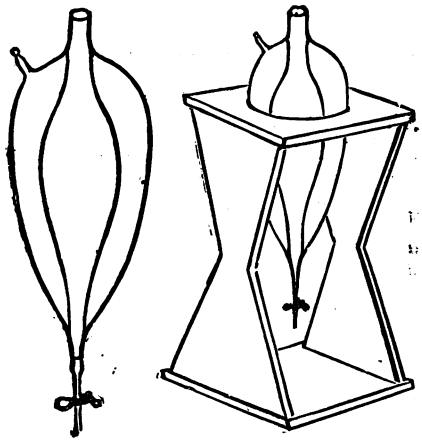
of the descriptions are illustrated by simple diagrams, and all who have charge of invalids, convalescents, or children have reason to be grateful to Miss Haddon for providing them with a means of amusing those under their care by an occupation which has already served to while away the leisure hours of countless generations in far-off lands.

MEDICAL AND SURGICAL APPLIANCES.

Apparatus for the Intravenous Administration of "Salvarsan."

MR. ARTHUR J. EVANS, F.R.C.S.Edin., Honorary Surgeon, Liverpool Stanley Hospital, writes: In the treatment of syphilis by salvarsan by the intravenous route, one is met with the difficulty of keeping the solution at an even temperature during the ten or fifteen minutes which it takes to flow into the veins. This is necessary, in addition to keeping the patient warm in bed; and when these details are carried out carefully, such after-effects as rigors, headache, vomiting, and variations in temperature are reduced to a minimum; in fact, in some of my later cases the patient has suffered no inconvenience at all. The accompanying illustration shows a flask made to my design by Messrs. Sumner and Co. of Liverpool, on the principle of the Dewar's glass flask; the inner portion (having a capacity of 500 c.cm.) is separated from the outer by a vacuum. Warm fluid allowed to stand in the flask loses only 3° F. in half an hour, so that in the ordinary time taken to administer the drug only 1° is lost. The solution is strained through sterile gauze into the flask, and the upper end is plugged with gauze or wool. The flow may be controlled by a clip on the tubing attached to its exit. The flask is kept sterile by being filled with alcohol when not in use. The apparatus is adaptable for any purpose in which it is necessary to introduce warm fluids into the body via the veins, tissues, or rectum. I have found it extremely valuable in the treatment of shock during or after surgical operation. For intravenous work, all that is necessary is to fill the sterile flask with the fluid at a temperature of 105° or 106° F. (two or three degrees of heat are lost in heating the glass). The clip is then removed from the attached tubing, and the fluid allowed to run through the needle until the air bubbles are expelled. The needle I employ is one specially designed for direct introduction into the vein without making an incision. Having entered the vein, the rate of flow is controlled by elevating or lowering the flask. In employing the flask for the continuous introduction of saline into the rectum according to Murphy's method for peritonitis, it is only necessary to refill it every half-hour, thus doing away with the cumbrous method of keeping the solution warm by means of spirit lamps, water baths, etc.



An Aseptic Thermometer.

The annexed engraving represents an aseptic clinical thermometer case made on the suggestion of Dr. A. Gordon Wilson of South Kensington. It consists of a tube of toughened glass, of the diameter of a lead pencil, closed at one end and fitted at the other with a rubber stopper into which is firmly fixed the end of a clinical thermometer. When the tube is about half filled with 1 in 1,000 solution of perchloride of mercury, and the thermometer is inserted, the level of the fluid rises so as to cover it completely, and the rubber stopper makes a fluid-tight point. The tube is provided with a shoulder to prevent rolling, and fits into a nickel case. It was made for Dr. Wilson by Messrs. Hewlett and Sons, and has been named the "Thermolique" case.

EXPERIMENTS ON LIVING ANIMALS.

THE return showing the number of experiments on living animals during the year 1910 under licences granted under the Act 39 and 40 Vict., c. 77, has just been issued.

England and Scotland.

Professor Thane's report contains the names of all "registered places." Nine new places were registered for the performance of experiments, and three places were removed from the register during the year. All licensees were restricted to the registered place or places specified on their licences, with the exception of those who were permitted to perform inoculation experiments in places other than a "registered place," with the object of studying outbreaks of disease occurring in remote districts or under circumstances which render it impracticable to perform the experiment in a "registered place." The names of all the persons who held licences during 1910 are given. The total number of licensees was 542. The reports furnished by the licensees show that 147 licensees performed no experiments. The numbers given above include 26 licensees whose licences expired on February 28th, 1910, and of whom 24 returned no experiments in 1910. The number and nature of the experiments returned by each licensee are also stated. The experiments are, as usual, set forth in a table (IV), which is divided into two parts, A and B, for the purpose of separating experiments performed without anaesthetics from experiments in which anaesthetics were used.

Number of Experiments.

The total number of experiments included in Table IV (A) is 4,939. Of these there were performed:

Under licence alone	2,718
Under Certificate C	224
Under Certificate B	1,765
Under Certificate B + EE	232

Table IV (B) is devoted entirely to inoculations, hypodermic injections, and some few other proceedings, performed without anaesthetics. It includes 90,792 experiments, whereof there were performed:

Under Certificate A	89,963
Under Certificate A + E	609
Under Certificate A + F	220

The total number of experiments was 95,731, being 9,454 more than in 1909; there was an increase in the number of experiments included in Table IV (A) of 1,051 and an increase of 8,403 in Table IV (B).

The Use of Anaesthetics.

The larger part of the experiments included in Table IV (A)—namely, all performed under licence alone and under Certificate C, 2,942 in number—come under the provision of the Act that the animal must be kept under an anaesthetic during the whole of the experiment, and must, if the pain is likely to continue after the effect of the anaesthetic has ceased, or if any serious injury has been inflicted on the animal, be killed before it recovers from the influence of the anaesthetic.

In the experiments performed under Certificate B, or B linked with EE, 1,997 in number, the initial operations are performed under anaesthetics, from the influence of which the animals are allowed to recover. The operations must be performed antiseptically, so that the healing of the wounds shall, as far as possible, take place without pain. If suppuration occurs, the animal must be killed. After the healing of the wounds, the animals are not necessarily, or even generally, in pain.

In the event of a subsequent operation being necessary in an experiment performed under Certificate B, or B linked with EE, a condition is attached to the licence requiring all operative procedures to be carried out under anaesthetics of sufficient power to prevent the animal feeling pain; and no observations or stimulations of a character to cause pain are allowed to be made without the animals being anaesthetized.

In no case has a cutting operation more severe than a superficial venesection been allowed to be performed without anaesthetics.

The experiments included in Table IV (B), 90,792 in number, were all performed without anaesthetics. They were mostly inoculations, but a few were feeding experiments, or the administration of various substances by the