

Boston as compared with Chicago . . . . .	1,200
Philadelphia . . . . .	1,673
New York . . . . .	6,774
Brooklyn . . . . .	1,413
Baltimore . . . . .	490

Total . . . . . 11,550

"This," says the writer quoted, "is the cost of criminal negligence of known laws of health in only five of our cities. If London cared as little for the lives of her citizens as New York seems to care for hers, there would die in that city every year 21,556 people more than at present die." The money value of the lives lost in those five cities alone, as figured by the statistician quoted, is over forty-six millions of dollars; while the time lost by others sick, *i.e.*, according to Farr, there are two years of sickness to every annual death, or in this instance (11,556 deaths) 23,110 years of needless sickness, which, estimated in money values means, for lost time alone, \$6,930,000 besides bills for the doctors, nurses, druggists and all other expenses. "And yet," says the writer, "when the city fathers are asked for a few thousand dollars for meat inspection, for new and necessary sewers, for an unpolluted water supply, or for any other measures of preventive medicine, the request is refused, or acceded to with such cringing stinginess as to be ludicrously inadequate." "In only five cities, and estimated in crude financial losses, we have seen there is a squandering of some fifty-three millions of dollars. Extend the calculation,—easily made,—to the whole country, and it is recognized that we are wasting several hundred million dollars worth of human lives each year, by our recklessness and our stupidity. The medical profession heroically works to save a few thousand sick, while the community goes on blunderingly and savagely killing and making sick by the million."

Our writer is wrong,—as we have attempted to show—to attribute this fearful mortality to either ignorance, or stupidity, or parsimony, so far as the Government is concerned. It is a national sin not to lower the death rate all over the United States; but it is a sin of omission in the failure to apply the vast concrete knowledge obtained by medical and sanitary science to the prevention of disease,—in accordance with the clearest dictates of humanity, reason, justice and common sense. But this the general government can not do, or be made to see the necessity for doing, until provision has been made for collecting, compiling and classifying this knowledge, and there is brought to its attention the cost in dollars and cents, of sanitary neglect; till the deaths all over the United States from preventable disease are consolidated, and it can be shown how much in money can be saved to the Government by the passage of laws to apply the remedy pointed out by sanitary science. Until the Government recognizes the great necessity here attempted to be shown for the creation of a Department of Public Health, and creates it, and puts it into operation, it must stand chargeable with criminal neglect, and held responsible for this fearful waste of human life.

## ORIGINAL ARTICLES.

### A NEW METHOD OF VALVULAR GASTROSTOMY WITH A MUCOUS MEMBRANE LINING.

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The older methods of making a stomach fistula for feeding, in case of impassable stricture of the esophagus, seldom proves satisfactory. Food is easily introduced and digested, but can not be forced through the pylorus into the intestine, because at every contraction of the stomach for that purpose most of the contents are forced out through the fistula. Thus the food is lost, and many of the patients die of starvation. A mechanical rubber valve which we invented in one case partly overcame the difficulty, but did not permanently save the patient.

Wetzel devised the following method: A small opening being made into the stomach, a rubber tube was inserted, and the outer portion of the tube laid along the external surface of the viscus, the stomach wall was folded over it for one and one-half inches and fastened with Lembert stitches, taking up only the peritoneal and muscular coats. The outer end of the new canal was stitched to the skin. The fistula thus formed resembled the ureter where it enters the bladder, and being thus valvular prevented leakage. A difficulty, however, arose. The new canal was lined with peritoneum and not with mucous membrane. It threw out granulations, and could only be kept from closing up by constantly wearing the tube.

Kocher, of Berne, modifying a plan of Alberti's, proceeds as follows: He draws about four inches of the stomach out of the abdominal wound, and stitches up the latter except about two inches. Then the surface of the protruded stomach-pouch is stitched to the wound. Next, he begins at the upper end of the wound and forcibly makes a channel between the superficial fascia and the muscle, etc., carrying the channel up outside the cartilage of the seventh rib, and onward to the sixth rib. Here he cuts an orifice through the skin. He then seizes the projecting stomach-pouch, forces it up through the new channel, and brings the tip out at the orifice on the sixth rib. Here it is opened and stitched to the wound in the integument. The bulging cartilage of the seventh rib acts to compress the pouch, and is said to prevent leakage. It seems like rough treatment of a delicate organ, but there has not yet been enough experience to decide the question of its usefulness.

In a recent case of esophageal stenosis we first tried the plan of opening the stomach with retrograde dilatation of the stricture of the esophagus, closing the stomach wound and returning the viscus. This restored the power of swallowing for a time, but the stricture again contracted, and shut off nutrition. Next we tried Wetzel's plan with perfect success, but for reasons above stated, the tube must be constantly worn.

After considerable experiment on cadavers and animals, we find the following operation feasible, and as it furnishes a valvular orifice lined with mucous membrane, a tube will only need to be used occasionally to prevent possible contraction at the orifices:

The annual meeting of the New York State Board of Health was held May 3. Dr. Florence O'Donohue was re-elected President, and Dr. J. T. Barnes, of Albany, was elected Secretary of the Board, *vice* Dr. M. Barnes resigned.

The mucous membrane of the stomach is connected with the muscular coat by a layer of exceedingly loose connective tissue, so that any spot on the mucous coat can be made to glide some three-quarters of an inch on the parts beneath. As an experiment, we injected melted lard forcibly into this loose submucous tissue, raising up the membrane three-quarters of an inch, in places. The specimen was then dried to render it rigid, cut into thin sections and the fat dissolved out in ether. Fig. 1 shows a section of this sort, the outer and inner walls being connected only with delicate reticulated fibers.

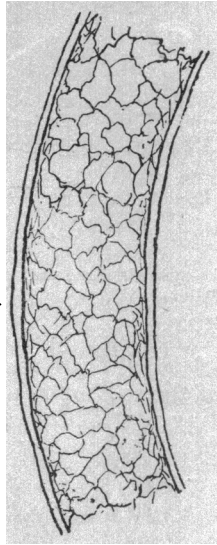


Fig. 1.

When the muscular walls of the living stomach contract, the mucous membrane is thrown up into high ridges, presenting to the eye of the surgeon curious quadrangular patterns, very different from the appearances in a dead stomach. Fig. 2 is a diagram to represent the folds in cross section.

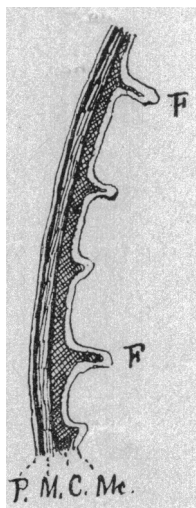


Fig. 2.

P—Peritoneal coat. M—Muscular coat. C—Connective tissue coat. Mc—Mucous membrane thrown into folds. F F—The folds.

This exceeding looseness of the membrane greatly facilitates raising flaps from it, to construct the valvular mucous canal.

The operation is made as follows: External anti-sepsis is obtained as usual, but the preliminary washing out of the stomach can not be performed on account of the stricture of the esophagus. The external incision is made in the usual way, and the stomach exposed and identified. It is then drawn out through the wound far enough to give freedom in handling. An incision is then made from near the upper border directly downward about two inches. Before this is done, however, provision must be made to prevent its fluids from getting into the peritoneal cavity by the careful placing of large sponges. As the patient has been prevented by the stricture from taking food, the contents will be found to be only the secreted fluids. The cavity is now washed out with warm boric acid solution, and the edges of the incision secured against slipping back into the abdomen. Now the lower part of the anterior wall is raised, turned out through the incision, and spread out flat. From the lower end of the cut, two incisions are made through the loose mucous membrane, one to the right, and the other to the left, each extending about three-quarters of an inch laterally from the lower end of the main incision. From the end of each of these two mucous membrane incisions, another cut is made downward through mucous membrane, parallel to the axis of the body and to each other for a distance of about one inch and one-half. At the lower ends the two incisions are turned at a right angle toward each other, but not meeting, a separation of one-third of an inch being left between them.

In Fig. 3, the quadrangular incision is shown by the letters A A, and the mucous membrane flaps by F F.

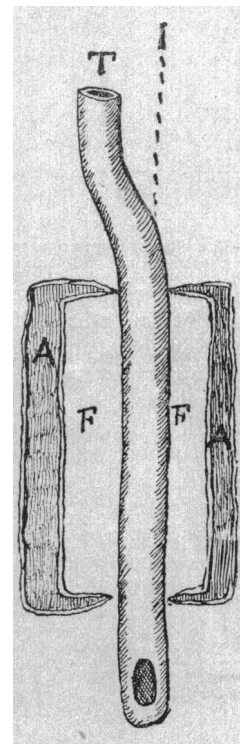


Fig. 3.

A A—The angular incisions through the mucous membrane, exposing the muscular coat. F F—The loose mucous membrane flaps. T—The tube. F—The dotted line shows the position of the incision into the stomach when the parts are replaced.

The next step is to place in position a smooth rubber tube of about the size No. 10 of the English catheter scale. There is nothing better for the purpose than a piece of well sterilized "velvet-eyed" soft rubber catheter. This is laid along the middle of the quadrangle of mucous membrane, and projects an inch below it. Now turn up the flaps *F F* over the tube and close them together with Lembert stitches, placed so as to turn the mucous surfaces in, and bring the connective tissue surfaces in contact. The extreme looseness of the submucous tissue allows the membrane to close over the tube without force.

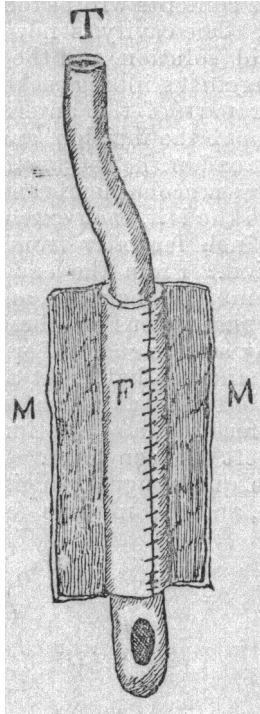


Fig. 4.

*T*—The tube. *F*—The flaps of mucous membrane closed over it. *M M*—The mucous membrane adjacent to the incision.

This stage of the operation is represented by Fig. 4. Now take hold of the edges *M M* of the mucous membrane with toothed forceps, and they can be folded without difficulty over the membranous tube *F*, and stitched together. In closing these flaps, the edges should be laid with the connective tissue surfaces against each other, and the needle passed to and fro, or through and through, something like a reversed Appolito's suture. At least, we prefer this method, though it is not absolutely necessary. The three following cross sections will make the operation more fully understood:

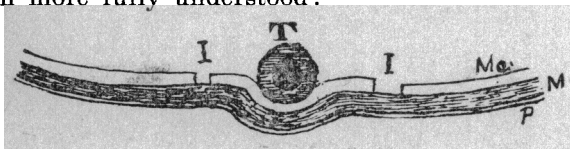


Fig. 5.

*T*—The tube. *I I*—The incision through the mucous membrane. *Mc.*—The mucous membrane. *M*—The muscular coat. *P*—The peritoneal coat.

Fig. 5 shows the tube laid in position ready to have the mucous flaps *I I* folded over it.

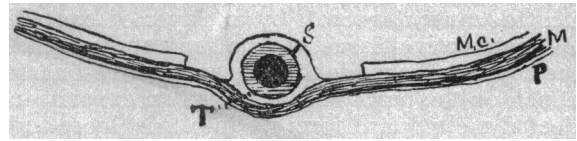


Fig. 6.

*T*—The tube. *S*—The mucous flaps folded over the tube. It is well to loosen one flap more than the other, so as to bring the suture, *S*, a little on one side of the center.

Fig. 6 shows the cross section after the first flaps are in position.

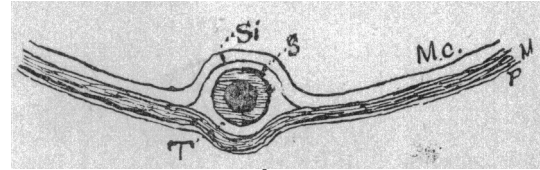


Fig. 7.

*S*—The suture of the first flap on one side of the tube. *Si*—The second flap lapping over the first suture, so as to come somewhat on the opposite side.

Fig. 7 shows both flaps in position, arranged so as to "break joints," which can be accomplished by pulling the edge of the second flap past suture *S*, and securing it by letting part of the stitches of the seam *Si* go deep enough to take hold on the surface of the first flap beneath it.

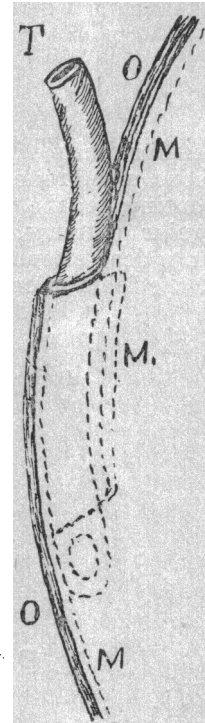
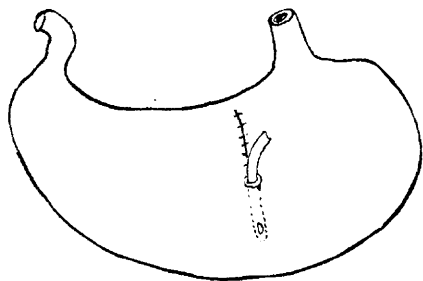


Fig. 8.

Diagram showing the relations of the tube to the parts. *T*—The tube. *O O*—The outer wall of the stomach. *M M M*—The mucous membrane.

Fig. 8 is a diagram showing the tube in position and enveloped in its double mucous flaps.

Fig. 9 is an outline sketch showing the tube in position, and the incision above it closed by a Czerny-Lembert seam. The dotted lines indicate the portion of the tube inside the stomach.



*Fig. 9.*

Sketch of the stomach with the tube in position.

The flaps having been carefully closed, the pro-lapsed portion of the stomach is returned to the interior, with the upper end of the tube projecting out of the incision. The stomach wound is then closed with a Czerny-Lembert suture, and the edge of the orifice, from which the tube projects, stitched to the skin. Finally, the wound in the abdominal wall is closed, except the point occupied by the tube. A small plug is inserted into the end of the tube, and the whole dressed antiseptically. I think it well to begin almost at once to put in a little milk with a syringe, so as to keep up general nutrition enough to favor union by first intention.

A female dog weighing forty-five pounds was subjected to this operation April 5, 1894. There was no leakage of the contents of the stomach whatever. At the end of a month she was in robust health, and on being killed May 4, the valve in the stomach was found in good working order, and readily pervious to tubes. We think that there might be a liability in some cases to a contraction of the external or internal orifice of the channel, and hence after the tube is withdrawn, it should be occasionally re-inserted to test the size of the channel, and if necessary to dilate it.

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## INSANITY; SYMPTOMS AND TREATMENT.

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Dr. Carpenter's "Principles of Human Physiology," tersely defines insanity to be "in its highest degree a complete disturbance of the intellectual faculties; the thoughts are not inactive, but rather far more active than in health; they are uncontrolled and wander from one subject to another with extraordinary rapidity; they twist and turn a single subject in every way; the faculties seem to have escaped from all restraint, thought after thought succeeding with such velocity that all power of perception is destroyed and the mind ceases to perceive impressions made upon the senses. The patient raves, unconscious of what occurs around him; he fancies that he hears voices, while ocular spectra excite further rhapsodies and a condition of delirium. The intellectual powers are disordered, depending upon structural disorder of the cerebrum. Disordered emotional excitement constitutes impulsive moral insanity or monomania, destructive in tendency and presenting examples, sometimes of homicide or suicide, without any apparent motive." Such cases, it may be added, can not always be attributable to perversions of the reasoning process, but arise out

of a perverted emotional state—the victims or subjects of which do not belong to the criminal class, though they may imitate their evil example, since it is well known that the consciousness of the performance of a certain act by one individual gives rise to a tendency to its performance by another.

Of other forms of insanity, there are mania—due to excessive cerebral action—and dementia, enfeebled action. Alcoholism, the puerperal state, fevers, chronic meningitis, or certain forms of inflammation, nervous shock due to wounds, loss of property, etc., all predispose to insanity, especially where heredity exists. The man whose insanity is often not so much as suspected, until he breaks out in a terrible and shocking crime, is the most dangerous person in the community. And here the opinion may be advanced that riots, murder and suicide would occur, perhaps, less often in some portions of our country if the people were more enlightened as to the origin and etiology of insanity. It may be asserted as a fact that the mass of the profession do not make the subject of insanity a specialty, but rather ignore it. The medical journals contain few publications on this theme. The *American Journal of the Medical Sciences* at one time contained a synopsis of the reports of superintendents of hospitals for the insane, prepared annually by the late Dr. Pliny Earle. Among the pioneers and co-workers in behalf of the insane in this country during the present century are Kirkbride, of Pennsylvania; Stribling, of Virginia; Nichols, of Massachusetts; Grey, of New York; J. Preston Jones, W. W. Godding and Miss Dix, first to suggest the founding of the Government Hospital for the Insane of the U. S. Navy and Army, and who also subsequently prevailed upon the governments of Europe to institute hospitals on the principle of those in America, which have contributed to rescue from a state of misery hundreds of the human race who would otherwise have died hopeless and forlorn. It is to be deplored that neither the State medical magazines or the JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION take any special interest in the subject of insanity, though the regular practitioner in town or country may occasionally receive the annual reports of such hospitals. Few medical colleges give instruction on the subject. Neither at the Universities of Virginia or New York is it embraced in the curriculum of study.

Happily, within the scope of the proposed Department of Public Health, recommended by the Committee of the AMERICAN MEDICAL ASSOCIATION, there is a clause to ascertain the extent, the origin and classification of insanity in the several States and territories of the country. In connection with the origin of insanity, it may be added that the Bible is not silent on the subject. In the Old Testament, when the Jews, the chosen people of God, incurred His displeasure, among other judgments inflicted was insanity; an example of which was presented in the person of the haughty King of Babylon. At the period of the New Testament times, when the Great Physician, the Savior, was on earth, mankind were submitting the insane to a most cruel and pitiable condition; cast out from human society and counted as possessed of devils as was the raving maniac of the tombs; no worse spectacle of misery in human guise could be presented when, by the magic presence and word of Christ all was changed, and the miserable victim afterward was found clothed and in his