end round his hand. He then apparently leant forward over the muzzle of the weapon, which he discharged by pressing on the loop of the boot lace with his foot. The other men in the barrack room saw none of the preparations for the deed, but, on hearing the report and turning in the direction from whence the sound came, saw Private S. fall forward. Death must have been instantaneous.

Post-mortem Examination.—At the post-mortem examination the bullet was found to have entered about an inch behind the symphysis menti and slightly to the right of the middle line. The wound of entrance, from which there had been considerable hæmorrhage, was irregularly triangular in shape, each side measuring about an inch in length. Immediately above it was a lacerated cavity 2 inches in depth. The skin was torn up in ragged flaps, but there was very little loss of substance. There was no blackening or charring of the tissues. The wound of exit was in the middle line, about half an inch above the bregma. It was a clean-cut, circular opening, the diameter of which corresponded to that of the bullet. There was no protrusion of brain substance, and only enough hæmorrhage to stain the hair immediately around the aperture. On tracing the course of the projectile, the lower jaw was found to be much comminuted for a considerable distance on either side of the symphysis. The bullet passed upwards and backwards through the floor of the mouth and root of the tongue, and behind the soft palate to the base of the skull. The basilar process of the occipital bone and the body of the sphenoid were broken up, and the upper half of the medulla oblongata destroyed. There was a narrow track leading upwards and backwards through the median lobe of the cerebellum. The tentorium was perforated, and the occipital lobes of the cerebrum torn on either side of the great longitudinal fissure. The skull round the aperture of exit showed a series of fissured fractures radiating in every direction and shattering the vault of the cranium. The sutures were burst asunder, and there were several fractures of the frontal and other bones altogether unconnected with those described round the opening through which the projectile left the skull.

The chief interest in these cases from a medico-legal point of view rests in the fact that there was no scorching or tattooing of the tissues, although in each case the rifle must have been very close to the skin, if not actually touching it. It would appear that in gunshot wounds where the new cordite ammunition is employed it is no longer possible to judge by the presence or absence of these features at what distance from the surface of the body the muzzle of a rifle may have been at the time of its discharge. This is a matter of considerable importance, as conclusions based on the appearance of the wound of entrance have more than once influenced the decision as to whether an injury was homicidal or suicidal.

In Case II it will be noticed that $2\frac{1}{2}$ minims of hypodermic solution of morphine were injected on the arrival of the patient at the hospital. No bad effects were found to follow its administration; on the contrary, it appeared to be distinctly beneficial, as, after it was given, the man became less restless and there was marked improvement in his general condition. It is also of interest in this case that the whole of the lower wound, except where the tissues were carried away by the passage of the bullet, healed by first intention.

Case III is remarkable from the absence of the extensive pulping of the brain, which is so frequently described as resulting from a Lee-Metford bullet being fired into the skull of a cadaver at a short range. Possibly the comparatively small amount of injury may be accounted for by the bullet having taken a course through the great longitudinal fissure; but, even so, one would have expected to have found more extensive destruction of the cerebellum, which was completely traversed by the projectile. It is also noted that no brain substance protruded at the wound of exit.

When it is proposed to transfer a case of gunshot wound involving much shock to hospital for further treatment, it is probably advisable to do as little as possible to the wound beyond arresting hæmorrhage until the patient arrives at his destination. Any extensive surgical interference would only intensify the shock, which would be further aggravated and prolonged by the journey.

PENETRATING WOUND OF THE BLADDER AND RECTUM FROM THE BUTTOCK: RECOVERY.

By MAJOR J. R. DODD, F.R.C.S., R.A.M.C.

[Communicated by the DIRECTOR-GENERAL, Army Medical Department.]

R. D., a workman in the Royal gun factory, Woolwich Arsenal, was admitted to the Arsenal Hospital on April 16th, 1899, bleeding profusely from a punctured and lacerated wound in the right buttock, also from the urethra. He had been

hauling on a rope with another, raising some heavy weight, when the rope broke, and he fell, with the other man upon him (both being heavy men), upon the end of a bar of iron, about seven-eighths of an inch in diameter, and several feet in length, which was lying on the ground, the last few inches of the bar, which was used for opening the doors of furnaces, being bent at right angles to the remainder, and sticking up perpendicularly from the ground. On examination the finger passed into the wound in the buttock, entered the rectum about 2 inches above the anus, then passing through the anterior wall of the rectum, it entered the substance of the prostate gland, impinging directly upon a large silver catheter which had been passed into the bladder, and had evacuated nothing but pure blood. A foreign body was felt in the rectum, which on removal proved to be four small pieces of cloth rolled up together, being, in fact, pieces of the patient's trousers, drawers, shirt, and underflannel, which the bar of iron had carried in before it.

The wound of the buttock was opened up into the rectum as in the operation for fistula; the catheter was tied into the bladder, and the usual measures for checking hæmorrhage were taken such as torsion of spouting arteries, hypodermics of ergotin, application of ice and mixtures of gallic and sulphuric acid, opium, turpentine, etc. It was, however, several days before the bleeding entirely stopped. The urine speedily became very offensive, fæces and flatus being mixed with it, and the tying in of the catheter had to be discontinued three days after the accident owing to its causing so much irritation. After that most of the urine came through the anus on voluntary efforts at micturition, which were discouraged as much as possible, the catheter being passed three times a day, and after the urine had been evacuated the bladder was first washed out with boracic lotion, and then injected with iodoform in sterilised mucilage. With the exception of a severe attack of epididymitis in the left testicle, the patient made an uninterrupted recovery.

On April 20th the sphincter ani was so far healed that the escape of fæces involuntarily ceased. On April 28th the urine was clear, acid, and free from smell, and the patient was able to pass a soft catheter for himself. On May 2nd the rectum wound was healed externally, and urine had almost ceased to pass *per anum*, while no flatus came through the catheter with the urine. On May 16th he left hospital on sick leave.

On June 28th I examined him and found his wound soundly healed; there was no bladder or rectum trouble, and a full-sized silver catheter passed without difficulty. On July 25th I again saw him; his urine was normal, and a No. 12 silver catheter passed easily. He believed, however, that he had passed a small piece of cloth with his urine a few days before.

ABSTRACTS OF THE ARRIS AND GALE LECTURES

ON

THE ANATOMY AND PATHOLOGY OF THE RARER FORMS OF HERNIA.

Delivered before the Royal College of Surgeons of England.

By B. G. A. MOYNIHAN, M.S.LOND., F.R.C.S.ENG.,

Assistant-Surgeon, Leeds General Infirmary; Consulting Surgeon, Skipton and District Hospital.

LECTURE I.

BILOCULAR HERNIA, INCLUDING INGUINO-PROPERITONEAL AND CRURO-PROPERITONEAL HERNIA, AND INTERSTITIAL HERNIA.

MR. PRESIDENT AND GENTLEMEN,—I propose to deal, in the lectures which I have the honour of delivering, with some of the rarer forms of hernia. In my first lecture I shall consider that form which is commonly called pro-peritoneal. My second lecture is concerned with the variety first described by