

the trachea and the cavity of the mouth. An apparatus was made, from instructions given by Dr. Gussenbauer, by Herr Leiter, the instrument-maker; and the patient had been able, by the aid of this, to speak distinctly when exhibited to the clinical class in the hospital. The apparatus, however, did not perform its functions perfectly; and an improved one had been constructed by Messrs. Leiter and Turriegal, which was demonstrated to the Society. It consists essentially of two curved canulae—a tracheal canula and a voice-canula; and, for vocal purposes, there is a tongue of silver plate, capable of producing a deep note. This has been proved by numerous experiments preferable to one with a high note, as it allows more space for breathing; and the air can pass more quickly, and more readily produce vibrations in the metallic tongue. By means of this apparatus, the patient is able to speak well, with a clear sonorous voice; but, before he can speak, he is obliged to expectorate, to remove the secretion accumulated in the apparatus. Dr. Gussenbauer has also made some experiments with the view of forming an apparatus of elastic membrane, the tone produced by which resembles the human voice more closely than that of metal; but he has found that the apparatus of elastic membrane is much less capable of being cleaned than the metallic one; and there is the further objection, that the elasticity becomes impaired by continued use. The patient at first wore a respirator for protection against the cold air. As a large portion of the epiglottis was removed, it was thought at first that the patient would not be able to swallow—and, in fact, fluids passed out through the opening that had been made. He learned, however, to push the dorsum of the tongue back when he swallowed, so as to close the opening of the air-passage; and a special apparatus has been devised by Dr. Gussenbauer, which still more completely acts as an artificial epiglottis. After Dr. Gussenbauer had described the apparatus, the patient applied it, and read some lines aloud. Articulation was evidently attended with some little difficulty; but, in spite of the monotony of the voice, the words could readily be distinguished.—*Brit. Med. Journal*.

THE IDENTIFICATION OF THE REMAINS OF DR. LIVINGSTONE.

The hold that the superstition of burial has upon the English race, and the probabilities of re-creation has of becoming popular, seem to us to be plainly outlined in the excitement in regard to the recovery of the body of the great African traveller and philanthropist. To us the one important point has been the recovery of his diaries and other papers and records. Yet we hear very little about this, although the newspaper press has teemed with par-

ticulars concerning the body. When the latter reached England, the question of its identification was of course an important one. As the readers of "Livingstone's Travels" will remember, some years ago he was seized by an infuriated dying lion, and his left arm very much lacerated, the bone being crushed to splinters: from these wounds he recovered with an ununited fracture. Dr. Livingstone had during life consulted very freely Sir William Ferguson concerning this arm, and to him were intrusted the examination and identification of the body. In his report he says, *inter alia*:

"From what I have seen I am much impressed with the ingenious manner in which those who have contrived to secure that the body should be carried through the long distance from where Livingstone died until it could reach a place where transit was comparatively easy, accomplished their task. The lower limbs were so severed from the trunk that the length of the bulk of package was reduced to a little over four feet. The soft tissues seem to have been removed to a great extent from the bones, and these latter were so disposed that by doubling and otherwise the shortening was accomplished. The abdominal viscera were absent, and so were those of the chest, including, of course, heart and lungs. There had been made a large opening in front of the abdomen, and through that the native operators had ingeniously contrived to remove the contents of the chest, as well as of the abdomen. The skin over chest, sternum, and ribs had been untouched.

"Before these points could be clearly ascertained, some coarse tapes had to be loosened, which set free some rough linen material—a striped colored bit of cotton cloth, such as might have been an attractive material for the natives among whom Livingstone travelled,—a coarse cotton shirt, which doubtless belonged to the traveller's scanty wardrobe, and in particular a large portion of the bark of a tree, which had formed the principal part of the package,—the case thereof, no doubt. The skin of the trunk, from the pelvis to the crown of the head, had been untouched. Everywhere was that shrivelling which might have been expected after salting, baking in the sun, and eleven months of time. The features of the face could not be recognized. The hair on the scalp was plentiful, and much longer than he wore it when last in England. A moustache could not be recognized, but whiskers were in abundance. The forehead was in shape such as we are familiar with from memory, and from the pictures and busts now extant. The circumference of the cranium, from the occiput to the brow, was twenty-three and seven-eighths inches which was recognized by some present to be in accordance with such measurements when alive.

"In particular the arms attracted attention. They lay as if placed in ordinary fashion, each