was administered has had frequent teasing stools. Ordered enema ex. opio. c. amyllum. Cold water and barley tea for drink.

2nd. Anodyne enema quieted the bowels. Pulse, though still frequent, soft and compressible; tension and tenderness of abdomen gone.

3d. Freedom from tenderness continues; pulse nearly natural. Reapplied the blister and allowed panada and arrow-root.

4th. Much depressed by the intense cold of to-day, (10° below 0 of Fahr.)

5th. Pulse natural; tongue nearly clean; is cheerful and hungry.

7th. No unpleasant symptom whatever.

9th. Removed the sutures from the wound, which is very much closed. Is free from pain; pulse natural and bowels regular.

The report of the case terminates here; and owing to the absence of Dr. A. E. Hosack, upon whom the case of the patient devolved, I am only enabled further to state that the ligature came away on the 42nd day.

New York, Nov. 26, 1836.

ART. II. *Case of Congenital Enlargement of the Tongue.* By THOMAS HARRIS, M. D., Surgeon of the United States' Naval Asylum, and one of the Surgeons of the Pennsylvania Hospital. (With a plate.)

R. K., aged nineteen years, a native and resident of Tennessee, consulted me in May, 1835, in relation to a congenital enlargement of his tongue. An elder brother, who accompanied him, detailed to me the following history of his case. At birth his tongue was enlarged and slightly protruded without the maxillary bones, so as materially to interfere with the process of suction. When about a month old, the tongue greatly increased in size, and so far projected from his mouth as to produce considerable deformity; but I could not learn whether or not symptoms of inflammation existed in the organ. It increased with the growth of the body until it acquired a magnitude inconvenient to the patient, and an appearance highly offensive to the sight.

When I first examined the case, the tongue projected beyond the upper incisors three inches—circumference six inches—vertical thickness one inch and a half. The tongue exhibited a violet colour; was of a hard and incompressible consistence, covered with a dark slimy

secretion, and that portion of it without the mouth was much larger in volume than that within. The weight of the tongue pressing continually on the inferior incisor and canine teeth, gave them a horizontal direction forwards; and at the same time drew the os hyoides and larynx upwards and forwards.

On examining the inferior maxilla, the rami was found much shorter than natural; half an inch at least less in length than that of his brother, who in all other respects was of the same size. The angle of the jaw was unusually obtuse, and the molar teeth were rather longer than natural. By these alterations in the conformation of the parts, the patient had so far overcome the inconvenience arising from his projecting tongue, that the molars could be readily brought in contact, and thus the process of mastication could be performed, and deglutition effected almost as well as if no deformity existed. He was obliged, it is true, to cut his food in small pieces, and introduce it at the side of his mouth.

Except during the act of eating, the saliva ran constantly from his mouth, to catch which, and to conceal the deformity, he was obliged to wear a silk handkerchief over his mouth and around his neck.

I decided to perform the operation, but as the patient was somewhat feverish, arising from his long journey and the heat of the weather, it was postponed for a week. As the inferior incisor teeth could not be restored to their natural position, I deemed it prudent to immediately extract them. In the presence of Drs. Horner, Barton, Randolph, Butler, and several medical students, the operation was performed on the 26th of May. I first elevated the tongue, and dissected it from the floor of the mouth, about three-fourths of an inch behind the anterior part of the jaw, and then introduced a strong straight bistoury, commencing where the first incision terminated, and pushed it through the organ between the median line and the left raninal artery, and drew it forward and laterally, so as to form the left flap, terminating at a point corresponding with the teeth. After the divided artery was secured by a ligature, the bistoury was again introduced in a corresponding position on the right side, by which the opposing flap was made; the artery was secured, and then the intervening space was divided by strong scissors. The cut in the tongue resembled in form the letter V inverted. In performing the operation in this manner, I had perfect command of the tongue until after the blood-vessels were tied. The flaps were now approximated, and maintained in this state by means of three interrupted sutures.

A pointed well formed tongue was thus made, and of the ordinary length. After the operation the patient complained of a burning, ex-

Harris' case of hypertrophy of the tongue

cruciating pain in the tongue; and this organ exhibited a tumid and livid aspect, which threatened gangrene. By abstracting a few ounces of blood from under the chin, and by the topical application of kreosote these symptoms were relieved. On the fourth day the ligatures were removed, and on the fourteenth the wound was entirely healed.

In consequence of the shortness of the rami of the jaw, and the alterations of its angles, the incisor teeth were separated an inch and a quarter, while the molars were in contact. In order to facilitate the approximation of the anterior part of the maxillary bones, several of the molar teeth were drawn out, which overcome nearly one half the separation, and at the expiration of two months, by means of pressure, the distance was reduced to less than half an inch.

This case forms another interesting example of the power of nature in accommodating parts of the body to new circumstances. Though the restoration of the jaw to its natural position, was no doubt hastened by pressure, still I believe that it would have been affected, in time, without such assistance. It is well known that spontaneous alterations take place in the angles of the jaw, in *all individuals*, at different periods of life. For example, during infancy, before the teeth make their appearance, and in after life, when from disease or old age they are lost, the angles are very obtuse; but while the dental line remains perfect, they are rectangular. So that nothing more extraordinary has occurred in the patient, whose case I have detailed, than is observed in every individual before and after shedding the teeth.

I received a letter from my patient dated August, 1836, more than a year after the operation, in which he states, that his jaws are nearly closed—all deformity is removed—that he articulates distinctly—is in excellent health and spirits, and then engaged in his studies in college.

This case is similar in all respects to that of Margaret Lawson, which I published in the year 1829 in the seventh volume of the *American Journal of the Medical Sciences*; except that this one was congenital, and the former commenced at four years of age.

The plate exhibits the peculiar position of the lower jaw, as well as the appearance of the patient before and after the operation.

Notwithstanding the rarity of this disease, Baron Percy, in an article in the *Dictionnaire des Sciences Médicales*, vol. xxvii. p. 244, has noticed, and collected twelve cases. In doing so, he has embraced the records of all countries, and a period of upwards of sixteen hundred years.

The first case recorded is by Galen, who flourished in the second century. He saw the case in Pergamus.

Sealiger reports a case which he examined in Agen in France in the year 1570.

Donat describes a case which he saw in Mantua.

Bartholin saw a case in Copenhagen in 1680.

John Valæus saw another in Copenhagen sometime before, which he describes as being "as large as his arm."

Bardet, Maurant, and Trioen each record one, but the writer fails to notice the period of their occurrence.

Baron Perey published two cases, one of which he saw at Petersbach, department of the lower Rhine; the other at Offenbourg.

Mirault reports a case, about which he was consulted at Huism, department of the Loire.

Sorbait and Rey have each published a case.

Of these twelve cases, four were successfully operated on by Bartholin, Verœus, Percy, and Mirault; the remaining eight were abandoned to their fate.

I am aware that there are recorded many recent cases of great enlargement of the tongue, but unaccompanied by any alteration in the configuration of the inferior maxillary bone. Lassus and others mention such cases, which they were enabled to cure by local bleeding and pressure. In the cases, however, which are above described, such remedies would be of no avail, as the monstrous tongue could not be forced into the mouth as they propose; nor could the altered angle be remedied while the huge mass was permitted to counteract the salutary efforts of nature.

Philadelphia, February, 1837.

ART. III. *An Analysis of some of the modes for effecting extension and counter-extension in Fractures of the Lower Extremities, with observations on the materials most proper for the formation of bands.* By REYNELL COATES, M. D.

There is scarcely any surgical accidents which have called forth the exercise of so much mechanical talent in the construction of machines for their treatment, as fractures of the thigh and those of the leg, when they require continued extension of the limb. Hardly a month passes unmarked by the proposition of some apparatus or modification of machinery, supposed to be novel in its character, and the claims of many of these contrivances are upheld by more or less practical experience. Two or three cases, perhaps, have been actually cured