in dissecting tonsils if we avoided injuring the musculature of the pillars and of the bed of the tonsillar fossa we would not have severe hæmorrhage, but if we did injure these structures severe bleeding was apt to follow. In opening quinsies he separated the anterior pillar as if he was going to remove the tonsil and then by pushing the pillar out of the way and separating it from the superior constrictor muscle the abscess could be located with accuracy.

Dr. J. O. Roe preferred the Hilton-Fagge method of opening these abscesses with curved scissors and never used a knife.

Dr. Newcomb, in closing, said that the question of danger to brain integrity in ligating the common carotid was the same, no matter for what emergency this operation was done. The autopsy records in the material collected by him showed in several instances the internal carotid was the vessel which had been perforated. Ligation of the external carotid in such cases would be useless, and he again emphasised the fact that the conditions in a condition of suppuration and after ordinary operation for tonsillotomy or tonsillectomy were entirely different. In one case we were working in healthy tissue, notwithstanding the hæmorrhagic complication; in the other we were working in tissue which had lost its vitality and to which the application of styptic measures was conditioned by this fact. In an ordinary post-tonsillotomy hæmorrhage the bleeding site was often visible, but this was not the case in hæmorrhages in connection with pharyngeal suppurations. There was no objection to a primary ligation of the external carotid, but it would not always stop the bleeding.

CORRESPONDENCE.

To the Editor of The Journal of Laryngology, Rhinology, and Otology.

My dear Sir,—In an editorial on page 6 in the January number of the Journal of Laryngology for 1908 the statement is made that "No modification of the submucous resection (Killian) operation for the relief of septal deformities of any real importance has been suggested, and this method of procedure, as originally advocated by Killian, retains the popularity it so richly deserves."

The impression the reader obtains from this paragraph is that Killian was the first one to describe a useful method of resection of deviations of the septum, that his method has justly extinguished all others, and that it is so classically perfect that it is practically incapable of further improvement, not to speak of displacement, by better ways of operating.

This attitude seems to me unfair to the others who have worked to develop the submucous resection, and among them to me. My first descriptions of my way of performing the operation were published in 1902 and 1903, included the careful preservation of the mucosa on both

sides of the septum, and represented a perfectly practical method, and one, above all, adapted to all varieties of deflections. Many of my countrymen at once adopted it, and the instrumentarium had a large sale in America and abroad, as it still has to an increasing extent. Killian's first detailed description of his submucous procedure did not appear until 1904, two years after my first paper. Owing, however, to its author's fame it became at once the method regarded as the standard one and as one making further study of others' ways needless.

If the Killian method of resecting deflections and his instruments for the purpose were really worthy to supersede all others nothing more should be said. Far from this, however, his procedure, while perfectly successful in simple cases of standard anatomical structure, is apt to fail the operator in difficult cases and seriously lacks adaptability, especially to deflections with adherent coverings, extreme deviations, deep-seated bony angles, and to the minute nostrils of children. In all of these cases it is apt to leave the surgeon with the mortification of a half result, and often a perforation. The insufficiency of the method has thus often been brought to my notice, and of late in London, where a clever and experienced operator had to leave the deepest part of a bony deflection in the nose, which continued the obstruction to respiration as much as if nothing had been done.

The Killian submucous resection is founded upon the false supposition that the coverings of deflections are not only strong enough to always endure their forcible uplifting by dull-edged or blunt elevators, or at the most chisel-edged blades, so that such instruments constitute the basis of Killian's set, but also in the erroneous assumption that in addition these coverings always readily peel away, except in a few well defined places, such as the hollow of the concavity. Based on this idea of invariably ready denudation is Killian's narrow entrance to the operative field by means of a mere slit through the mucous membrane at the front of the septum, which makes more or less blind work in baring the deviation of its coverings a necessity, so that where they are adherent they are subject to the danger of tearing and perforations, and the impossibility of accomplishing sufficient denudation of the deflection where the coverings thus cling to the septum compels the operator to be satisfied with an insufficient resection or else, if he be rough, he will bruise the mucosa by overstretching it in his forcible efforts to uplift it, thus inviting inflammation and even suppuration. While I admit that the Killian method, because of its simplicity, will always have followers who will risk its uncertain results, I advocate my own way as one that with least traumatism will resect any deflection, no matter how difficult, with invariable success for him who has mastered it. It is not easy, and requires surgical, not mere manipulative, skill, an exact attention to detail, a knowledge of the anatomy of the septum and the Kirstein light.

While effort is required to learn it, I have nevertheless taught it to many in America who have abandoned the Killian method for it. The latter method may be called properly the concealed or covered one, or operation through the button hole, as compared to mine, which I call the open one or L-flap method. This L-flap is reflected forward and gives room for making a second flap of cartilage underneath it. The L mucosa flap gives easy access to the deeper parts of the convex side of the deflection, while the cartilaginous flap opens a broad way into its concavity. The open operative field thus obtained permits, what I have found a necessity in nearly every case, dissection of adherent portions of the coverings of the deflection from the underlying cartilage and bone by

means of rounded knife-blades of proper form used under the exact guidance of sight, as cutting implements always should be. In this manner I avoid the traumatism, tearing, stretching, violence and perforations incident to the undermining of the covering of the septum by blunt implements where such covering is at all adherent. The open operative field obtained permits operating in the deeper parts of the nose without a long speculum such as Killian uses, the blades of this instrument being much in the way in deflections with pronounced angles. In my method the nose is held open with flat, short retractors held by an assistant, no speculum being used, at the most one additional retractor by the operator. For protection of the flap in the deeper part of the nose a single large retractor, very thin-bladed, is occasionally used. Instead of the haphazard and painful chiselling away of bone, which requires the supplementary violence of breaking out fragments with forceps, I cut away the bony deflection cleanly to its last vestige with cutting bone-forceps, so slender that they enter anywhere, and yet so strong that in their later reinforced pattern they never fail to cut the thickest bone they can seize. Only for very broad bony masses on the nasal floor, too wide for the forceps blades, do I occasionally use the chisel. All of the bony resection is in plain view, and the difficult denudation of the crista incisiva and corner is conducted with proper delicate raspatory curved chisels used in plain sight. My instruments have been criticised as too numerous. The reason for their number is that all of the dull-edged elevators have keen-edged counterparts, so that where dull dissection becomes too difficult the sharp blade of the same form takes its place.

The swivel knife has no place in my instrumentarium and does not fit the method. This objectionable implement has to my knowledge caused the sinking in of the nasal bridge in several cases, and has made the largest perforations ever encountered in the operation. Its swinging blade works in the dark through the button-hole slit, and is of more uncertain guidance than a fixed blade, following its own way instead of the one meant by the operator.

Instead of the needless submucous injection of cocaine solutions used in the Killian method, associated with objectionable pricking through the mucous coverings, I merely use surface application of pure cocaine crystals moistened with adrenalin. I obtain so perfect a local insensibility that I have operated on seven-, nine-, and ten-year-old children without general narcosis, including the resection of extensive bony deviations, and without pain. The patient is always in the half-reclining position on a high operating table.

The flaps are not stitched, the tampon holding them in place, and I always get union by first intention in forty-eight hours, without ever a "hæmatoma." A full account of the method may be obtained in the *Arch. f. Laryngol.*, Prof. B. Fraenkel, and in a booklet published by the *Journ. of Ophthal. and Oto-Laryngol.*, 100, State St., Chicago, Dr. A. H. Andrews, editor.

To conclude with I state that my open method is the best one for all difficult unusual deflections and for children, and is more exact and accompanied by less injury in all directions than the buttonhole method of Killian. I expect, however, that for a long time at least operators will only make use of my more difficult procedure for children and extreme or cicatricial deviations.

Respectfully,

Otto T. Freer (Chicago).