnold and Sons, of West Smithfield, have made at my suggestion, and which contains in very compact compass, the immediate requirements of bacteriological and other microscopists. A few slides and cover glasses, a spirit lamp, grooved needle and platinum needle, capillary tubes, pipette and pair of forceps furnish a ready armamentarium for taking specimens, and any further preparation required can be subsequently completed at leisure.



MEDICINAL AND DIETETIC PREPARATIONS.

Soloids for Preparation of Saline Solution.—Messrs. Burroughs, Wellcome, and Co., Snow Hill Buildings, E.C., have sent specimens of compressed salts for the preparation of saline solutions for intravenous injections. Soloids of sodium chloride contain 30 grains, and those of sodium chloride and sodium sulphate 15 grains each of the two salts. Soloids sodium chloride compound are composed of sodium chloride, sulphate, carbonate phosphate with potassium chloride. These soloids are very convenient for the ready preparation of solutions which are generally required in a hurry. Two of the soloids dissolved in a pint of sterilised water at a temperature of 100° F. form a solution of proper strength for injection. By means of soloid lead subacetate a solution approximating in the quantity of lead subacetate to the official liquor plumbi subacetatis dil. can be immediately prepared. Soloids lead and opium lotion contain 20 grains lead acetate, and the dry constituents of 20 minims of tincture opium in each. These soloids, on account of their portability and the ease with which the solutions can be prepared, will be found especially convenient to travellers.

"Gutenberg" Temperature and Pulse and Respiration Chart.—This sheet, printed and published by James F. Wilkinson, Pendleton, Manchester, contains an ordinary temperature chart and a chart for pulse and respiration rates, the normal line of the pulse being drawn at 75, that of the respirations at 17 per minute. There are also spaces for notes as to the condition of the bowels, urine, and body weight. The sheet is sold either singly or made up in pads.

THE MEDICAL ASPECTS OF THE SPANISH-AMERICAN WAR.

The *Philadelphia Medical Journal* of November 25th published Surgeon-General G. M. Sternberg's Medical Report of the United States Army for the Financial Year 1898-9. It deals with the fiscal year ending June 30th, 1899, and consists of two parts; the first financial, the second dealing with the health of the troops.

As it embraces the active period of the Spanish war, it is of special interest to us in its bearing on our South African campaign.

Financial Statement.

This statement at once shows how widely the constitution of the medical service of the United States army differs from our own in possessing a complete financial autonomy, embracing the procuring and distribution of hospital supplies, and even including what is properly looked upon as largely a medical duty—recruiting and mustering out of invalids. It is, therefore, only in certain directions that the two services can be fairly compared.

Appropriation and Expenditure.

The money voted for the medical service during the year in review was $3,750,000 (about £765,000), of which there was expended $2,750,000 (about £564,000).

The large item in these accounts is "medical supplies." This we take to embrace hospital dietary, which in a country like the United States is sure to be on a very liberal scale. Other considerable items are for "medical attendance and medicines," pay of "nurses" and other "employees," "hospital washing," etc.

Medical Officers.

The number of medical officers in the regular army was 192, which "was barely sufficient for the needs of the service in time of peace," with a strength of 25,000 men, and of course utterly insufficient for the war, or to meet an increase in the establishment of regulars, independent of volunteer establishments.

It was therefore necessary to employ about 940 "contract surgeons" during the year, of whom 385 were still serving on July 1st, 1899. Something of the same kind is now going on in our own undermanned medical establishments.

Female Nurses.

The female contract nurses reached a maximum of 1,200 in September, 1898, and 202 were still employed on July 1st, 1899.

Hospital Ships.

The *Relief* and the *Missouri*, which were Government ships, did excellent service between Cuba and the Philippines and the home country; but the *Aid*, formerly the *Bay State*, and the *Terry*, proved unsuited for hospital purposes for reasons which are not given.

Recruiting.

During the calendar year 1898, 66,237 white, and 5,013 coloured recruits were examined for the regular army; of that, a little over 20 per cent. only were rejected. This is much below the primary rejections among our own recruits, and apparently admits of a double explanation. First, men in America are enlisted up to a later age, and are therefore more developed; secondly, the medical examination is evidently less exacting. Nevertheless, the chief cause of rejection there, as here, is defective physique, while defective vision seems more common than with us; and diseases of the "circulatory system," which we presume can only mean varix and varicocele and cardiac affections among recruits, are also more common.

Irish and Germans formerly constituted a fifth of the United States regular army, or 200 in every 1,000; but they have recently steadily decreased, until in 1895 they were but 90 per 1,000; the native born have risen correspondingly.

Notwithstanding the smallness of the army and the largeness of the recruiting field, and the consequent opportunity for strict selection, a considerable "delinquent" and "undesirable" element has constantly to be weeded out of the United States forces, of which some figures are given.

HEALTH OF THE ARMY.

It is noted with regret that even in the regulars, and still more among the volunteers, failure to keep and furnish accurate and complete records—especially in Cuba during July and August—makes the returns incomplete, and the ratios less than they undoubtedly actually were; this, however, with the scratch medical establishment employed, is scarcely to be wondered at.

REGULAR ARMY.

With a mean strength for the war year of 46,635, the admissions were at the rate of 2,136 per 1,000, or over two entries per man, and double the entries during peace. The excess was due to various "camp" diseases, of which the chief were malarial affections and typhoid fever.

The death-rate was 27.55 per 1,000 against a decennial average of 6.99, or nearly four times the normal amount. The number of days sick for each man was likewise double the average.

Of the different corps the infantry suffered most; but the death-rate was very high among hospital attendants, chiefly from typhoid fever, contracted in their ministrations on the sick.

The admissions were especially swollen by malarial diseases, but there were no fewer than 4,130 admissions from typhoid, and 604 from yellow fever; there were only 1,547 from gunshot wounds.

The death-rate of 27.55 per 1,000 was made up thus: Typhoid fever 9.74, gunshot wounds 3.94, malarial fevers 3.24, diarrhœa and dysentery 2.14, yellow fever 1.50, injuries other than gunshot 1.61, all other causes 5.38. Although the troops were exposed to dangerous infection in the islands from small-pox, there were only 19 cases and 7 deaths—such was the efficiency of revaccination. The highest admission-rate was in Porto Rico and Cuba; that in the Philippines was the same as in the United States itself.

The total deaths between May 1st, 1898, and June 30th, 1899, among regulars and volunteers, was 6,619, or an annual rate of 33.03 per 1,000 of strength, allocated as follows: Cuba 45.14, Porto Rico 38.15, Manila 17.20; United States: Regulars 17.43, volunteers 26.67.

Typhoid fever accounted for more than half the deaths from disease, and was worst in Porto Rico; yellow fever was worst in Cuba.

SANITARY CONDITION.

The sanitary condition of the permanent camps before the war was excellent, but the new camps formed on the outbreak of the war, and filled with undisciplined volunteers, speedily became hotbeds of disease, especially of typhoid fever, from which they suffered severely in July and August. Much good sanitary work has been done in Cuba since its occupation in December last, so that the amount of sickness in the camps and garrison has been much less than was expected; scattered cases of yellow fever have occurred, but its absence in epidemic form has afforded great satisfaction. The sanitary measures brought to bear on Santiago, hitherto one of the most unhealthy spots in Cuba, have proved remarkably successful. In Porto Rico, also, effective sanitation has been equally successful in controlling disease, and especially has an important attempt been made to suppress its worst disease—small-pox—by wholesale vaccination of the population. For that purpose a vaccine farm was formed at Coamo Springs.

Sanitary measures at Manila and elsewhere in the Philippines have been carried out with great labour, but with much success; so that the sickness and mortality have been not only relatively but absolutely low.

WATER SUPPLIES.

Much attention has been bestowed on this point, so that the supply to the various camps has uniformly been excellent. In no case was the rapid spread of typhoid conceded to be due to water pollution.

Various methods of sterilising drinking water have been tried, but simple boiling was found at once the readiest and most effectual, although it makes the water insipid and unpopular. The best filtering agents were found to be an asbestos strainer, with a cylinder of compact infusorial earth. The whole question of sterilising and aërating water was referred to a Board, who recommended the use of the apparatus known as the Waterhouse-Forbes water steriliser.

CONSERVANCY.

The disposal of excreta in pits in camps of any long standing was found to be fraught with danger, unless most vigilantly looked after and constantly disinfected. After various experiments the most promising method was that known as the "trough system," with removal of the contents by pneumatic pressure. This has been successfully established in several camps.

FOOD SUPPLIES.

The subsistence, or, as we call it, the supply departments, worked exceedingly well, and were constantly efficient. Many reports were received that the ordinary home ration was unsuited for the tropics in containing too much of the fatty and too little of the starchy elements.

The "60 per cent. allowance for subsistence" in hospitals proved more than ample, and enabled the medical officers to provide freely every delicacy for the sick; indeed a 40 per cent. allowance is declared to be sufficient.

CLOTHING.

The blue uniform used in the States was found too heavy for Cuba and the Philippines, and the woollen undershirts caused much irritation from prickly heat. Canvas suits until washed soft, were found to be too stiff and heavy, and caused chafing; and a similar complaint was made of one of the khaki issues. The British Indian helmet was found the best headgear; although after the rains set in the "campaign hat" was found to have certain advantages over the helmet.

The clothing finally recommended in the tropics is a lightweight woollen undershirt, cotton drawers, white duck for garrison, and khaki for field service.

CONCLUSIONS.

From all of the foregoing it will be seen the experiences of our American friends in tropical warfare have been singularly like our own; and confirm what has long been well known to our army medical officers. We look less for new facts than for the application of new methods which their great inventive skill is likely to evolve.

Surgeon-General Sternberg concludes his report with certain recommendations concerning his army medical service which are equally applicable to our own; and which we have long and often urged on our War Office.

He points out the entire inadequacy of the regular army medical service, and urges its increase as soon as practicable. He says, "Physicians and surgeons from civil life, however well qualified professionally, as a rule are not prepared to assume the responsibilities of medical officers charged with administrative duties and sanitary supervision of camps. The proper performance of such duties cannot be expected from a physician without military training or experience, no matter how distinguished a position he may have held in civil life."

He urges the organisation of "a corps of trained medical officers larger than is absolutely necessary for the army on a peace basis."

He has thus found the danger and difficulty of a scratch medical organisation in time of war, a lesson which indeed may yet be brought home to ourselves. As the war with Spain evolved the weak points of the American army system, so our own deficiencies are certain to be found out in the Boer war.

It must be the immediate business of the nation to remedy them.

IDIOCY IN THE BALEARIC ISLANDS.—E. Fajarnes y Tur, in a recent number of the *Revista Balear de Scienc. Med.*, compares the number of idiots in the Balearic Islands with that in Spain. He finds that both in the islands and in the town of Palma de Mallorca, just as in Spain and France, idiocy more commonly affected the male than the female sex, and that the number of cases of acquired idiocy was greater than that of congenital idiocy. The proportion of idiots in Spain was 0.54 per 1,000, in the Balearic Islands it was 0.43 per 1,000, and in the town of Palma it was 0.63 per 1,000. The high percentage in Palma is ascribed specially to sociological conditions.