parts of ichthylol and glycerine are infinitely better than any other method. Several years ago I used pure ichthylol in a case of ulceration of the leg which resisted every other means of treatment—even a fifty per cent ointment of ichthylol aggravated the condition, and I now advocate combination with glycerine, as it is a more satisfactory base than lanoline or vaseline, and lessens the expense. Twenty per cent ichthylol in glycerine is sufficiently strong when the wound has taken on a healing action. I only change the dressing once in twenty-four hours, twice in very exceptional cases. There is thus a considerable saving in the amount of cotton-wool, lint, etc., used. The patient is no longer disturbed by frequent changing of the dressing, and the time in hospital is reduced to half or even less than is the case with other methods of treatment. I paint the ichthylol on boric lint by means of a camel-hair brush and then apply it. It does not irritate the wound; the lint, as it does not adhere, can be readily removed, and a healthy granulating surface results in three days. I avoid washing the wound with lotion, and use instead pure sp. vini recti applied once or twice weekly. I have almost discarded drainage-tubes. The results are better without them and the patients always experience great relief when their use has been discontinued. I syringe out the sinuses with pure sp. vini recti. In some cases where the patients have complained of irritation after the sinus had been syringed out with spirit I used an alcoholic solution of methylene blue (four grains to one ounce) with very good effect.

SECONDARY HÆMORRHAGE AND PEROXIDE OF HYDROGEN.

By MAJOR CARLINE.

Royal Army Medical Corps.

A patient was admitted to Ward 2A, on May 31, 1915, with gunshot wound in the buttock. On June 11, Captain Purves opened up and drained the wound. On June 28, he was transferred to the Convalescent Home at Woodhall Spa. On July 15, patient had some hæmorrhage followed by a more severe loss during the night. On July 16, the patient presented the appearance of having lost much blood. He was stated to have a copious discharge of pus from deep down in the left buttock, and this had been treated by injections of peroxide of hydrogen. An incision was made which passed through the narrow opening of the sinus, which soon widened out, and the finger was at once passed into the great sciatic foramen, the gluteal muscles being much wasted and destroyed; the gluteal artery was felt to be pulsating on the edge of the sciatic notch, and with some difficulty secured in forceps, the vessel being in a friable condition. Five pairs of forceps were used before the hæmorrhage was completely stopped; these were left in situ, the wound being
plugged. The vessel was entirely under control of the finger, but the blood which escaped when this was temporarily removed to see if the forceps were properly applied was noticed to effervesce freely, showing that some peroxide remained in the deeper parts beyond the foramen through which the abscess cavity extended. The forceps in course of time came away and the patient returned to this hospital on July 22. There has been no return of hæmorrhage.

Thinking this case over in conjunction with many others, one could not help suspecting that in the presence of a wounded vessel the peroxide, through its action on blood-clot, was sometimes the cause of secondary hæmorrhage, and investigation of other cases tends to confirm this.

In the case of a patient admitted to Ward 2A, March 19, 1915, with a gunshot wound in front of the thigh and a large purulent cavity, which was opened up and drained April 16, peroxide was freely used; on April 25, the patient had a severe hæmorrhage, followed by occlusion of the vessel lower down, with signs of commencing gangrene of the foot, which, however, happily passed away. The conclusion seems obvious in this case that an artery was wounded at the time of injury, probably close to its origin from the femoral, and clot had formed. This, being loosened by the peroxide, had passed into the circulation and blocked that vessel lower down, leaving the originally wounded artery to bleed.

These cases of secondary hæmorrhage were more frequent at the time when peroxide of hydrogen was being more freely used than they are at present. It has been suggested that these cases of secondary hæmorrhage are due to septic infection; probably they are indirectly, if the septic infection has determined the use of peroxide, but having had a large hospital experience of septic wounds from 1867 to 1878, one cannot recall any such cases. At that time, in amputations, the vessels were secured by waxed thread, one end of which was left hanging out of the wound, that from the principal artery being knotted. After a few days these threads were gently pulled upon daily, until they all came away; that on the main artery was not touched until a definite date, which in the case of the femoral was the tenth day, and, of course, in a very septic case these threads would be liable to come away more easily and before their time, and there is no doubt this was the cause of many cases of secondary hæmorrhage.

Cases of secondary hemorrhage of another kind have been frequent, notably in the calf of the leg, when the tibials have been torn, and in the arm, where a projectile has passed through the axilla perhaps to the elbow, and just beneath the skin. These cases have been found to contain large masses of more or less organized blood-clot, and it has been very difficult to find the bleeding points, which frequently take the forms of one or more slits in the direction of the course of the vessel. In one case the axillary artery was slit for three inches.

One cannot help thinking that the difficulty in these cases would have
been very much lessened and the haemorrhage, where a vessel is torn across, sometimes prevented, if the art of bandaging the naked limb had not been lost when antiseptic surgery first became general.

FLY PREVENTION MEASURES.

By Captain P. J. Marett.
Royal Army Medical Corps.

A short account of the measures undertaken for the reduction of Musca domestica in manure-heaps in camps and in billets in Bouen may be useful at the present time. Details are given, for attention to what appear to be minutiae is the secret of success.

It is unnecessary to describe the life-history of the house-fly, and only special points elucidating the processes undertaken with a view to fly reduction will be mentioned.

Manure-heaps.—Adult pregnant flies lay their eggs in clusters; the clustering is readily recognized, and occurs in fresh manure as a rule, but will also occur in stale manure freshly turned over. The clusters occur in cracks in the manure and consist of hundreds of flies, sometimes so many that on more than one occasion flies have been seen leaving a cluster (having laid eggs) carrying one or more eggs on their backs. Clustering is always to be found in a sheltered spot, preferably facing the sun and in places which have been trodden on. Where flies are seen clustering they are not disturbed, but the clusters are marked with a stick, and when oviposition is completed the eggs are lifted and burnt. A trained man removes thirty to forty batches in a day, which practically means dealing with the egg supply of the day. These eggs have to be removed the day of laying, as in summer time the eggs hatch out in a few hours (four to eight).

Passing from the egg to the larval stage, for the purpose of this paper the larval instars will be dealt with as consisting of two only: the first the feeding larva, the second the larva about to transform into the pupa. This division is made owing to the different habits of the two stages.

The first stage is passed in the manure on which the larva feeds. Owing to fermentation and the heat arising therefrom, it is only the upper two or three inches of manure which are suitable for feeding larvae. A study of this stage of the insect shows that it does not migrate to any extent; as eggs are laid in clusters, so the feeding larvae are to be found in accumulations, known as nests. Where feeding larvae exist in large numbers the manure is absolutely triturated, and search for these larvae is facilitated by recognizing these triturated patches.

During this feeding stage there is no known method of trapping, owing to the fact that horse manure is the natural food supply. On