with her hand placed under it. The head rested upon the right shoulder, and could not be raised from it without severe pain. The neck was much altered in shape, and there was an irregularity in the region of the axis and atlas that gave the idea of a partial luxation of those vertebræ. Her general health was good, and the muscular power was perfect.

Her mother stated that about two months after my visit, the child was sitting at a table playing, when she suddenly called out, "Oh! mamma, hold my hands;" that when she got to her, both arms and legs were powerfully thrown back and moving convulsively; that she had not the power to support her head, which fell from side to side. Her mind was not impaired, she conversed freely, and did not complain of pain. She was immediately placed in bed, when the spasmodic action of the limbs subsided, she fell asleep and slept quietly through the night. The next morning she was perfectly powerless from the neck down; she swallowed with difficulty, but articulated well, and the sphincter muscles retained their power. She continued in this state for three months, after which time the power of locomotion very gradually returned.

The history of the case and the appearance of the child rendered it evident that some serious lesion had taken place involving the cervical vertebræ and spinal cord, and fearing that any sudden movement might produce such pressure upon the cord as to cause instant death, I had an apparatus made by which I could fix the head and gradually raise it from its position on the shoulder. The apparatus was made somewhat upon the principle of "Wiess's support for wry-neck," with a bar passing over the head, to which a strap was attached to support the chin, and the head could be moved and placed in any position by means of recompense screws.

She wore the apparatus for nearly a year, when she was able to leave it off with head nearly erect, the neck tolerably straight, and possessing considerable power of rotation. There is a depression behind the right sterno-mastoid process, and a corresponding elevation upon the opposite side.

She continued in this state, with more or less pain, until March, 1867, when she was brought to me complaining of sore throat; upon examination I found tumefaction and redness upon the posterior part of the fauces over the body of the axis. Suspecting that an abscess was about to form, she was directed to gargle frequently with warm water, and return in a week, at which time

she appeared, her mother producing the bone,* saying that the child had coughed it up in her presence the day before. I found an opening corresponding in size to the bone, near the body of the axis. In a short time the opening closed, the pain ceased, and the child, to use her mother's words, "got well."

The power of locomotion is perfect; she can walk or run at pleasure, can rotate the head pretty well, and is at present going through a severe ordeal, in the shape of an attack of whooping cough. I may mention that she has, on several occasions, during a paroxysm, lost all muscular power, and fallen in consequence of pressure upon the spinal cord, but the effect has been momentary.

That the bone in my possession is the odontoid process, I think there cannot be a doubt; and that ulcerative action sufficient to disengage it from its possession, should take place with so little constitutional disturbance, is remarkable. It should teach us to admire the wonderful conservative power of Nature.—*Canada Medical Journal.*

Hospital Reports.

BOSTON CITY HOSPITAL.

Three cases of Amputation. Service of CHARLES D. HOMANS, M.D. Reported by CHARLES B. BRIGHAM, House Surgeon.

CASE I.—August 7th. John C., aged 19, laborer. Patient, while cleaning off a sugar crusher, an hour before entrance to the hospital, was caught in the machine by the right arm; the limb was completely torn off at about six inches from the shoulder. The wound was dressed with lint and cloth, bleeding considerably. Pulse fair, at 80. Patient was offered stimulants, but refused them. The muscles and integuments were so torn that it was thought necessary to amputate at the joint, and, the patient being etherized, the operation was performed by the lateral flap method. The hæmorrhage was but slight, the arteries being controlled by compression in the axilla. Silk ligatures were placed upon ten arteries, and the flaps were brought together by silk sutures. A compress of linen, wet with carbolic-acid wash (3iss. to Oi.), was used as a dressing. Patient was fed on beef essence at intervals of an hour during the night.

* A photograph accompanies the paper in the *Canada Medical Journal*.—Ed. B. M. & S. JOURNAL.

8th.—No hæmorrhage from wound; no pain. Patient is in low spirits, taking nourishment only with urging. Evening.—Patient has been uneasy since noon, and now, slightly wandering, tries to get out of bed. Pulse 132. Gr. $\frac{1}{4}$ of Magendie's solution of morphia given subcutaneously.

9th.—Patient rested quietly during the night. The wound is of a darker shade in the axilla.

10th.—Patient takes beef essence and water gruel well. There is a slight serous discharge from the wound; several sutures were removed and strips of adhesive plaster substituted.

12th.—The lower flap has sloughed slightly and superficially. Pulse 106. Wound discharges healthy pus freely.

14th.—Patient in good spirits; has a good appetite, and sits up nearly all day. The discharge is more serous; the wound is granulating finely, and is syringed out daily with carbolic-acid wash.

20th.—Patient out of bed. Pulse 86. The sides of the wound are approximating rapidly. During the next week the ten ligatures came away.

Sept. 12th.—Wound about two inches in diameter. Patient's general condition excellent.

20th.—Patient out of doors daily. Only a slight ridge of granulations remains. This continued to grow smaller until the 25th, when he was discharged, well.

CASE II.—August 9th. James McC., aged 7, schoolboy. Patient, while jumping from the front platform of a horse-car, fell; his left foot was severely crushed by the car wheel, the integument being extensively lacerated, and several of the metatarsal and two of the tarsal bones broken. It was decided to amputate just above the malleoli. Patient etherized; operation by the circular method. There was very little hæmorrhage. Silk ligatures were placed upon five arteries; the flaps were brought together by silk sutures; a dry compress was then bandaged over the stump. 6, P.M., three hours after the operation, pulse 104; no pain. Was ordered beef essence and iced milk at intervals of waking through the night; no opiates given.

10th.—Patient rested well during the night. The dressing was not changed. Leg rests in a bed of oakum.

11th.—Patient takes only beef essence and milk. There is a slight serous discharge from the wound; pulse 95. Dry dressing continued; sutures removed, and strips of adhesive plaster used.

14th.—Considerable discharge from the

wound, which is now dressed with simple cerate on lint over the plaster.

14th.—Patient slightly feverish; pulse 112. Wound is syringed with carbolic-acid wash daily.

15th.—Patient feels much better. From this time until the 20th, the discharge from the stump diminished daily; a mass of healthy granulations arose between the flaps, covering the bone completely. The patient's diet consists of eggs, toast and milk for breakfast; broth, meat and milk for dinner; crackers and milk for supper.

29th.—Patient out in a basket for several hours a day.

31st.—Two ligatures came away; within the next four days the remaining ligatures were removed. There is now little or no discharge from the wound.

Sept. 6th.—Doing well. There is but a slight ridge of granulations between the flaps. The stump is dressed with plaster simply.

12th.—Wound wholly healed. Patient walking on crutches in the ward.

14th.—Patient discharged, well.

CASE III.—Sarah McD., aged 56, single woman, entered the hospital with a compound fracture of the right tibia and fibula just above the malleoli, caused by being run over by a team. There was considerable hæmorrhage from the wound. The foot was cold; no pedal pulse perceptible. Patient's pulse 72, and feeble. She was freely stimulated by brandy. Being then etherized, the wound was examined. The muscles were much pulpified as far as above the knee; there was, moreover, a fracture of the fibula near its head. Amputation by the flap method was performed at the middle of the thigh. Three arteries were ligatured; the flaps were brought together by silk sutures; a cold compress was applied to the stump. Brandy and beef essence was ordered at intervals of half an hour through the night; gr. $\frac{1}{4}$ of Magendie's solution was given subcutaneously. On the next day the patient's pulse was 104. As she is blind, and feels no pain, she is not aware that her limb has been removed. She has beef essence and chicken broth, as she prefers, every hour during the day. No hæmorrhage. The stump rests in oakum.

On the 20th, two sutures were removed, giving vent to a few ounces of bloody pus. Pulse 104. The remaining sutures were removed on the following day; the flaps were approximated by plaster, and the wound was syringed out daily with warm carbolic-acid wash. Pulse 96.

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23d.—Appetite good; she has now gruel and custard for breakfast and supper, and oyster soup for dinner. The wound is granulating finely.

26th.—Patient complains of more feeling in the stump than before, especially of pain at night; this was relieved for a few nights by subcutaneous injections of morphia.

30th.—Bands of tissue connect the flaps with the bone.

Nov. 4th.—A solid mass of granulations fills the space between the flaps; there has been a slight sloughing of the under flap superficially.

10th.—The ligatures were removed; the granulating surface one half the original size and healing rapidly.

26th.—A dressing of ung. zinci oxidi used over the slight granulating surface remaining. Patient sits up in bed nearly all the day.

Dec. 10th.—In hospital nearly well.

In the first case no stimulants of any kind were given throughout his illness. In the second case neither stimulants nor opiates were used. In the third case both opiates and stimulants were employed.

Bibliographical Notices.

Die Hirnwindungen des Menschen. Von ALEXANDER ECKER.

The Cerebral Convolutions of Man, represented according to Personal Investigations, especially on their Development in the Fœtus, and with Reference to the Use of Physicians. By ALEXANDER ECKER, Professor of Anatomy and Comparative Anatomy in the University of Freiburg. Brunswick. 1869.

ALTHOUGH phrenology at the present day, as taught either by Gall and Spurzheim or their later disciples, is accepted in its completeness by but few if any physiologists, yet there remains a tendency to assign to various parts of the cerebrum a connection with some definite class of faculties, not, to be sure, with the nicety and precision claimed by the phrenologists, which are dependent rather on imagination than on observation, but yet with some reference to their more general subdivisions.

Probably the question of aphasia, which has excited so much attention within the last few years, will do more than any other consideration less nearly connected with ordinary medical subjects, to call the attention of the profession in a direction very in-

teresting to the anatomist, physiologist, and perhaps the mental philosopher, that is to the arrangement of the cerebral convolutions.

It is obvious that if the convolutions are regarded as a confused and irregular mass, without symmetry or constancy, and if the plates represent them, as Professor Ecker says, "like a dishfull of macaroni," any attempt at localization of faculties must be nearly useless, and the method of the phrenologists, which is directly concerned rather with the cranium than with the brain, is as good as any other. In short, if there is no accurate knowledge of cerebral topography, corresponding or even approximating to that which we possess of the spinal cord or medulla oblongata, pathological anatomy, one of the strongest allies of physiology, will be of little or no use in constructing the future branch of science which shall establish more accurately the point at which mind touches matter, and we take leave of one of the surest and safest guides in a region which needs all the light that can possibly be thrown upon it from any direction. This knowledge is afforded by but few text books, and by none of easy access to the American student.

The edition of Quain's Anatomy, published in England in 1867, contains a tolerably full account of the convolutions, based principally on the description of Gratiolet, but not so intelligible as that in the little book whose title is here given.

Among other less accessible publications upon the same subject may be mentioned the very elaborate work of Leuret and Gratiolet, and another by the latter author alone, a finely illustrated paper by Bischoff, in the memoirs of Bavarian Academy of Sciences for 1868, a volume by R. Wagner, a paper by Turner in the Edinburgh Medical Journal for June, 1866, and several monographs on particular specimens by Flower (Phil. Trans. 1863), Marshall (Phil. Trans. 1865), and Huxley (Proc. Zool. Soc. of London, 1861).

The work of Prof. Ecker is noticeable principally for its succinctness and clearness, avoiding long discussions on undecided points, and yet sufficiently furnished with references to make easy its comparison with the labors of others in the same direction.

Entire originality in descriptive anatomy is out of the question, but the facts verified by our author are here presented in a more intelligible manner than in any other easily accessible work. In fact, it would not be very difficult for any one without a know-