grow, but did not become thinner, and he lost all sexual desire. His urine was scanty, but normal. In spite of rest in bed, and an exceptionally ample diet, he continued to lose weight; thyroid gland made him worse, but large doses of opium and bromide relieved the excitement, and his weight became almost stationary. On June 18th, 1911, he weighed 127 lb.; he was given $\frac{1}{10}$ grain of dried parathyroid gland four times daily, and four days later he discontinued the opium and bromide. He gained $6\frac{1}{2}$ lb. in the first four days, 12 lb. the next five days, and $28\frac{1}{2}$ lb. in the first nineteen days. Simultaneously all his symptoms disappeared, and in a month he was well. He continued to take the parathyroid; in January, 1912, he weighed 161 lb., and in December, 1912, 175 lb. He discontinued the parathyroid in November, 1913, but remained well, weighing 189 lb. in February, 1914.

SHRAPNEL WOUND OF THE SPINE, WITH EXCEPTIONALLY LOW TEMPERATURE.

BY

M. W. B. OLIVER, M.A., M.B., B.C.CAMB., F.R.C.S.ENG.,
LIEUTENANT R.A.M.C.,

AND

F. B. WINFIELD, B.A.CAMB., M.R.C.S.ENG., L.R.C.P.LOND.,
LIEUTENANT R.A.M.C.

LANCE-CORPORAL S., aged 19, was admitted to 13th General Hospital, British Expeditionary Force, on December 23rd, 1914. He was very cold; unfortunately at the time no

low-registering thermometer was available, but the ordinary clinical thermometer, shaken down to well below 95°, did not register any rise. At first he did not speak, and did not appear to understand when spoken to, but later recovered sufficiently to give an intelligent account. The history he gave was that on December 21st he had been hit by a shell, which exploded behind him. He immediately lost the power in his legs, but apparently did not lose consciousness.

In the neck, in the region of the sixth cervical spine in the middle line, there was a small circular wound which had very nearly healed.

Eyes.—The right pupil was larger than the left; both pupils reacted to light and accommodation. Fundus normal; no nystagmus.

Cranial Nerves.—Normal.

Motor System.—Upper Limbs: Both were quite flaccid. No movements were possible, except slight shrugging of the shoulders. Lower Limbs: Rather flaccid. Could draw

up and extend both. The ankle and toe movements were relatively good in the right, but in the left there were no toe movements. **Trunk:** Respiration was wholly diaphragmatic, and there was no contraction of the abdominal muscles.

Sensation.—Prick lost to C₃ on the left side and to C₄ on the right.

Reflexes.—Knee-jerks absent on both sides. Ankle-jerks absent. Plantar reflexes equal and extensor on both sides.

A skiagram showed a large shrapnel bullet at the level of the sixth cervical spine, and almost exactly in the middle line, with fracture of the laminae of this and the spinous processes and laminae of the fourth and fifth cervical vertebrae.

On December 26th two low-registering thermometers were obtained, and the temperatures recorded by each were identical as follows:

			Mouth.		Rectum.
11 a.m.	...	...	80.6° F.	...	80° F.
4 p.m.	...	...	80.4° F.	...	86° F.
11 p.m.	...	...	84.2° F.	...	86.3° F.

On December 27th the patient was transferred to an adjoining hospital—No. 7 Stationary—as there were no small rooms available at No. 13. Here he was put in a room with a fire, and the temperature kept at about 70° F., otherwise no special treatment was carried out. The temperatures recorded during the day were:

			Mouth.		Rectum.
7 a.m.	...	...	86° F.	...	88.9° F.
10 a.m.	...	...	98° F.	...	—
2 p.m.	...	...	102.2° F.	...	—
4 p.m.	...	...	105° F.	...	—
6.30 p.m.	...	...	105.6° F.	...	—

At 8 a.m. he was comatose, and remained in this condition until he died at 6.45 p.m.

Post-mortem Examination.—The cord in the region of the fracture appeared somewhat swollen and softened, and there was some haemorrhage into the central canal. Apart from this nothing abnormal was found.

To Dr. Gordon Holmes we are much indebted for his notes on this case.

NOTE ON A SUCCESSFUL METHOD FOR THE EXTERMINATION OF VERMIN INFESTING TROOPS.

BY

S. MONCKTON COPEMAN, M.D., F.R.C.P., F.R.S.,

LIEUTENANT-COLONEL R.A.M. (T.); DIVISIONAL SANITARY OFFICER,
1ST LONDON DIVISION, T.F.

WITHIN about a couple of months of the troops of the 1st London Division coming into camp under canvas at Crowborough I learnt through the medical officers in charge of some of the battalions that a certain number of the men under their charge were experiencing the unpleasant effects incidental to infestation by lice.

Steps were at once taken to deal with the matter, but our efforts were at first somewhat handicapped owing to the fact that not only at that time had the men not been supplied with a second service suit, but that a number of those affected were found not to be in possession of a second shirt or change of underclothing. Moreover, it was not possible to obtain assistance from the rural sanitary authority of the area in the work of disinfection, as it did not possess any apparatus for the purpose of dealing with infected clothing and blankets.

As a matter of first instance, all the battalion medical officers were called together for the purpose of informing them as to the various aspects of the question, including the life-history of the body-lice, *Pediculus vestimentari*, an excellent description of which, by Dr. Shipley, was published in the BRITISH MEDICAL JOURNAL for September 19th, 1914. At the same time commanding officers were communicated with as to the necessity for ensuring that all men under their command should be provided with, at least, a second shirt, and, if possible, a complete change of underclothing.

Further difficulty was experienced in providing baths for the men, there being no means at hand of obtaining hot water in large quantities. This was eventually obviated by the purchase of several large second-hand galvanized iron tanks, which were set up near the ablution place in each camp. These tanks were supported over a central trench, on bricks laid in puddled clay. One end of the trench, which extended beyond the tank at either extremity, was fitted with a chimney built up of old bricks, drain-pipes, and puddled clay, while the other end was used as a stokehole. On lighting a fire in the trench, it was found that, even where no cover was provided for the tank, the contained water, to the amount of 200 gallons or more, could usually be brought to boiling point in about an hour.

Bathing was carried out in an adjoining marquee, or, in some instances, in an empty house. Hot water from the tanks was carried in buckets and poured into galvanized iron wash-tubs, in which the men could stand. Recently, however, the troops have been moved into huts, where ablution rooms and bath-rooms supplied with hot and cold water are provided.

The further details of treatment are briefly indicated in