The first case which came under my observation, and was submitted to treatment by forcible straightening, was one belonging to the series described in the first class.

CASE I. *Depressed and Bent Cartilaginous Septum of the Nose rectified by Forcible Straightening one Month after the Accident.*—L. L., aged 16, was brought to me on the 12th of July, 1861. He had received a blow on the nose a month previously from a cricket-ball at Eton, and two surgeons who had been consulted considered that nothing could be done. The external deformity was slight, consisting of a depression a little above the tip of the nose, at the junction of the cartilage with the bone, with some lateral inclination of the former; but since the accident the voice had become completely altered, and the breathing through the right nostril much interfered with.

On examination, I found the right nostril obstructed by the cartilaginous septum, which had been bent by the blow from the cricket-ball, and now projected into the cavity of the nostril, so that a probe could not be made to pass through it. The cavity of the left nostril was much enlarged, by the depression and bending of the cartilaginous septum into the right nostril. Considering all the circumstances of this case, I advised that some attempt should be made to straighten the septum, in the hope both of rectifying the deformity and restoring the voice, and in both these respects the result was successful.

On the following day, consent was given by the parents, and I gave instructions to Mr. Blaise of St. James' Street to prepare the forceps, screw-compressor, and ivory plugs, which are represented in figs. 1, 2, and 3.

On July 16th, the first attempt to straighten the septum was made, with only partial success, in consequence of the patient not being allowed by his father to take chloroform, and the pain and sneezing rendering it impossible to proceed. The steel screw-compressor was, however, worn for three days and nights, and afterwards the ivory plugs were used with as little intermission as possible. This did not cause much pain or inconvenience, and the improvement was very decided, although incomplete. Consent to the administration of chloroform was now obtained; and on July 30th I repeated the operation, the chloroform being administered by my friend Dr. Allan, the medical attendant of the family. I now completely straightened the septum, and the obstruction of the right nostril was at once removed, so that the forceps, with the blades closed, could readily be passed through it. The retentive apparatus was used as before, the ivory plugs being worn at night for several weeks. It was not necessary to repeat the operation; the external deformity was so far removed that a trace of it only could be said to remain, and the voice was completely restored.

CASE II. *Fracture of the Nasal Bones, with Depression and Bending of the Cartilaginous Septum, much improved by Forcible Straightening Six Months after the Accident.*—This was one of a much more severe character than the preceding. C. R., aged 22, an officer in the army, first consulted me on June 6th, 1871, having sustained a very severe injury to the nose by a fall in the previous December. This gentleman was wearing one of the new-fashioned Ulster coats, and, having both hands in the pockets, fell down flat at a railway station, the nose coming into contact with an iron rail. The nasal bones had been fractured, and projected towards the left side; the cartilaginous septum was also much depressed and bent, projecting into the left nostril, whilst the tip of the nose was directed towards the right side, somewhat in the shape of a half-moon, giving to the face altogether a most unsightly appearance. In this case, also, more than one surgeon of eminence had been consulted, and the opinion given was, that no treatment could be adopted with any probability of success. I advised the same treatment as in the former case, and this was assented to.

On June 9th, I performed the operation, chloroform being administered by Mr. Braine. The cartilaginous septum was straightened, but very little improvement effected in the position of the nasal bones. The steel screw-compressor was used continuously for three days and nights, followed by the use of the ivory plugs. The improvement, so far as the front part of the nose and cartilaginous septum were concerned, was satisfactory; but the nasal bones being still depressed and displaced towards the left side, I directed Mr. Blaise to construct a kind of steel truss (represented in Fig. 4) to pass round the head, having a small oval pad connected with the front part, and capable of accurate adjustment, by means of two cog-wheels, so as to be applied to the left nasal bone, as a retentive apparatus, after the bone had been forcibly bent or rebroken.

On June 21st, chloroform was again given by Mr. Braine; I then rebroke the nose. In this operation, considerable force was employed in the attempt to bring the nasal bones into their natural position by a firm and long-continued pressure on the left nasal bone. Very considerable improvement was effected, and the steel truss and pad were immediately applied as a retentive apparatus. I also more completely

straightened the cartilaginous septum; and the steel screw-compressor, followed by the ivory plugs, was used to support the septum, at the same time that the truss was applied to support the nasal bones externally.

After this operation, the progress was satisfactory, and the improvement very marked and well maintained; still, however, from the severity of the case and its duration, neither the depression, nor the lateral deviation of the nasal bones, was entirely removed.

On July 5th, 1871, I repeated the operation, chloroform being given by Mr. Braine. Still further improvement was gained, with very little force, and the retentive apparatus used as before for several weeks.

On November 27th, I saw him for the last time. I found the improvement had been well maintained, and the appearance of the nose so much improved that it would scarcely attract attention, and the result was considered to be very satisfactory.

CASE III. *Both Nasal Bones evenly Depressed between the Nasal Processes of the Superior Maxillary Bones, producing Flattening of the Upper Part of the Nose: Cartilaginous Septum also Depressed and Bent, projecting into the Right Nostril: the Tip of the Nose deviating towards the Left Side.*—Miss F., aged 11, was sent to me by my friend Mr. Walter Coulson, on the 9th June, 1874, and the nose then presented the general appearance indicated in the above description. The accident occurred six years previously, when she was only five years of age, by her falling down a sloping bank forty feet in height, the nose coming into contact, probably with a stone, when she first rolled off the embankment. In addition to the external deformity, the breathing was very much interfered with in this case; the voice was also much altered, and an offensive discharge constantly occurred from the nostrils, as in ordinary ozæna. No evidence of necrosis of bone could be obtained by examination with the probe, nor was this indicated by any tenderness to pressure externally. I therefore advised the operation of straightening as in the preceding cases.

On June 10th, 1874, chloroform being administered by Mr. Braine, I straightened the cartilaginous septum with the steel forceps, and to some extent succeeded in improving the position of the nasal bones. The steel screw-compressor and ivory plugs were worn without inconvenience.

On July 2nd, I endeavoured still further to raise the depressed nasal bones, with the assistance of Dr. Sliman of Hackney, who administered chloroform. The blades of the forceps were carried directly upwards in a direction to elevate the nasal bones, and a firm lateral pressure applied externally at the same time. A marked improvement in the shape of the nose was thus produced, and the same retentive apparatus employed, but it was difficult to maintain sufficient lateral pressure externally. The general improvement in the form and shape of the nose was considerable, and much of the depression removed. The offensive discharge from the nostrils entirely ceased, and both the breathing and voice were much improved.

Several other cases have fallen under my observation, in which the injury has been limited to depression and lateral bending of the cartilaginous septum, with partial displacement from the vomer, as in the first case, and in every instance the treatment has been perfectly successful.

A CASE OF PERFORATING ULCER OF THE DUODENUM, WITHOUT DIAGNOSTIC SYMPTOMS.

By EDMUND J. SPITTA, L.R.C.P.Lond.,

Late Demonstrator of Anatomy at the School of St. George's Hospital.

ULCERS of the duodenum are by no means rare, but in nearly all such cases symptoms occur which are diagnostic. In the one, however, which I am about to relate, no such symptoms were present, and perforation occurred most suddenly without a single warning.

X., aged 61, came to see me on Monday morning, June 21st, complaining of pain in the epigastrium. "He had always had good health, never knowing a day's illness." I prescribed some opium pills, of which he took a few, with much benefit. On the following morning, however (June 22nd), he again appeared, the pain, although much better the previous day, having now become worse. "I told him he had better go to bed, apply warm poultices, and continue the pills. As he was leaving, he stopped and asked me "to call and see him some time when passing by". I did so in about two hours, and found him sitting up in bed (he said it was more comfortable than to lie down), and still in pain. His pulse was slightly irritable, but his skin cool. His appearance was natural, and his countenance wore no anxious expression; he was able to move in bed and to talk. His wife told me he enjoyed

good health, excepting for the last two years, when he had occasionally complained of wind in the stomach. This was always relieved by hot brandy and water, which caused him "to bring up a quantity of wind". I ordered a continuance of the treatment.

Two hours later, his wife came to ask whether there was anything else to be done, as he was still in great pain. I ordered hot poppy fomentations, and the pills every half hour until the pain abated.

I heard nothing more of the case that day, and, therefore, presumed he was better. But when I went the next morning, to my astonishment, I found the patient dead. On inquiry, I learnt that the deceased appeared so much better in the afternoon that his wife only gave the pills every hour; but that in the evening, after straining at stool, he felt faint, perspired profusely, and in a quarter of an hour died.

On hearing this account, I assured the friends that there must be something unusual to account for so sudden a death, and that perforation of the bowel had probably taken place. I therefore desired a *post mortem* examination, which I was permitted to conduct thirty-six hours after death. On examination, the peritoneal cavity was found much distended with fetid gas and fluid, the latter consisting of fluids swallowed, fluid feculent matters and bile. The peritoneum was healthy throughout. In the first portion of the duodenum, there was a large old ulcer, about the size of a sixpence, which had perforated the bowel and opened into the peritoneal cavity. Its edges were thickened, but the adjacent parts presented no signs of inflammation, neither was the peritoneum, even at that part, at all inflamed. The peritoneal aspect of the perforation showed that the ulcer had for some time entirely eaten away all the coats of the bowel excepting the peritoneal, for the flaps of that membrane were distinctly visible. The parts adjacent to the bowel were healthy.

Such is a condensed history of the case; but the fact to which I wish to draw attention is that the patient, who most likely had had the ulcer for one or two years, never presented any specially diagnostic symptoms until the perforation occurred. He never had vomiting of blood nor pain after food; neither was there any history of bloody stools, with occasional attacks of faintness; and up to the very last there were no signs of peritonitis.

Of course, it is a matter of doubt whether the perforation took place before I saw him at his house or whilst straining at stool. I should think the latter, seeing that he appeared so much better in the afternoon, and that when I saw him in the morning there were certainly no symptoms of collapse. So lightly did he think of his pain when he called upon me in the morning, that he only asked me to see him "sometime when passing by"; and, indeed, the very fact of his walking home seemed enough to allay any suspicions of so rapid and fatal a result.

The only case I know precisely similar to this, is one which occurred in the practice of Dr. Barlow, many years since, of a brewer who died suddenly, without any marked symptoms, and in which a *post mortem* displayed an old ulcer of the duodenum, evidently similar to that of my own.

ETHER AS AN ANÆSTHETIC.

By THOMAS SKINNER, M.D., Liverpool.

So far back as July last, I had prepared the following remarks on Ether as an Anæsthetic. The letter in this week's JOURNAL from the pen of Mr. Clover has induced me to precipitate its publication; and all the more so, as Mr. Clover has arrived at the same conclusion as myself as to the best specific gravity of ether for anæsthetic purposes.

Everyone knows how much I prefer chloroform to ether or any other liquid as a general anæsthetic and in midwifery, whilst it is not a long time since I stated my belief in these pages that there are special occasions and operations where ether is much to be preferred to chloroform, namely, in all operations on the eye, head, and abdomen, such as cataract, iridectomy, hernia, and ovariectomy. This being so, it behoves us to ascertain the most convenient form of the drug and the readiest and simplest mode of administering it effectually.

After a number of experiments, I have ascertained that the specific gravity of the ether is of the greatest importance to be attended to. If accurately adjusted ether-inhalers are used, such as Snow's, Squire's, and the like, it matters little about the specific gravity, as the patient is pretty certain to get the entire of the vapour; all that is necessary is that the ether shall be chemically pure. Of course, the only substances affecting the specific gravity admissible are alcohol and water. In other respects, as I consider all mechanical inhalers as cumbersome, not unattended with danger to the patient, and the very reverse of the readiest, simplest, and most economical methods of inducing anæsthesia by means of any drug, I cannot advise their use.

When we come to the simpler and readier methods of inhaling ether, however, the tables are turned. Ether of a low specific gravity is a very great mistake. I have used it from .720 up to .735 (I am certain that it varies a good deal by keeping, especially if it be not kept in a very cool place), and I have no hesitation in declaring that I have given up using any other than that of the *British Pharmacopæia*, which has a specific gravity of .735, and which is spoken of so highly by Mr. Clover. With ether of this specific gravity, the patient gets far more of it with very much less loss; and less of it goes a much greater length. As to the comparative safety of ether according to specific gravity, if alcohol and water are the only foreign ingredients affecting it, it is *nil*, and need not enter into the calculation. I have not used ether made from methylated spirit as yet, but I believe it to be quite as safe as that made from the best rectified spirit; and I should not hesitate to use it, even though "methylated ether leaves an odour after it has evaporated" (Squire's *Companion to the British Pharmacopæia*, 1871).

Among the ready methods of administering sulphuric ether of specific gravity .735—which is the simplest and handiest? If any man have been at the trouble to devise a method, and come to the conclusion that he has succeeded, it is but natural that his own will, in his estimation, eclipse all others; but the world must be the judge, and not he. I am perfectly willing to be judged by such a tribunal in the present instance—as all who have seen my mode of administering ether of any specific gravity, and in particular of .735, are agreed that it is all that can be desired for simplicity, durability, portability, cleanliness, economy, and effectiveness.

Apparatus.—A good sound cork perforated with a glass or metal tube, the same as that of my chloroform bottle, only larger in the bore. The cork must fit an ordinary half-pint or pint bottle, and the tube must be sealed at the point to the diameter of the twelfth or sixteenth of an inch, sufficient to admit of a free and straight flow of the ether from the bottle when inverted. The tube must not be drawn out to a point which is certain to be broken off, but round, and the tube ought not to extend above three-quarters of an inch beyond the cork. A closely fitting cap of cork, or leather, or leather and cork (not India-rubber, as the ether destroys it) might be added with advantage, as it would prevent the escape of the ether in the interval or *en route*. If the tube be made of metal, a cap of the same material will be most suitable. I have generally placed my finger on the end of the tube, but this is not so necessary when the ether is of a higher and more manageable specific gravity, such as .735 of the *British Pharmacopæia*. The bottle, a half-pint or pint, should be of actinic glass, yellow being the best if obtainable, or it may be covered with leather or thick paper of any or no colour (yellow is the most actinic) for the purposes of excluding the light, lessening the chance of breakage and of protecting the ether from the heat of the hand. If covered with leather, a slit or tell-tale should be cut in it in order the more readily to ascertain the amount of fluid remaining in the bottle.

Inhaler.—It is composed of an interior of thick white felt, and an exterior of patent or black enamelled leather. It is altogether close, having no aperture except where it fits over the nose and mouth, which it closes very perfectly, if need be. The enamelled leather cover is reflected for the distance of an inch, inwardly, over the thick white felt, the internal and external surfaces of leather being temporarily stitched through the felt and the two plies of leather to keep all firm. After administration, the stitches are cut or undone, the felt is removed and washed, dried and returned, and restitched ready for another patient, or a second felt may be kept ready for use. I beg here to repeat a rule which I have previously laid down in these pages, namely, that cleanliness and decency demand that no two individuals should be made to breathe through the same inhaling apparatus without its being thoroughly cleansed—a step which is perfectly impossible with permanent mouth-pieces, tubes, and evaporating or air-chambers. The leather cover admits of washing the same as the felt, inside and out. The form of the inhaler is that of "Punch's" nose, seven inches in the longest diameter by five inches. It is a professional black, and folds perfectly flat, occupying the space of a flat and folded pocket-handkerchief.

The mode of using the inhaler is very simple. The ether-bottle being only three-fourths or two-thirds full, pour about half an ounce of ether (.735 *British Pharmacopæia*) into the inhaler, directing it especially on the sides of the felt; then insert the tubed-cork into the bottle of ether. Apply the inhaler over the nose and mouth of the patient, but not too close at first, although the sooner it can be closely applied, the sooner the patient will be anæsthetised. In renewing the ether, lose no time; invert the inhaler and quickly sprinkle the surface of the felt with a free allowance from the bottle; as quickly reapply the inhaler, never giving the patient time to rally from the previous inhalation. At one time, I had the leather cover perforated, so as to enable me to give additional