irons or definite periods upon bread and water, work upon the fortifications, or confinement within the walls of a fortress, have replaced the regulations of former times.

The Austrian soldier rises with the lark, and goes to his drill in the early morning between five and six o'clock, and sometimes has a long way to get to his drill-ground. He returns between ten and eleven to his dinner, after which he has no regular meal. He is allowed a little over two pounds of bread a day and twenty kreutzers, out of which last sum he has to provide his dinner. He is paid a florin (100 kreutzers) every five days; but this sum is retained by the pay-sergeant, who deducts the price of the dinner-meals; these cost something less than the 100 kreutzers, so that the soldier has about twenty kreutzers to spend every fifth day on beer, if not in debt for blacking or some small thing of the kind. A private of the company acts in turn as cook, and accompanies the sergeant to market daily in order to bring home meat, vegetables, potatoes, for soups, etc. The friends of the soldiers often send them small sums of money, which the richer shares with the poorer comrade who may have nothing but his pay. Men who re-engage after their eight years' service are entitled to a medal.

Some of the barracks in Vienna are very fine ones. In one of the largest, which held three regiments, the cavalry-stables occupy the lower storey, above which are the rooms for the troopers, and over these those of the infantry. Early in September, forty thousand men were encamped not far from the capital, near Gunterdorf, ten to eleven miles distant. From there the sick requiring hospital treatment were sent daily to Vienna, and transferred from the station in old-pattern ambulances or omnibuses drawn by two horses.

The military hospital—"Garnisons-Spital"—is situated not far from the great civil hospital in the Alsenstrasse, founded in 1873, and containing two thousand five hundred beds in one hundred and eighty-four rooms, with fifty physicians and four hundred nurses. The "Garnisons-Spital" is very large, and arranged in two quadrangles. In the centre of one is a garden for the men; in the centre of the other, one for the officers. It contains eight hundred beds, and, on September 5th, seven hundred sick, one hundred and sixty of which number were cases of venereal. The hospital receives the sick from the garrison of Vienna, numbering some six thousand, and from the camp near Gaumendorf. They arrive at 9.30 A.M., bringing with them their regimental clothing and equipment, which are received into store. The ward-windows open upon the circumference of the quadrangle; the doors, upon the windows, which run along the hollow of the blocks. In each of these last are a ground, first, and second floor. On the ground-floor are the offices for the administration; wards for infectious diseases; prisoners'; the guard-room; cook-house; pharmacy; apparatus for supplying hot water; and the baths, which are capable of bathing one hundred patients in a day. There are forty-five beds for officers, twenty-five of which were occupied on September 5th. Each officer's ward contains from one to five beds; it is very neatly furnished, the beds with blue and white counterpanes. The floors are stained oak-colour and polished. At the foot of each bed is an ornamental screen. There are also some easy-chairs, and to each patient is appropriated a wardrobe. Ten servants or orderlies were allocated to sick officers. On every landing are the closets and an urinal arranged in a circle; and the hospital orderlies sleep in barrack-rooms, which appeared very neat and in excellent order.

Each division or corridor of the hospital was in charge of a surgeon-major or division-surgeon, a regimental surgeon ranking as captain, an upper and an under surgeon, and some one year's volunteers, and a proportion of students, some two hundred of whom were undergoing instruction in the Military Medical School. In these corridors were the consulting rooms of the division medical officers. The medical chief of the hospital—a surgeon-major—had entire control over the establishment, with the exception of administering punishment to offenders against discipline, who were handed over to the military authorities. The regular staff consists of a medical chief, five surgeons-major, two brigade-surgeons, four regimental surgeons, five under-surgeons, three volunteers, and some student-assistants. The two latter classes of officials perform the greater part of the clinical work in the wards. The officers of administration wear grey uniforms with silver lace.

Five hundred, seven hundred, and eight hundred cubic *mètres* of air-space are allowed to individual patients. The beds are of wood, massive, and oak-coloured. The contrast of colour with the lime-washed walls is pleasing to the eye. The wards are lighted with paraffin-lamps, and warmed by heated air. The number of beds varies from two, five, fifteen, to thirty. Two junior medical officers and the chaplain reside in the hospital. The under-surgeon on duty wears his uniform with a sword, and does not leave the precincts of the hospital. The quarters of the resident surgeons are very nicely

furnished. On entering from the corridor, a small closet is met with, in which is the bed of the officer's servant, a private of the Sanitary Corps. Immediately beyond is a large sitting-room, communicating with a bed-chamber.

The divisions are external or surgical, internal or medical; venereal, and similar divisions for diseases of the throat, eye, and nerves. There are also separate wards for insane patients and prisoners. In the hospital are also the lecture-rooms, pathological museum, and mortuary of the medical school, and a store-room in which are a supply of coffins, in shape not unlike a sarcophagus, richly gilt for officers—a plain white cross marks the soldier's. From sixty to eighty deaths occur in each year. In the pathological museum are some very large skeletons. One, of a soldier who died during the revolution of 1848, is nearly eight feet in height from the floor.

In order to ventilate the wards, the cold air is made to enter from the outside through a large opening in the base of the wall; this is protected by a grating. From here it is conducted by means of a shaft to the ward, previous to entering which it is warmed in passing through an air-chamber in a large stove, and then enters the ward through louvered openings. There are two openings, one near the floor, the other at the ceiling. In summer, the former opening is closed, and the cold air descends from the latter as from the Sherringham valves in our hospitals. The foul or heated air makes its exit through openings near to the ceiling above, or between the windows on the opposite or outside walls. The absence of an unpleasant odour on entering a ward affords a good test of this system of ventilation. Along the centre of the larger wards is a long table, and, at the bed-heads, a small oak-painted cupboard with a small drawer. The pharmacy is a very large one, and in charge of three chemists and their assistant. A large shed in the hospital yard affords protection to recent ambulances.

There are only two kinds of sick diet in use—"full portion" and "half portion", with the addition of extras when required. Vermicelli enters largely into the preparation of the soup, which is prepared in a large copper boiler. A number of cases of pulmonary consumption appeared to be under treatment. This consisted chiefly of the administration of tonics, quinine, acids, and wine, but not of cod-liver oil; a medicine the advantages of which did not seem to be fully appreciated.

No females are allowed in the streets without a male companion after 10 P.M. The better class of *femme de publique* are allowed to choose their own physicians, whose certificate of health has to be produced to the police authorities weekly. He has certain hours for seeing them, and receives a fee of two or three florins for each examination, and is responsible for the correctness of his view. One of the effects of this curfew law is that, after 10 P.M., the streets are nearly deserted by females, who resort to the *cafés* of the hotels until conveyed home in hackney *voitures*.

There is one sight in this most charming of capitals which no soldier should fail to see; the Town Arsenal, containing a very fine collection of armour and weapons of different ages, including in the collection the skull of Mustapha Pasha, who threatened Vienna in the sixteenth century. After his repulse, he retired to Belgrade, when he received from the Sultan a silk rope, with which he was immediately strangled. The skull, a very small one, the rope, and his shirt, are preserved in a glass case. They were removed from his tomb at Belgrade when taken afterwards by the Austrians. The shirt, now dark with age, is covered over with Arabic characters, and is woven in one piece. The custodian of the museum says that the ponderous armour of the knights of old only weighs sixty pounds; not a great weight for heavy armed cavalry. It is difficult to conceive how they could have fought in so cumbersome a defence.

CASE OF INTUSSUSCEPTION OF BOWEL: SPHACELATION: RECOVERY.

By E. A. FOX, L.R.C.P.ED.,

Physician to the Warrington Dispensary and Infirmary.

B. B., AGED 4½, was a boy of delicate constitution, subject to bilious attacks and paroxysms of violent temper, and of rather costive habit.

July 12th, 1876. He was perfectly well and running about. He had his bowels naturally moved during the day. On the 13th, he complained of pain in his bowels, and was vomiting everything he took. His mother gave him an enema, which produced a natural alvine evacuation. On the 14th, his mother, finding that there was no improvement, and the pain and vomiting continuing, sent for me.

I found him lying in bed, with marks of bilious vomiting on his night-dress; his tongue coated, skin cool, pulse natural. He com-

plained of pain in the abdomen. On examining the abdomen, a distinct, hard, oblong tumour, about two inches and a half long and an inch and a quarter wide, and painful on palpation, was discovered in the right iliac region, about the situation of the ileo-cæcal valve. A second smaller tumour was also present, about one inch to the left of the umbilicus. He was ordered milk and lime-water, hot fomentations to the abdomen, and an enema of soap and water. The enema was soon returned, mixed with blood and mucus, and smelling very feculent; but there was no feculent matter. My suspicions were now confirmed that this was a case of intussusception at the ileo-cæcal valve. He was ordered four minims of tincture of opium every four hours while in pain.

July 15th. The tongue was coated; vomiting was incessant; there were borborygmi and great thirst. The tumour was larger and painful. The skin and pulse were natural. After elevating his pelvis and depressing his shoulders, I injected a quart of water mixed with oil, and then tried to dislodge the invaginated bowel by friction towards the diaphragm. The enema returned, and was again mixed with blood and mucus. In the evening, I made a second attempt to disengage the bowel by manipulation; and this time the enema brought away a lump of feces of the size of a walnut. The smaller tumour had disappeared.

July 16th. As there was no improvement, a third attempt was made to reduce the bowel, but without success. Finding that the obstruction still continued, all hope of displacing the intussusception by manipulation was now abandoned. I now trusted to opium, fomentations, and nutrient enemata; and ordered his thirst to be relieved by a little iced water (he would not take ice).

July 17th. The vomiting now became distinctly fecal, and signs of prostration began to set in—sunken eyes, feeble pulse, etc. The abdomen was swollen to an enormous size, so that one could count in tiers the coils of intestines.

July 17th to 22nd. He continued much in the same state just described, but gradually became weaker. The enemata were retained for two or three hours, and then returned. They had a fecal odour, but there was no feculent matter.

July 23rd. The vomiting began to diminish. The child looked much better. The abdomen was less tympanitic, and flatus was passed *per anum*.

July 24th. He was still improving. The swelling was nearly gone; the tumour was just perceptible. There was no vomiting, and a small loose evacuation took place without any blood in it.

July 25th. He had four copious pale motions. With the last there was a lump of fleshy-looking substance, which, upon examination, was found to be a foot of large bowel turned inside out, with the vermiform appendix attached, which also was turned inside out. On slitting open the ascending colon, it was found to contain nine inches of small intestine, showing that the intussusception commenced at the ileo-cæcal valve. The whole of the separated bowel was quite black and gangrenous.

The boy was now fed on beef-tea and farinaceous diet. He gradually improved; his bowels acted naturally daily, but this was preceded by a little pain for about a week. He is now (September 30th) quite recovered and strong.

I ought to point out that there was absence of inflammatory symptoms, except the pain. The separation did not take place until the *tenth* day, and its expulsion not until the *twelfth* day. I think it is also remarkable that the length of sphacelated bowel measured twenty-one inches.

SUDDEN DEATH: PERFORATION OF THE SUPERIOR VENA CAVA.

By R. E. POWER, L.R.C.P.,
Medical Officer to the Invalid Convict Prison, Dartmoor.

THE following case is an instance of an unusual cause of death.

W. S., aged 49, went to bed in apparently good health, and was found dead in his bed the following morning. On inspecting the body, I noticed that there was not any disturbance of the bed or bed-covering; the body was on its back, the legs semiflexed in an attitude of repose, both arms bent, the hands nearly touching the respective ears. The face was calm; the mouth slightly open; the lips free from blood, froth, or mucus. The entire appearance conveyed the impression that death had taken place during sleep. Rigor mortis was complete; the body still warm.

POST MORTEM EXAMINATION in twenty-six hours.—The body was well nourished and muscular. On opening the chest, nothing abnormal

was presented; but, on making pressure at the apex of the right lung, venous blood welled out freely, and, on the removal of the contents of the thorax, flowed in large quantity into that cavity, previously to the division by the knife of any of the vessels. On separating the pleura from the adjoining tissues beneath the clavicle, a quantity—eight or ten ounces—of unhealthy grumous purulent fluid discharged itself. It resembled the digested contents of the stomach, for which it was first mistaken, the œsophagus having been divided; it was of a greyish colour, less consistent than pure pus, and less flocculent than the contents of a strumous abscess. On searching for its origin, no pyogenic surface or sac could be discovered. It had apparently formed the contents of a diffused intercellular abscess above and outside the pleura in the region of the inferior triangle of the neck, chiefly amongst the cellular tissue that forms the superior thoracic boundary; it had dissected for itself a cavity at the back of the sterno-mastoid muscle, reaching to within about an inch of the mastoid process; but thence and from elsewhere it had flowed without leaving a trace of its origin other than that the surrounding tissues were soft and blood-stained; the superior vena cava especially so. In this vessel, about half an inch from the junction of its factors, was a perforation about the diameter of a split-pea, from which the blood had oozed. A noticeable fact was that there was no internal hæmorrhage during life; all the blood that flowed being during the *post mortem* manipulation; no doubt, the lesion being outside the pleura, the tissues prevented any hæmorrhage, which would have been passive had there been an exit for it. Death, too, apparently was caused by syncope at the moment of perforation of the vein, so that the cessation of *vis à tergo* was instantaneous. The lungs were healthy, and free from adhesions, but were both gorged with blood. Some fluid blood was found in the heart, but not any fibrinous clots. This organ was flaccid, but otherwise healthy, and the valves perfect. The trachea and œsophagus were also both free from any appearance of disease. The previous medical history of this man, so far as is known, was a healthy one.

I have never heard or read of a similar cause of death.

CASE OF PTERYGIUM CRASSUM IN BOTH EYES, TREATED SUCCESSFULLY BY LIGATURE AND SUBSEQUENT IRIDECTOMY.

By H. PENFOLD, M.R.C.S.,
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OF the various ways of operating for pterygium, the ingenious mode by ligature, as suggested by Szokalski, was the one adopted with complete success in the subjoined case.

A robust man, a farm-bailiff, sixty-five years of age, consulted me in November last, suffering from serious impairment of vision in both eyes, particularly in the left, which had compelled him for six months or more to give up his occupation. He resided in a very bleak district in the South Downs, and his duties necessitated his being out of doors a good deal on horseback and on foot; and, as a consequence, he had been exposed at times to boisterous winds and inclement weather. On such occasions, his eyes had become weak, irritable, and bloodshot, especially at their inner canthi.

On examination, a thick fleshy and vascular growth was very obvious at the inner angle of each eye, particularly in the left, where the pterygium was rather more developed. These symmetrical pterygia were fan-like in shape, and their apices encroached very nearly to the centres of the corneæ, and covered more or less the corresponding pupils. They were very dense; and their attachments to the sclerotic and corneal structures were somewhat firm in places and loose in others, whereby the free movements of the eyeball were in a measure impeded. He had used various eye-washes for years past, with no other result than a steady and gradual increase of the pterygia, local discomfort, and impairment of sight.

A few days afterwards, I effected a removal of the pterygia by ligature, in the manner adopted by Szokalski. I inserted two small curved needles, armed with the ends of a fine silk thread, perpendicularly beneath them; then cut off the needles and firmly tied each portion. The effect of the ligatures was to cause considerable local pain and chemosis, and required the diligent application of cold water-dressing; but at the end of a week all these symptoms subsided, and I was enabled with a pair of forceps to remove the strangulated portion of the growth.

He now went home for a month, when he returned to me for further examination, and I noticed a great diminution in the pterygia; but there remained two or three small vascular growths, which I easily