

## Technical and Bibliographic Notes / Notes techniques et bibliographiques

The Institute has attempted to obtain the best original copy available for scanning. Features of this copy which may be bibliographically unique, which may alter any of the images in the reproduction, or which may significantly change the usual method of scanning are checked below.

L'Institut a numérisé le meilleur exemplaire qu'il lui a été possible de se procurer. Les détails de cet exemplaire qui sont peut-être uniques du point de vue bibliographique, qui peuvent modifier une image reproduite, ou qui peuvent exiger une modification dans la méthode normale de numérisation sont indiqués ci-dessous.

- Coloured covers /  
Couverture de couleur
- Covers damaged /  
Couverture endommagée
- Covers restored and/or laminated /  
Couverture restaurée et/ou pelliculée
- Cover title missing /  
Le titre de couverture manque
- Coloured maps /  
Cartes géographiques en couleur
- Coloured ink (i.e. other than blue or black) /  
Encre de couleur (i.e. autre que bleue ou noire)
- Coloured plates and/or illustrations /  
Planches et/ou illustrations en couleur
- Bound with other material /  
Relié avec d'autres documents
- Only edition available /  
Seule édition disponible
- Tight binding may cause shadows or distortion  
along interior margin / La reliure serrée peut  
causer de l'ombre ou de la distorsion le long de la  
marge intérieure.
- Additional comments /  
Commentaires supplémentaires:

Continuous pagination.

- Coloured pages / Pages de couleur
- Pages damaged / Pages endommagées
- Pages restored and/or laminated /  
Pages restaurées et/ou pelliculées
- Pages discoloured, stained or foxed/  
Pages décolorées, tachetées ou piquées
- Pages detached / Pages détachées
- Showthrough / Transparence
- Quality of print varies /  
Qualité inégale de l'impression
- Includes supplementary materials /  
Comprend du matériel supplémentaire
- Blank leaves added during restorations may  
appear within the text. Whenever possible, these  
have been omitted from scanning / Il se peut que  
certaines pages blanches ajoutées lors d'une  
restauration apparaissent dans le texte, mais,  
lorsque cela était possible, ces pages n'ont pas  
été numérisées.

# The Canada Medical Record.

Vol. XXII.

MONTREAL, JANUARY, 1894.

No. 4.

## CONTENTS.

<b>ORIGINAL COMMUNICATIONS.</b>		<b>EDITORIAL.</b>		<b>De la Méningite Tuberculeuse chez l'Enfant..... 95</b>	
Fell Method—Forced Respiration... 73		Lodge Doctors..... 94			
<b>SOCIETY PROCEEDINGS.</b>		<b>NEWS ITEM.</b>		<b>BOOK NOTICES.</b>	
The Montreal Medico-Chirurgical Society..... 88		International Medical Congress.... 95		The Medical News Visiting List for 1894..... 96	
Paralysis of the Arm following the Application of an Esmarch's Bandage..... 88				The Physician's Visiting List for 1894..... 96	
Myceloid Sarcoma of the Second Metatarsal Bone..... 88		<b>PAMPHLETS RECEIVED.</b>		<b>PUBLISHERS DEPARTMENT.</b>	
Upon Horse-Pox affecting the Cow..... 89		Exercise for Pulmonary Invalids... 95		A too Common Affront to the Profession..... 96	
Epithelioma of the Soft Palate, etc. 90		Outlines of Obstetrics..... 95			
Neurasthenia of the Stomach..... 92		Connecticut State Medical Directory..... 95			
The late Dr. William F. Hutchinson..... 93					

### Original Communications.

#### FELL METHOD—FORCED RESPIRATION.

*\*Report of cases resulting in the saving of twenty-eight human lives. History and a Plea for its general use in Hospital and Naval Practice.*

By GEO. E. FELL, M.D., F.R.M.S.  
Ex-President American Microscopical Society, etc., Buffalo, N.Y.

It may be well to premise what I have to say by calling attention to the meaning of the term *Forced Respiration*. We understand by *artificial respiration* an artificial method of breathing for an individual; but since forced respiration has been used, with the remarkable results

*\*Read before Section General Medicine Pan-American Medical Congress, Washington, D.C., September 7th, 1893.*

As this is the first report giving results of value on this subject presented outside of the members of home societies, and the knowledge of the subject being new to most of the members of the Congress, it is given in detail.

here recorded, it appears terms should be employed which would be distinctive, and some time ago I made a suggestion to the profession, which seems to have been quite universally adopted, to the following effect:

*Auto-respiration*: respiration by the individual for himself.

*Deep respiration*: forcible respiration by the individual himself.

*Artificial respiration*: This we understand to be that produced by the methods which have been suggested by Sylvester, Howard, Marshall Hall and others, in which movements of the limbs of the patients and pressure are made with the view of inflating the lungs. In many instances artificial respiration cannot be depended on to furnish a sufficient supply of air to the lungs, hence the need for the following.

*Forced respiration*: those measures by which air is forcibly passed into the lungs, according to the method first *systematically* used successfully in the saving of human life by the author.

The following cases are reported in detail simply to silence all doubters as to the serious aspect of each case, as in the intro-

duction of a new method into medical or surgical practice it is important to state cases fully. While some of these cases have been heretofore reported, the object of the paper would be rendered *nil* by mere reference to them, as the majority of the members of the Congress appear to know very little regarding the work accomplished by the methods described.

## REPORT OF CASES.

### CASE I.—DR. FELL.

At 12.30 a.m., Saturday, July 23, 1887, I was called to attend Mr. Patrick Burns book-keeper, residing at No. 49 Morgan Street. I found the patient in a semi-conscious condition. His wife reported that he had been drinking heavily for a week past, and had been in the habit of using alcoholic liquors to excess for ten or twelve years. His present excesses induced him to try chloral to produce sleep, but finding this unsuccessful, he added twenty grains of morphine,\* with the following result. According to his statement, he had taken the drug late on Friday afternoon, so that sufficient time had elapsed to permit complete absorption. When first discovered by his wife, he was breathing stertorously, and was with difficulty aroused. A draught of black coffee was given, which produced vomiting. On my arrival, I supplemented this with one of mustard, sodium chloride, and water, which effectually emptied the stomach. This produced no further effect, as the patient, left to himself, immediately passed into the deep, narcotic condition of opium poisoning. The pupils were markedly contracted, and it was evident a serious case was on hand. At this time I administered two cathartic pills which I had with me, and, at different times, minim doses of fluid extract of belladonna, sent for some atropia, and frequently administered the one-sixtieth of a grain hypodermically. To keep the patient awake, he was dressed, and two attendants walked him around the block in the cool, pure atmosphere of the early morning. At each round I examined him, and administered more atropia. The fourth or fifth round, when within one-half

block of the house, his limbs gave out, and while being tugged and jerked along, stertorous breathing began again; he was carried into the house, and laid on the floor, as I believed, to die. This was about 3.30 a.m. As the respiration failed, and the intervals between them lengthened, Sylvester's method of artificial respiration was employed, and kept up at intervals long after I had given up any hopes of the man's recovery and until I was thoroughly exhausted, and, further, without apparent benefit to the patient. In the meantime, I notified the family that the patient could not live.

At this juncture, Father Grant, of the Cathedral, appeared, and performed the last rites of the Catholic Church. At my suggestion, a bed was prepared in the front parlor of the house, and the patient laid upon it. From Mrs. Burns I obtained the data for the death certificate, which I confidently expected to file in the morning. I then took a last look at the patient, only to confirm my opinion that death was imminent, and then thought nothing more could be done. I was too thoroughly fatigued to think of forced respiration.

The pulse, before Father Grant came; had registered as high as 180, and before I left the house it could have been counted with difficulty: I considered it 200 or more. The respirations at 4 o'clock in the morning were five per minute, and, when I left the house for home, were intermittent, or with a long intermission followed by a few spasmodic respiratory efforts, and then apparent inanition for a time. I left for home a little after 5 o'clock in the morning, went to bed, and, after a sound sleep, was awakened by a call about 8 o'clock.

Dr. F. R. Campbell, who, through illness, had been unable to respond to an early summons from Mrs. Burns, called about 8 a.m., and finding Mr. Burns still alive, sent for me. I promptly repaired to the house, and indeed the patient was alive, with respirations, however, not more than one per minute, and the pulse with difficulty to be detected at the wrist. The extremities were quite cold; the face had assumed a cyanotic appearance; pupils still contracted. The doctor suggested that more atropia be given hypodermically, to which I assented. Together we repaired

\* Mr. Burns stated on questioning that he had a powder two inches long, three-fourths of an inch wide, and about one-fourth of an inch thick, and that he took one-half of it; on measurement, found equal to grains xx.

to the drug store near by, had some powders prepared, and on our return were surprised to find the pupils *widely dilated*; it is needless to say no more atropia was administered. The sudden dilatation of the pupils was undoubtedly caused by the paralysis of the nerve centres controlling the iris, and is one of the frequent conditions in the last stages of opium-poisoning and indicative of general muscular paralysis; it is also known as the "dilatation of asphyxia."

Dr. Campbell made the remark: "We can do nothing more now." I agreed with him; but recalling a case of opium poisoning in a Mr. Dyke, which I had lost about a year previous, and my views then entertained, I mentioned to Dr. Campbell my conviction that Mr. Burns' life might be saved by opening the trachea placing a tube in it, and with suitable apparatus keeping up the respirations until the poison could be eliminated. I informed him that I had the apparatus used on dogs in the laboratory of the college at my residence near by. He offered to assist if I would make the experiment. With the aid of a gentleman stopping at the house, I obtained the apparatus. On my way I asked Mr. G. H. McMichael, a medical student, to assist in the operation.

*Details of Operation.*—The tracheal tube was quickly cleaned with a bi-chloride solution, and the operation of tracheotomy begun at 9 a.m. The hæmorrhage was overcome before incising the trachea. The greatest difficulty was experienced in passing a ligature\* about the trachea, to prevent the air from passing up the throat. After this was accomplished we were ready to begin the respirations.

The blood passing from the incision was of a dark coffee color, indicating an extreme venous condition. Having been deeply occupied with the operation, I had not noticed the condition of the patient farther than to be able to state that no respiratory effort had been made for some time, and that the dark blue tinge of the face had materially increased.

We began the forced respirations. The lungs were inflated; not the slightest ex-

\* This is now obviated by placing a ring on the tracheotomy tube. The face mask will, however, take the place of tracheotomy or intubation in the great majority of cases,

piratory effort was made, indicating not only paralysis of the muscles of respiration, but loss of elasticity in the lung tissue. No mention has been made of the difficulty encountered after the patient revived and began to move uneasily about. These movements loosened the tube in the trachea, and started hæmorrhage, and as at this time the patient was depending upon the forced respiration for his life, the result was made uncertain. This was the most serious time in the operation. In the house were boarding three soldiers of the U.S. recruiting service, who were quickly summoned, and performed efficient service in restraining the patient. At this time, and before the tracheal tube was inserted, considerable blood passed into the lungs; it was subsequently coughed out at the opening of the valve of the apparatus. At 12 o'clock mid-day, after the forced respirations had been under way two and one-half hours, the ordinary tracheotomy tube was substituted for the tube of the apparatus, and the patient allowed to breathe for himself.

This case (No. 1) was reported in a paper read at the Washington International Medical Congress in 1887, and some two months afterwards Case No. 2 occurred in Vienna. It will be noted that my first case had been fully published previously. communicated with Professor Boehm of the Vienna Hospital, August 14, 1888, requesting an account of the second case of forced respiration. November 11, 1888, I received from him the following account of the case, which coincided with my views previously expressed regarding the value of forced respiration.

#### CASE II.

Professor Doctor BOEHM, Vienna, Austria.

ALLEGEMEINES KRANKENHAUS,

VIENNA, Oct. 21, 1888.

HONORED CONFRÈRE,

Having just returned to Vienna, I take great pleasure in answering your favor of August 14th, 1888.

There has as yet been no authentic report published of the methods which were employed in rescuing Dr. Langer from death by morphia poisoning, I therefore give briefly the important points of the case.

Dr. Langer took, between the 10th and

20th of September 1887 (nearly two months after Dr. Fell's first operation), six decigrammes (8.24 grains) of morphia dissolved in water. As his servant's attempt to awaken him in the morning was fruitless, a physician from the hospital was immediately called in, and he diagnosed morphia narcotism.

The pulse was very small and intermittent, respiration had nearly ceased, the number about five per minute. The pupils were contracted to the size of a pin's head and insensible to light; corneal reflex absent; deep coma; briefly, a typical case of narcotism by morphia.

The attempts to save the patient's life were now made.

The stomach was emptied of its contents and rinsed out with black coffee. This was followed by injections of ether, both of which were followed by apparent good results. After the respirations had increased to seven per minute, the patient was removed to the Royal Hospital, at which place artificial respiration was kept up from 8 a.m. until 12.30 p.m. As it was now apparent that artificial respiration was not sufficient to restore normal breathing, tracheotomy was performed. A canula connected with a bellows was introduced, and "forced respiration" (künstlich Luft eingeblasen) kept up for three or four hours. At 5 p.m. the use of the bellows could be dispensed with, and our attention entirely devoted to watching the natural respiration.

The attempts which the patient made to breathe for himself continued to increase in number, and the next morning he became conscious. Our subsequent treatment consisted in simply caring for the wound and in elevating and enlivening the much depressed spirits of the patient.

#### CASE III.—Dr. FELL.

Mr. J. A. V., aged 43, took two ounces of laudanum and some chloral about 9 or 10 p.m., Saturday, December 10, 1887. About midnight his wife heard him breathing heavily, and tried unsuccessfully to arouse him, and sent for a physician. Dr. Lawrence G. Hanley, of the Emergency Hospital, was the first to respond to the call, and was shortly thereafter followed by Dr. Jacob Goldberg.\* The condition of the patient

at this time, 1.15 a.m., indicated that a large dose of some powerful narcotic had been taken. Breathing was stertorous; pulse, 128; respirations, 6 per min.; and pupils contracted. At 1.40 a.m., Saturday morning, I was called, and found that the physicians were employing Sylvester's method of artificial respiration. Assuming, at their request, entire charge of the case, I had the patient placed upon a mattress on the dining-room table.

2.20 a.m.—The natural respirations ceased, or would last but a short time without the aid of the artificial respirations. Pulse, 72 to 84, indicating satisfactory oxygenation of the blood; however, the notes taken at the time show that the natural respiratory efforts were so irregular and deficient that it was difficult to count them.†

The inefficient character of the natural respirations, even when supplemented with the artificial method of Sylvester, was evidenced by the gradually marked increase of cyanosis. Previous to this, when noticing the first good results of the artificial respiration in this case, I informed the physicians that this would be a good time to effectually answer those who believe that artificial respiration would accomplish as much as forced respiration in cases of deep narcosis from poisons which act upon the respiratory centres. I informed them that if the life of the patient could be saved by artificial respiration, or by any other known means, my apparatus adapted to man should not be used. It was evident that the artificial respirations were doing little good, growing less and less efficient.

2.30 a.m.—Natural respirations, seven per minute. 2.40 a.m.—Natural respirations, stertorous, twelve per minute, but so "shallow" that little good was effected by them. 3.25 a.m.—Respirations failed. Owing to evident signs of heart failure, it was considered by all the physicians present that the life of the patient demanded the application of forced respiration. Time was given to demonstrate beyond question the

†This case is reported from full notes taken during its progress by the different physicians present.

\*This was the first case in which Dr. Fell's apparatus for use on man was used. Respiration was kept up for 14½ hours, which could not have been done under conditions existing with apparatus used in first case.

\*Dr. Samuel Goldberg was present later in the case; also a number of medical students.

uselessness of the artificial respiration, until it was feared that the patient might succumb before the forced respirations could be applied. 3.40 a.m.—Operation of tracheotomy begun. Blood venous. Dr. Hanley remarked at the time that it was "ebony colored." 4.05 a.m.—*Forced respirations* begun. In a short time the pulse became stronger and was reduced to 78 per minute. 5.30 a.m.—Pulse 102. 5.45 a.m.—Pulse 64. 6.25 a.m.—The patient, *up to this time insensible*, opened his eyes, stared in a half dazed manner, and raised his head above the pillow. He recognized Dr. Goldberg (by voice only, as afterwards stated), and, in answer to inquiries, stated that he had taken twenty grains of chloral with some stimulant. This was found to be untrue. 6.45 a.m.—First noted that when forced respiration is discontinued, not the slightest attempt at breathing is made by the patient, even when the cyanotic condition is extreme.

During the progress of the case water was frequently swallowed by the patient. In one or two instances the forced respirations were unintentionally kept up when the patient was swallowing. The glottis being opened at this time, water entered the lungs, and was subsequently coughed up and passed out of the valve of the apparatus.\*

7.00 a.m.—Pulse 96. 8.15 a.m.—Pulse 108. It was found that the patient could breathe for himself, but only for a short time, and forced respirations had to be continually kept up. 9.00 a.m.—The trachea tube not being secured tightly in the trachea, permitted quite an amount of blood to pass into the lungs and the air to pass upward into the mouth, so that the lungs were not thoroughly inflated at each inspiration. This blood gurgled ominously at each respiration. With a curved needle encircling the trachea, another ligature was passed and tightened about the trachea and tube, as the rings to the tracheotomy tube had not been devised or value of face mask known at this time. The forced inspirations following markedly improved the action of the heart.

\*This indicates, in part, the value of the application of the apparatus in cases of drowning; also that it would be objectionable to pass a tube into the larynx by way of the buccal cavity when the elimination of poison is important, as liquid, in swallowing, would be apt to enter the lungs. It indicates the value of the face mask in drowning. See later pages.

As the poison became more completely incorporated with the blood, the effect of even a short stoppage of the forced respirations was indicated in a weaker action of the heart. At one time the rubber tube connecting the respiratory or air valve with the trachea tube became almost completely clogged with clotted blood. It was removed and thoroughly cleaned, as was also the inner tube of the tracheotomy tube a number of times. Digitalis fluid extract, in half minim doses, was given a number of times, also atropia, one-eighth grain at one time and smaller doses also. No dilatation of the pupil took place at this time.

The question of keeping up the forced respiration when there seemed to be no prospect of the ultimate recovery of the patient was seriously discussed. I was urged to discontinue the respirations on account of the case being considered hopeless. At one time I stopped the respirations for a longer period than usual, thoroughly discouraged and tired. The man was not dead, and we had to keep it up.

11.30 a.m.—Drank some brandy and water; vomited. As the patient had at this time been given up to die, his family were permitted to see him and "bid him good-bye."

12.00—Pulse 117. Grain 1-75 of atropia administered hypodermically. 12.10 p.m. Face cyanosed; efforts to breathe made; twitching of toes; respirations not supplying air enough. 12.40 p.m.—Owing to a solution of atropia being placed on or in the eyes, the pupils gradually dilated.\* Pulse 126. 12.55 p.m.—The patient, who had become unconscious for a short time, regained consciousness and drank some water. Pulse, after drinking, 168, weak and flickering. After this, more air was administered by giving three movements of the bellows for the inspiration instead of two, as formerly.

3.20 p.m.—Temperature 100.5° Fahr. 6.00 p.m.—Pulse 120.

After nearly fifteen hours of forced respiration, at 6.15 p.m. the patient began breathing for himself. Respiration, fourteen per minute. This lasted fifty-five minutes, when the respirations lowering to *eight* per

\*This may not have been judicious, but it was done under the belief of all the physicians present that the patient could not recover.

minute, *at the request of the patient* the forced respirations were again proceeded with.

9.15 p.m.—Pulse 120; respirations, fourteen, natural; *becoming shallow, they were supplemented* with the forced respirations.

11.30 p.m.—Pulse 100.

December 11, 1887, 12 midnight. It is now twenty hours since the forced respirations were begun.

1.05 a.m.—Pulse 128, strong. The patient has been breathing for himself for the *last four hours, but has now requested that the forced respirations be used for a time.* Since then he has breathed spontaneously. For over fourteen hours he could not be left to breathe voluntarily, even for half a minute, without evident discomfort and danger, viz., between 4.00 a.m. and 6.30 p.m. of the 10th inst., *and for nearly seven hours thereafter* the natural had to be supplemented by the forced respirations.

4.00 a.m.—Pulse 117. Although oleum tiglii to gtt. v. has been administered, no movement of the bowels has taken place. Essence of pepsin, beef peptonoids, milk and spiritus frumenti given a number of times. Enemata of water, soap and water, with oil and stimulants, given also.

Every six or eight hours the catheter was used. Up to 12.30 a.m., 11th inst., and some twenty-seven hours after two ounces of laudanum had been taken, not more than six ounces of urine had been drawn from the patient. This large amount of poison (two ounces) had been going the round of the circulation, producing its maximum effect on the whole system. The left arm was partially paralyzed and the brain congested.

Between 3.00 and 4.00 a.m., 11th inst., bowels moved for the first time. At 7.00 a.m. the patient left the table without assistance, to use stool. At 9.00 a.m. the tracheotomy tube was removed, wound plugged antiseptically, and patient put to bed. Although very seriously ill for three or four days following, no serious lung difficulty set in, and the patient has fully recovered.

#### CASE IV.—Dr. FELL.

The following case I do not hesitate to pronounce one of the most remarkable in the annals of Medicine:

Julius Baere, a resident of Lockport, N.Y., aged forty-five years, of a nervous

temperament, a naturally lively disposition was subject, through ill health and mental suffering, to spells of melancholy, which were aggravated by several serious reverses in business and other matters which need not be stated. He was of medium height, weighed about one hundred and thirty-five pounds, and was in poor condition to withstand the terrible physical ordeal to which he was to be subjected. January 24, 1888, he left home for Buffalo, having previously obtained a two-ounce vial of laudanum. On his arrival at Buffalo he put up at the Continental Hotel, complained of not feeling well, ate very little supper, and retired to his room. This was the last time he was seen until he was found next day at three o'clock p.m., to all appearances, dead (so reported).

The first physician to arrive at the hotel was Dr. Luther Phillips, who, on examination, gave up the patient. The physicians from the Fitch Emergency Hospital, Dr. George E. Penrose in charge, next appeared, and administered brandy and ether subcutaneously. Drs. William A. Hoddick, Carlton R. Jewett, Hermon Mickle, John D. Flagg, and several others subsequently were present during the progress of the case, and without exception gave it up as hopeless. Coroner Kenny was summoned, and, before leaving his office, telephoned to Undertaker Rodney to go to the hotel with a coffin, which he did.

The two-ounce vial of laudanum was empty; the throat of the patient was cut, severing the trachea and anterior jugular vein; it was found also that the left arm had been incised with the razor so as to clearly expose, without opening, the basilic vein. At this time the patient was making a faint gasp once in about ten seconds, and breathing through the hole he had made in the trachea.

On arrival at 5 p.m., Jan. 25, I found the corridor and bed-room filled with physicians and laymen, the patient lying on the right side of the bed. Hæmorrhage extensive;—as an indication, it may be mentioned that the right side of the over- and undershirt, the shirt-sleeves to the wrists, right end of pillow, and side of mattress were literally soaked with coagulated blood. A tall slop-jar at head of bed was one-half full of blood and water. The pupils contracted, pallor of face and

an occasional gasp, only indicated that life existed. No pulse at wrist, and fluttering movements of heart on auscultation; skin cold; patient had a cadaverous appearance, and, of course, was unconscious. The physicians had ceased their efforts at resuscitation. Dr. William A. Hoddick reported the condition of the patient at time of my arrival as follows:—"Skin cold, cadaverous appearance, lips colorless, the pallor of death apparent, extremities cold, pulse almost imperceptible, only a slight fluttering of the heart could be discovered, eyes insensible to light, pupils completely contracted, but little blood in the body."

My first marked interest was in noting that the incision in the trachea was just suited to my tracheotomy tube, which I immediately inserted, causing a reflex inspiratory spasm. Within one minute from the time I entered the room I was practising forced respiration upon the patient.

Within a few minutes the cyanotic condition slowly passed from the face. Forced respiration being kept up steadily, in about three hours, at 8 o'clock p.m., the pulse could be detected at the wrist and the patient showed signs of consciousness. The bowels moved freely, great quantities of stercoraceous matter passing from the patient. At 9 p.m. the patient became fully conscious of his surroundings and condition. Contraction of the pupils continued, showing continued effect of the narcotic. When forced respiration was discontinued, an occasional attempt at respiration was made; at no time, however, during the first ten hours while the instrument was in steady use, would he make more than two or three attempts at respiration without it.

As he gradually became weaker from continued movements of the bowels and frequent attacks of vomiting, attempts were made to nourish him. The most easily assimilable substances were rejected. Milk and lime water, peptonized liquids, liquid and powdered peptonoids, iced champagne, brandy, etc., were used, but the stomach would not retain them; vomiting continued; the patient approached the stage of collapse; brandy hypodermically was frequently given without marked benefit. The action of the heart was of a bounding, uncertain character undoubtedly produced

by a deficiency of blood upon which to work. At one time stercoraceous vomiting set in,—in fact, a most deplorable condition existed. It was decided to attempt the introduction into the circulation of a saline fluid by the transfusion method. I repaired to the Fitch Accident Hospital, secured the apparatus and the assistance of Dr. Penrose, who with Dr. Mickle opened the conveniently exposed basilic vein of the left arm, introduced the transfusion canula, and allowed about six ounces of the fluid to slowly mingle with the circulation.\*

No apparent change in the condition of the patient was noticed from this injection; the forced respiration was continually kept up, and the life of the patient depended upon it, as all other means taken would have proved futile without it. At this time no pulse at the wrist could be detected for fifteen minutes at a time: the carotid pulse could be made out at all times. Continuing the work through the night with the aid of my class of students from the college and a number of physicians, toward early morning the opinion still prevailed that the case was hopeless. The wife and daughter of Mr. Baere were called in to see him. Their presence, with that of Mrs. A., the wife of the hotel proprietor, seemed to cheer him up. Mrs. A. urged me to discontinue the work of resuscitation, on the plea, shared by all, that it was only prolonging the misery of the patient, and the case was hopeless. I urged, as in my second case, that a physician was not justified in giving up until life became extinct, and kept the forced respirations under way. The unsuccessful attempts at feeding by the stomach had been discontinued for a time after the stercoraceous vomiting. The nourishment of the patient, however, had become a matter for serious consideration, and, at the suggestion of Dr. C. R. Jewett, half teaspoonful doses of Cibil's Fluid Extract of Beef, diluted with a little carbonic acid water were administered. This was the first substance to be retained; the dose was repeated, increased, and at last the patient showed signs of improvement.

Some twelve hours after we had been at work, the satisfactory result of forced res-

\*The formula for this fluid was as follows: ℞.—Sod. carb., grs. iij; Sod. chloride, grs. xviii; Aquae ℥ viij. Misce. Inject one to six ounces.



piration, as a means of breathing for a human being, was demonstrated in the passive condition of the patient. During the forenoon the effect of the narcotic gradually passed away, the pupils dilating more and more. The condition of the patient was such, however, that he could not breathe for himself for any time without evident discomfort and risk. The forced respiration had to be kept up. During the day, many physicians and laymen visited the room and witnessed the steady action of the apparatus. Noon passed, and yet the patient could not be left to breathe for himself. At 1.30 p.m., however, nearly one full day (twenty and one half hours) after the forced respiration was begun, Mr. Baere began to breathe for himself. In a few hours he became so fatigued that he begged to have the forced respirations resumed, and the little instrument was again called into action, quieting and easing the patient. Several times this was done before he continuously breathed for himself, thus making the use of the instrument to cover more than a day before it was laid aside for good. Towards evening the temperature of the room in which the patient lay became so cold that he was transferred to a warmer and better location. Under careful treatment he rapidly improved, but complained of constant pain in his chest. It was feared that pneumonia would set in, as the respirations were somewhat rapid. It did not, and there was nothing to indicate that the lungs were unfavorably affected by the long continued forced respiration. Within five days after the operation, the patient was transferred to the Hospital of the Sisters of Charity, and his temperature was normal and pulse 96. The pain in the chest was found to have been caused by the hypodermic injections, given at a time when the circulation was so inactive in the surface capillaries that gangrene was produced by them. The poor fellow suffered for months after the operation from this cause. The greater portion of the left breast sloughed down to the ribs, and in the right thigh an abscess, produced from the same cause, appeared, which, when first opened, on the 20th of February, gave out a pint of pus. There is, then, a possibility of overdoing the hypodermic treatment where a large quantity of blood has been lost. I do not hesitate

to state my belief that Mr. Baere would have been in condition to leave the hospital within two weeks of the date of the operation, had it not been for the result produced by hypodermic medication. At this time following it, his throat was closed up and in good condition. He was able to walk about and do light work long before he left the hospital, and when he did so was in better physical condition than he had been for years.

Regarding my first three cases, there is no question as to the outcome, had any other means been tried to save them. Forced respiration alone is to be credited with the saving of these lives to future usefulness. To demonstrate beyond question the thoroughness of the work accomplished, at my request Messrs. Burns, Van Orden and Baere, all in good health, appeared before the Fourth District Branch of the New York State Medical Association, at its meeting in Buffalo, May 8th, 1888, where I gave a preliminary report upon the subject of this paper. To the insurance companies this work was a boon, as it saved to them some \$23,000 life insurance. But how trivial is this compared to the saving of human life and the future possibilities of this operation!

#### CASE V.—DR. FELL.

This case is taken from the records of the Emergency Hospital, where it occurred, and is reported by the house physician, Dr. J. F. Mulherin.

Hospital Case No. 1,000.—Peter Church, aged 80, U.S., admitted May 18, 1888, 8.30 p.m. This man was brought in ambulance from 126 Mohawk street, where he was found in a dazed condition. Patient had stated to friends at this place that he had taken laudanum; empty bottle shown to ambulance attendant. On admission, patient unconscious, pulse full and strong; 84 per minute; respirations about 10 per minute; pupils contracted down to pin points.

Emetics administered; atropia, gr. 1-100, hypodermically and catheterization at 8.35 p.m.; repetition of atropia, gr. 1-100, in ten minutes. Artificial respiration by Sylvester's method at 9 p.m.; heart failed, and respirations about three or four per minute; respirations gradually became imperceptible; atropia, gr. 1-100; also

brandy and digitalis given hypodermically.

At 11 p.m. Dr. Fell was called, and tracheotomy with forced respiration determined upon. Present, Drs. Fell, Heath, Mickle and Mulherin. Trachea opened and tubes inserted by Dr. Heath at 10.25 p.m.; forced respiration commenced; patient seemed to revive; pulse became fuller, was irregular; color in face returned, and at 12.15 a.m. patient first opened his eyes. Stomach tube introduced to wash out contents, at 12.30. Injection of soapsuds per rectum, 1 a.m. This found inefficient, and gtt. ii. olei tigllii administered at 1.15; urine again drawn at 1.45. Signs of returning consciousness at 2.30; patient opened eyes and lifted hand. Between 2 and 3 a.m., condition good, pulse full and regular; vigorous slapping of face and yelling in ears elicited no response; 3 a.m., pulse 90; 3.45 a.m., patient suddenly raised his arms and attempted to speak. At this time the forced respiration was discontinued, but patient refused to breathe. At no time since the operation was begun has the patient been cyanotic. At 4.15, patient again threw his arms about, and, in answer to a question, said he was "awake." Hæmostatic forceps removed from neck after vessels were ligated, slight hæmorrhage. Respiration continued; 5 a.m., patient opened eyes, became somewhat convulsed, and again relapsed into a state of unconsciousness; two ounces of nitre given by mouth, and stimulants through the air-heating section of the apparatus. At 5.15 a.m., bellows working at the rate of 108 movements per minute, patient by this means receiving 21 respirations to the minute; pulse good and color of face normal; 5.20, air-heating apparatus again used; 5.40, heated air discontinued; 5.50, urine drawn; 7.00 a.m., face and hands more cyanotic, pulse 90, temperature 99.5° Fahr.; 7.30, pulse growing weaker, patient somewhat cyanosed; 8.20, failing; 9.00 a.m., pulse 88, heart very weak; 9.30, pulse varies, becoming alternately strong and weak. At no time during the operation has the patient been able to breathe of his own accord. At 10.00 a.m., pulse 90, temperature 98°; peptonized beef extract given per rectum. 12.45 p.m., patient made a few convulsive efforts to breathe, again relapsed into un-

consciousness, pulse becoming very weak and feeble; patient grows pale; skin cold. Complete cessation of pulse at 1.10 p.m. May 19; patient dead; forced respiration discontinued, and instrument removed at 1.13 p.m.

In this case the patient was kept alive by the forced respiration for fourteen hours and ten minutes; and it is reasonable to infer that his life was prolonged at least twelve hours longer than it could have been done by any other methods known.

#### CASE VI.—Dr. FELL.

May 26, 1888, I was called to the residence of H.C.F., Delaware avenue, Buffalo, and found his eighteen-day-old infant held by a nurse in a tub of warm water; body deeply cyanosed; an occasional gasp indicated that life still existed; pupils contracted; reflexes absent. Inquiry elicited the following history: a homœopathic practitioner of Buffalo had been called to prescribe for the child. He took out of his case a powder containing morphiæ sulphat, gr. j. By some psychological freak, he directed the nurse to give it to the babe, thinking he had replaced it in his case and handed her a harmless powder in its stead. Some time after the physician had left the house, the nurse called the child's mother's attention to the supercription on the powder,—morph. sulph. gr. j.—and with the probable belief that all homœopathic (?) medicine was harmless, the fatal drug was placed in the mouth of the little one at 12.45 p.m., and all absorbed. At 2.30 p.m. the child was discovered in convulsions, a physician Dr. A. M. Curtis, summoned, and the usual steps taken to resuscitate. When it is considered that the quantity of morphine taken was equivalent to about seventy doses for an infant of this age, it appears a hopeless task. From 2.30 until about 4.30 p.m. artificial respiration was used with little benefit. It was nearly 5.00 p.m. before I arrived at the house, and with difficulty in one so young, only to be appreciated by experience, I made tracheotomy. Previous to the trachea being reached, respirations would cease; but by placing my mouth over the nose and mouth of the babe, and forcibly blowing; the lungs were inflated, resulting in keeping up the action of the heart until the

trachea could be irritated. Irritation of the trachea, followed by incision, seemed to stimulate the respiratory centres for some time, but as the case was approaching a crisis, at last a small-sized catheter,  $\frac{1}{8}$  inch external diameter, was used to make connection with the trachea, and by an increasing series of larger tubes, this was connected with the tube from the air-valve of the forced respiration apparatus. About 6 p.m. the forced respiration was begun, Dr. A. M. Curtis giving valued assistance in holding the small tube in the trachea. In fifteen to twenty minutes the cyanotic condition passed away, the child steadily improved for an hour, when the cyanosis returned. Examination revealed that the tube had slipped out of the trachea. After replacing, forced respirations were continued, and natural hue of health returned. The pulse improved, ranging for a time at 134 per minute. Drs. W. H. Heath and Geo. W. T. Lewis were called in to assist. Natural movements of the limbs returned, reflexes again established, the limbs moved, bowels acted freely, and eight or ten natural respirations were taken. Hopes for recovery were almost entertained from the remarkable changes produced by the forced respirations, but at 9.30 p.m. the little heart ceased beating.

In this case, no less than in those preceding, the result of forced respirations was remarkable. The infant, only eighteen days old, had for five and one quarter hours been subjected to the influence of one grain of morphine, in an asphyxiated condition for at least four and one-quarter hours, thus weakening the muscular tissue of the body. Under forced respiration life was retained, with the results mentioned, for three and one-half hours. I hazard the opinion that if forced respiration had been instituted within the first two hours, the results might have proved different.

June 18, 1888, I was called to attempt the resuscitation of a still-born babe. No heart action could be detected. A catheter was placed in the trachea by intubation method, connected with the forced respirator, lungs were inflated and expiration produced by pressure; no results. The child was undoubtedly dead before the forced respiration was begun. The

feasibility of the operation was demonstrated.

#### CASE VII.—Dr. FELL.

Frederick Ryers was found in front of an "opium joint," and taken to the "Emergency" hospital. His condition was so serious that the house physician sent for me. Cyanosis was marked, absence of reflexes, contraction of pupils, spasmodic respiration, doing little good. Tracheotomy made. Blood venous. Forced respiration was kept up, calling the heart into positive action, and causing the return of the pulse at both wrists, and a change from the venous to the arterial state of the blood at the wound in the neck. Reflex action could not be induced; the brain tissue did not respond to the revived circulation, and the pupils continued dilated. The action of the heart kept up for about an hour before final stoppage. A few days previously I had had at the same hospital a case in which the patient was saved without resort to forced respiration, although the indications were such as almost to warrant the operation. I was preparing to operate, when, a slight improvement being noticed, I desisted, and the patient recovered without requiring tracheotomy. Influenced by this case I waited too long with Mr. Ryers, until, in fact, the pulse was lost at both wrists, and, on auscultation, no action of the heart could be detected.

#### CASE VIII.—Dr. FELL.

I was called to attend a case of "still-birth" by Dr. Geo. R. Stearns. Face presentation. Application of forceps in delivery had ruptured brain tissue, producing, as was subsequently ascertained, sufficient hæmorrhage to prevent resuscitation. Previous to my arrival, the nurse had kept up the action of the heart by mouth to mouth insufflation. Cyanosis was extreme. As I did not wish to attempt tracheotomy, for a time I resorted to the same means.

This not giving satisfactory result, the tube connecting with the air control valve of the apparatus was placed in the mouth of the infant, the nostrils closed, and the lips compressed about the tube, and forced respiration instituted. The change was immediate. Cyanosis passed away, the heart action became good and full, reflexes of the

lower limbs were induced, but no change in brain could be produced. After four or five hours work it was evident that the brain was so injured that it was useless to proceed further, and forced respiration was discontinued.

The value of this case is, that it demonstrates that forced respiration may be carried on without tracheotomy, showing that in many cases it could be applied through the medium of a suitable mouth-piece, and again illustrating its marked value over artificial respiration which would have proved entirely useless. It was the experience obtained in this case that enabled me to hold the life of my next patient until forced respiration could be systematically applied, and by which the patient was saved.

#### CASE IX.—Dr. FELL.

June 21, 1889, I was called by Dr. J. S. Armstrong, about midnight, to attend Mr. S. F., a grocer, troubled with melancholia. Dr. C. C. Fredericks was called in to assist. The previous evening the patient had taken Tr. Opii  $\zeta$ ij. Evidences of approaching death from the poison were noticeable. Patient placed on a table, and an incision for tracheotomy made. Blood in incision purple. Dr. Fredericks informed me the patient was dying, the pupils dilating (dilatation of asphyxia). The tube of the apparatus was placed in the mouth of the patient as in previous case, the lips tightly compressed about the tube, the nostrils closed, and forced respiration kept up for a short time. The lungs were inflated, the blood in the wound changed to arterial, and the pulse improved slightly. The tracheotomy was then proceeded with, but before its completion it became again necessary to inflate the lungs through the mouth. On the institution of forced respiration per tracheotomy tube, the cyanosis rapidly passed away, the pulse became stronger, and in about thirty minutes the patient became conscious. After about eleven hours of forced respiration, auto-respiration was established, and the patient made a good recovery.

#### CASE X.—Dr. FELL.

October 11th, 1889, this same patient took another two ounces of Tr. Opii, together with five to ten grains of morphia. With Dr. Armstrong I performed trache-

otomy over the wound of first operation, and after fourteen hours of forced respiration, the patient was again rescued and made a good recovery, the wound in the neck closing completely in eight days.

These two cases resulted in the preparation of the face mask, which marks an important era in the evolution of forced respiration, and brings the operation to that degree of simplicity that it may be readily utilized by physicians unwilling to make tracheotomy, and the crews of life-saving stations who can readily be instructed to use the method per face cup when it would be entirely impracticable without. The late Capt. D. P. Dobbins, inspector of life saving stations on the great lakes, was much impressed by the results of my method per tracheotomy, but admitted that it could not be put into operation by the crews at life-saving stations. Now, however, the method per face mask makes it *par excellence* the only method which should be in use at these stations.

#### CASE XI.—Dr. FELL.

A young woman had taken one or two ounces Tr. Opii. Artificial respiration failed. Forced respiration for four hours, with face mask, saved patient.

#### CASES XII., XIII., XIV.

Dr. C. R. Vanderburgh, Columbus, Ohio, reported three cases saved by face mask.

#### CASE XV.—Dr. FELL.

A woman had taken an uncertain amount of morphia,—a large amount, however, as was evident from the effect produced upon her. About midnight a physician was called, but refused to attend, so that she was under the influence of the narcotic all through the night, until about 10 o'clock the next morning. I was called at 9 a.m., and arrived at 9.30. I ascertained there was no pulse at either wrist, but on auscultation found the heart faintly acting, cyanosis deep. I then had her placed on a mattress in an adjoining room, and with the face-mask, air-control valve and the bellows, went to work. It was fully an hour and a half before the pulse at the wrist could be detected. The woman became conscious, sat up, and asked for a drink. In the middle of the afternoon Dr. Porter came in to witness the operation, and offered his assistance, which was

accepted. It may be stated, that when a person is very deeply narcotized with forced respiration, we may occasionally produce a conscious condition, but the patient will again pass under the influence of the narcotic, and become utterly unconscious. You may breathe for him for half an hour at a time, yet there will be no evidence of life except the action of the heart and the fact that the blood is supplied with oxygen. So this patient would occasionally become conscious. During one of these conscious periods, Dr. Porter, who had been standing in one corner of the room, came forward, and began to perform Sylvester's method of artificial respiration, with the object, I presume, of demonstrating that it would accomplish as much as what I was doing. He understood how to apply that method from previous experience. All watched the result with interest. In a little while the cyanotic condition began to appear along the face, gradually becoming deeper and deeper. I said: "Doctor, you see now just what the result is."

"Yes," he said, "there is no question about it."

We then renewed the forced respiration with the face-mask. In a short time the cyanotic condition disappeared, and the woman again became conscious. I kept up forced respiration with this woman until she revived again and began to be in quite a jovial condition, and, as I thought, was perfectly safe. Then Dr. Porter desired to try the Faradic battery, which I consented to, regarding the woman's condition as such that, were it again necessary, we could at any time rely upon the forced respiration again. I was anxious, of course, to report this as another case of life saved by forced respiration. After breathing some eight hours, and carrying the case through the most critical period, we called the Faradic battery into play. But what is the result of faradization in a case of that kind? Merely the stimulation of the heart at the expense of its energy. However weak the current may be, if you obtain any heart action it is of a tonic nature, and is secured at the expense of the energy of the heart muscle. What we need to look out for in such a case is to conserve the energy and the vitality of the heart muscle. In this case the result was, that in about three quarters of an hour

after the faradization began, the heart stopped beating, spasmodically. This case was lost through faradization.

#### CASE XVI.

Hospital case reported as saved by the Fell method. Particulars not obtained.

#### CASE XVII.—DR. FELL.

Sunday morning, March 1st, 1891, at 3.20 a.m., I was called to the residence of Dr. Harrington, on Franklin street, and there found a young lady who had taken a large dose—about 15 grains—of morphine. At 3 a.m., Mr. Harrington, sr., had noticed stertorous breathing. He arose, looked at the patient, but concluded it was nothing more than a very deep slumber. The condition continuing, however, he called Dr. Harrington, who examined the patient, finding her in a comatose condition, cyanotic, pupils markedly contracted, and a bottle of morphine on the table. She had written two or three letters which clearly indicated the cause of the trouble.

I immediately proceeded to forced respiration with the face-mask, which resulted in overcoming the cyanosis and producing an improvement in the heart action. We continued forced respiration with the face-mask until 6.30 a.m., when it was observed that the cyanosis was again increasing, and the condition of the patient growing more and more desperate. No evidences of consciousness were present. By shouting into the ear, ocular reflexes were noticed in a contracting of the orbicular muscles. There appeared to be no hope of recovery at this time.

With Dr. Harrington's assistance we made tracheotomy, and inserted the tracheotomy tube, as arranged for forced respiration, into the trachea. Connection was then made with the apparatus, and forced respiration kept up. The improvement on the employment of forced respiration by tracheotomy over that produced by the face-mask was evident. The chest movements were greater, and the results were more satisfactory in many respects. However, of so serious a nature was the condition of the patient at this time, that not one present expected other than a fatal termination. No pulse existed at either wrist; auscultation could detect no heart movement, either by Dr. Harrington, myself, or the students present. Two

conditions, however, appeared to indicate that life was not extinct: the pupils continued contracted, and cyanosis did not supervene. The glassy stare of the eyes was present, and outside of the two favorable conditions mentioned, it appeared that death could not be far off.

At this point Dr. Harrington's father made the remark, that if this young lady was made to live it would indeed be "a miracle." However, I kept up the forced respiration, saying that I would do so for a little while longer, "just for the fun of it." In a short time auscultation on the part of Dr. Harrington gave us the satisfactory information that the heart was beating. In the course of a few hours these reflexes were more and more marked, and consciousness supervened. Forced respiration was continued through the forenoon and until late in the afternoon, making some twelve to fourteen hours of continual forced respiration before the patient could be allowed to breathe for herself. She has made a good recovery. In this case artificial respiration would at no time have been of any avail to the patient.

#### CASE XVIII.—DR. FELL.

Sunday, March 15th, 1891, at 11.30 a.m., I was called to attend Joseph Altieri. A prescription containing phenacetin, morphine, and cocaine in small quantity, had been prescribed by the attendant physician for neuralgia of the stomach. The patient had taken repeated doses, without regard to instructions upon the prescription, until a large poisonous dose of these very dangerous drugs had been taken. At 11.30 a.m., forced respiration with the face-mask was commenced, and quickly overcame the marked cyanosis, which was intensified undoubtedly by the phenacetin. With the face-mask, forced respiration was kept up all the afternoon, the patient at times becoming conscious. The cyanotic condition seemed, however, to increase, owing to the base of the tongue falling back and occluding the larynx. A ligature was placed through the tongue and the organ pulled well up, with the result that the lungs were more readily inflated.

In this case oxygen gas was administered in connection with the forced respiration apparatus, it being supplied in greater

or less quantities, as seemed to be desirable. At times the amount of air passing to the stomach and bowels was so great as to markedly distend them, thus interfering to a certain extent with the inflation of the lungs by the forced respiration, and indicating one of the difficulties to be met with in forced respiration with the face-mask. In the afternoon the patient became comatose, and responded very little to the respiratory work. During the evening it was evident that the patient was not progressing satisfactorily, the influences of the poisons being peculiar in their action, there not appearing to be any elimination of the drugs, although the catheter was used as often as was necessary, and the antidotes which seemed to be indicated, and stimulants, such as digitalis and alcohol, injected hypodermically. At 10 p.m., Sunday night, I made tracheotomy, and forced respiration was then kept up by the direct method. The result, as in the former case, indicated the very great readiness with which the method could be used in the inflation of the lungs; and the patient was apparently holding his own. I left for home at 11 p.m., trusting that the patient would be in good condition in the morning.

An army of students was present to assist in the work of respiration, and with Dr. Harrington they kept faithfully at work through the night, until 5.30 in the morning. At this time the patient was breathing with comparative ease, and the prospects looked encouraging. However, a spasmodic contraction of the stomach occurred; its contents were ejected with force. Every effort was made to prevent any of the vomited matter from passing into the lungs, but the spasm resulted, however, in the ceasing of the action of the heart, and the labor of eighteen hours was lost.

The necessity of something other than manual labor in the forcing of a column of air into the lungs was strongly demonstrated in this case. Although there were plenty of persons present—the students, and the relatives of the patient—who performed all the labor required, no one who has not witnessed a case of forced respiration can really appreciate the amount of energy expended in respiring for a human being, be it even so easy comparatively as

by the method used in forced respiration.

This is the first extended case in which oxygen gas was administered in conjunction with the forced respiration. The results were satisfactory, but the odds against which we were fighting—the combination of deadly drugs which had been taken—were too much for even an expectation that success would crown our efforts. With morphia alone in large quantity, I believe the patient would have been saved.

CASE XIX.—DR. FELL.

The value of forced respiration as a tidying-over measure in various conditions was exemplified in the following case: An old lady, seventy-three years of age, had taken, through the carelessness of a druggist, a dose of aqueous solution of corrosive sublimate. Its influence on the nerve centres produced shock; cyanosis was present, and death, which seemed inevitable, would soon have ensued. Forced respiration with the face-mask, easily applied, toned up the system, respiration was much improved, and the patient lived about two days longer for the treatment.

CASE XX.

In the surgical clinic of Dr. Hal. C. Wyman, Detroit Emergency Hospital Reports, reported by Dr. Robert S. Linn under Fell's operation for morphine poisoning, etc., as follows:

"Miss C., æt. 21, had taken 20 grs. morphinæ sulph. about one hour before the ambulance was called. Her condition when brought to Emergency Hospital was critical. Pupils were much contracted, and did not respond to light. Respirations were only five a minute and pulse quite weak. The stomach was evacuated of its contents with stomach pump, and about one pint of strong coffee injected into it. About 16 oz. of urine were drawn from the bladder. A hypodermic injection of atropiæ sulph., grs. 1-60, was given, and artificial respiration performed without benefit. An incision  $2\frac{1}{2}$  inches long was made in median line over the trachea, tracheotomy performed, forced respiration kept up for about three hours, and the life of the patient was saved."

CASE XXI.—DR. FELL.

I was called by Dr. Eli H. Long to attend a case of opium narcosis in a lady seventy-eight years of age. She had taken a

large quantity of gum opium. Respirations shallow, fourteen per minute, pupils contracted, coma existing. Face-mask applied, and used about eleven hours, when tracheotomy was made, but too late to save the patient. Convulsions set in, and continued uninterruptedly until death ensued. A mistake was made in this case in not performing tracheotomy sooner. With the face-mask the cyanosis was not satisfactorily overcome. Extension of the head, which was used with success for some time, had finally no influence in raising the epiglottis. A ligature through the tongue, by which the base of the tongue was raised, worked better. The cerebral hemispheres were greatly congested. Free venesection would have been beneficial if performed in season. The indications for tracheotomy existed for some time before it was made.

CASE XXII.—DR. FELL.

I am under obligations to Dr. Allen A. Jones, instructor in practice, Medical Department University of Buffalo, by whom I was called, for the following report of this case, in which the face-mask demonstrated again its great value in a typically appropriate case.

"About 4 o'clock on the afternoon of Thursday, October 8, 1891, I was hurriedly summoned to the house of a former patient, and found her lying on a sofa-unconscious, extremely cyanosed, her lips and ears being blue; her pupils were contracted almost to pin points, and her respiration was of the Cheyne-Stokes character, ceasing entirely for two or three full minutes, then coming with peculiar groanings and whistlings, which died away until respiration ceased.

"I had been told over the telephone that she had taken morphine, but I did not know how much.

"Her pulse was frequent and small, but yet of good strength when I first arrived. I sent for Dr. George E. Fell without delay, with instructions that he should bring his apparatus for performing forced artificial respiration.

"While awaiting his arrival, with the help of those about me, I succeeded in restoring some color to the lips by artificial respiration (Sylvester's method). The pulse grew weaker and weaker, and

the heart almost ceased beating before Dr. Fell arrived.

"It was impossible to give emetics per orem, so we gave one-fifth of a grain of apomorphine hypodermically, as soon as Dr. Fell arrived. Then with the patient on the table we instituted forced respiration (by face mask).

"The patient's lungs filled easily and well without tracheotomy.

"We breathed for her steadily for about one hour, and then she moved her hands to her face and opened her eyes. Her cyanosis had entirely disappeared, and good oxygenation was manifest. The face-mask was taken off, and the patient breathed for herself in a long, slow, sighing fashion several times, but ceased entirely after a few minutes. The lips turned blue once more, and she would inevitably have died had we not recommenced forced respiration again. Very soon she was again able to breathe alone, and temporarily stopping the forced respiration, we gave her mustard water, and she vomited profusely. We repeated the mustard water, but she did not vomit; her head fell back, respiration ceased, and again she was turning blue when we applied the face-mask and used forced respiration for the third time.

"After a short time we induced her to swallow another large cupful of warm water and mustard with a teaspoonful of salt in it, with the result that she emptied her stomach completely.

"As is common in conditions where the respiratory centre is benumbed, emesis seems to stimulate that centre, and respirations were more willingly taken. Even at this junction, however—being about two and one-half hours from the time that forced respiration was commenced—she would certainly have died had it not been continued, as it was, altogether for four hours. At the expiration of that time she breathed herself seven times in the minute, and in the morning her respirations were 20, her pulse 80, temperature 101°.

"Dr. Herbert U. Williams, who kindly remained all night with the patient, stated that the pulse gradually fell, and the respirations gradually increased from hour to hour; that he gave her a hypodermic of atropine (the one-hundred-fiftieth of a

grain), of strychnine (one-sixtieth of a grain), and of tincture of digitalis (fifteen drops), about 11.30 p.m. At 1.30 a.m. she had a cup of strong coffee, and a glass of warm milk at 2 a.m. At 2.30 a.m. she urinated freely.

"This patient said she took eleven grains of morphine dissolved in a glass of water at 1 o'clock on the 8th. I saw her at 4. Dr. Fell arrived about 4.30; we performed forced respiration until 9 o'clock, with the result that the woman's life was saved.

"I am convinced that ordinary artificial respiration would not have saved her life, and I cannot speak in too high praise of Dr. Fell's effectual and simple apparatus for forcing such a patient to breathe, if necessary, for many hours in succession. I think more physicians ought to possess and have in readiness Dr. Fell's apparatus, and many lives would be easily saved, where now they are lost because no such facility is at hand.

"It is interesting to note in this case that diplopia existed from the return of consciousness on Thursday evening until some time Saturday morning; and for four days the patient thought a cup of food, or whatever it might be in her hand, was held at the lips, when in reality it was four inches from them, and at first she poured out milk and tea upon her dress."

#### CASE XXIII.—DR. FELL.

December 1, 1891. Called to Erie County Penitentiary by Keeper Albert H. Neal. Geo. C. W., a prisoner, had taken tincture of opium, 3 oz., and a quantity of sweet spirits of nitre, with suicidal intent, at 1 p.m.

Grains 1-10 apomorphia hypodermically administered by Drs. Fohl and Hays, resident physicians, produced vomiting. I reached the case at 3.10 p.m. The conditions usually produced by the poison were present. After about one half-hour's forced respiration work per the face-mask, the cyanosis prevailing passed away, heart action became stronger, and patient became conscious at short intervals of time. This condition prevailed under forced respiration for some four hours, then auto-respiration ensued. The stupor was unusual, and I ascribed it to the intense congestion of the encephalonic vessels. Death, I believe, has been caused in several of my cases by this condition. At my request Drs. Fohl and



Hays removed 4 oz. of blood from the left arm with quite satisfactory results, relieving the congested state, and aiding, I believe, very much in the saving of the life of the patient. This patient was put to bed before I left the case, and was apparently on the fair-road to recovery. Some few days later, to my great surprise, I noticed that he died of heart failure. I had not seen him since my operation, although informed that he had progressed favorably until the time of his death, which occurred suddenly. The next case indicates, as this does also, the importance of sustaining treatment and careful watching of the patient for a few days at least following the operation.

(To be continued.)

## Society Proceedings.

### THE MONTREAL MEDICO-CHIRURGICAL SOCIETY.

*Stated Meeting, April 14th, 1893.*

JAMES STEWART, M.D., PRESIDENT, IN THE CHAIR.

*Paralysis of the Arm following the Application of an Esmarch's Bandage.*—Dr. JAMES BELL related the history of the case, the circumstances being, in his experience, unique. A young woman, 20 years old, admitted to the hospital Jan. 16th, with ankylosed elbow joint. The position was not a very bad one, being a little greater than a right angle. The history of the injury was as follows: On the 6th of last July she fell in a car, and, knocking against the wall, hurt her elbow. At the time she did not pay much attention to it; but after a while, the joint having become stiff, it was thought necessary to call on a doctor. The latter attempted passive motion, which was partially successful, but the ultimate result was ankylosis in the above position. Excision of the joint was advised, to which she after a while consented, and the operation was carried out in the ordinary way. It was noticed, after removal from the operating room, that she had no power in any of the fingers, and that even sensation was not normal. Owing to the hand being encased in dressing, no very accurate observations could be made for some days, but it was remarked that the fingers perspired profusely. At the end of the third day after operation, being anxious and unable to explain the paralysis (the operation was done subperiosteal, and he was sure no injury had been

done the ulnar nerve, besides, injury to the latter would not account for paralysis of all the fingers and muscles of the forearm), the dressing was removed, and the explanation was at once patent. The Esmarch had been applied in the upper portion of the arm, just above the belly of the biceps, and below the prominence of the deltoid, and it had been tied so tightly that the skin was blistered. There was consequently no longer any doubt as to the Esmarch being the cause. The whole operation only occupied 40 minutes, so that the band altogether could not have been applied more than half an hour. Upon the discovery of the neuritis, she was at once put under the care of Dr. Stewart. Motor paralysis remained absolute for three weeks. On the 21st day the first sign of movement returned, being a slight motion of the thumb, and after about six weeks' treatment she returned to her home with almost complete power of the arm. Once movement began to appear, it progressed very rapidly. She was able to flex and extend the arm and fingers completely, though not with the full amount of power. There, however, was no motion deficient.

This case is very instructive and very important, in view of the frequency of the application of the Esmarch. It is interesting on account of its rarity. It was the first time he had met with the accident, and, considering the number of operations he had seen in the last twenty years, and the recklessness with which the Esmarch had been applied in all sorts and conditions of patients, it seemed to him that this must indeed be a rare complication. It could hardly have occurred had the Esmarch been applied in any other part of the body; but it is a lesson well worth bearing in mind.

The PRESIDENT drew attention to the value of electricity in prognosis. This case, even up to the second week, presented no signs of the action of degeneration, so that although the paralysis at the time was absolute, he could give a favorable prognosis, and the ultimate result justified it.

*Myeloid Sarcoma of the Second Metatarsal Bone.*—Dr. ADAMI exhibited the tumor because its position, namely, the second metatarsal bone, is distinctly uncommon, and therefore worthy of record. It was removed in the hospital recently by Dr. Shepherd, during which some difficulty was experienced, owing to the deep arch passing close beneath the second metatarsal bone. The arch was cut across, and considerable hæmorrhage was experienced. At first it looked as if the tumor had grown from the tendons, owing to the latter being closely applied to its upper surface. Further examination, however, showed this was not the case; the tendons were with moderate ease dissected off, and the tumor seen to be attached to the bone. On examining the tumor

microscopically, thin fibrous bands are seen stretching across the tumor, originating from the periosteal surface of the bone. We are then really dealing with a periosteal tumor. Further examination shows it to be a very pretty and very good example of a myeloid sarcoma. The main features are large spindle cells of various sizes; and amongst these some very large giant cells multi-nucleated. In addition to these, and accounting for this being rather a slow growth, there is a considerable amount of fibrous tissue in the tumor, and which in places has undergone hyaline degeneration. The correct name, therefore, for the growth would be hyaline myeloid sarcoma. The patient was a young man.

*Upon Horse-Pox Affecting the Cow.*—Dr. ADAMI brought this subject before the Society, not because his observations could be considered as other than at their commencement, but because at the present moment great interest is being manifested in the subject of vaccinia and the various diseases allied to or liable to be mistaken for it.

In Montréal, horses are very subject to horse-pox, and especially during this winter has the disease assumed the character almost of an epizootic. Dr. Adami himself had seen as many as twenty cases. It would seem to come on just about the time of a thaw, when the horses in their work about the streets are very much exposed to partly-frozen water about the lower portions of their legs. Many of these cases this winter have been associated with the production in the groom, or those attending the horses, of definite eruptions, very similar to the true vaccinia pox. Dr. Bell and others present could give records of grooms and others going to the hospital with pocks on the hand, lips and face obtained in this way.

The case in question was one which occurred in the stable of Mr. Strathy, a gentleman who has well-kept stables. Unfortunately, less than a month ago both his horses were attacked with horse-pox. Now, it is the custom in Montréal with many people to keep a cow in the stables with the horses, for greater warmth as well as for domestic convenience. Such was the case in Mr. Strathy's stable, and the cow was milked and tended to by the groom who looked after the horses. One horse had the pox about ten days, the other, the greater part of two weeks, when it was noticed one Monday that there were upon the two posterior teats of the cow a small papular eruption. On Wednesday, Mr. Baker very kindly showed him (Dr. Adami) the cow; the papules had then become distinct vesicles, and on the Friday following they showed well-marked scabs. There was a certain amount of inflammation in the vicinity; but this had been reduced to a minimum by the cessation

of all manipulation of the udders and by employing a milk tube to draw off the milk. The scabs were very characteristic, and accorded wholly with the classical pictures given of the true cow-pox affecting the udders and teats of the cow. The history seemed to be most clear. The stable was outside Montréal; the horses and cow were kept apart from all other animals, and they were attended to by the same man; the cow showed the characteristic eruption. It would seem most probable that here we were dealing with a case of horse-pox communicated to the cow by the milker, who was at the same time groom. A week previous to the meeting, Dr. Adami had inoculated a calf with the scabs rubbed up in glycerine, and again with the knife that he had employed in removing these scabs, with the result that on that day there were to be seen on the latter well-marked typical vesicles, some beginning to dry up, some becoming slightly pustular, such as one gets in vaccinating the cow for the purpose of obtaining vaccine lymph. This is a subject of extreme interest. One hundred years ago Jenner declared that cow-pox was produced from horse-pox. On further investigation it was seen that he had made a mistake, that he had inoculated "grease" instead of horse-pox, and ever since the anti-vaccinationists have availed themselves of this circumstance as a fruitful source of derision in their attacks. Since then there have been many workers in this line, but the conclusions drawn have been very vague ones. He thought that the present case afforded an opportunity of doing some good work in clearing up the difficulty and establishing the identity or separate status of horse and cow-pox. Having once obtained a cow-pox from a horse, as we almost surely have done, and then by inoculation from the cow, obtained typical vaccinia in the calf, if some human being will allow himself to be vaccinated by this lymph from the calf, and typical vaccine vesicles or pustules are obtained, Dr. Adami held that he would go near to prove that these two conditions are identical. It is an experiment well worth carrying out, especially as there is a commission now working on this subject in London, and so far they have been able to arrive at no very definite results. Dr. Adami expresses his indebtedness to Dr. Baker for much assistance in this case.

Dr. JAMES BELL saw two cases during his winter of horse-pox in grooms. The first man came with a sore on his lip; it was large, hard and indurated, with depressed, umbilicated, vesicular surface; enlargement of the lymphatic glands beneath the jaws. It was at first regarded as a hard chancre, though the man persistently denied any confirmatory history. Finally, on learning his occupation and who he worked for, his case was better understood.

No doubt it was a case of horse-pox. He was a groom to a gentleman whose horses had been afflicted with the disease this winter. Moreover, the subsequent history and development of the case confirmed the diagnosis of horse-pox.

The other case was seen some time after the foregoing, and, with the benefit of this experience as a guide, a diagnosis was more readily made. His was a sore thumb, and, although the history is not so reliable as in the first case, still he (Dr. Bell) was practically sure it was a case of horse-pox.

Now, if it can be inoculated on the groom it can be inoculated on the cow, and this is another link in the evidence going to prove the identity of small-pox in the different species of animals, only modified by the special organism in each case. He asked for some information as to a differential diagnosis between "grease" and "horse-pox" in horses. It seems rather suspicious that horse-pox should be so prevalent in horses at a time of the year when they are exposed to wet and damp weather, which is known to be the cause of "grease" in these animals; or, in other words, that a good many cases of "grease" are diagnosed as horse-pox.

Dr. D. J. EVANS said that a case of this kind came under his observation some three weeks ago. A groom who was attending to three horses, all of whom were afflicted with the pox, happened to get a slight scratch on his hand. At the seat of the scratch a little inflammation was noted, with some slight constitutional febrile disturbances; a vesicle formed, which in a few days became pustular, when it broke, and a marked little ulcer remained. The ulcer finally healed up, and left a distinct cicatrix behind.

Dr. KIRKPATRICK asked if horse-pox protects against small-pox in the same way as when the vaccine has passed through the calf.

Dr. GURD referred to a case he had seen about eight years ago. A groom, while attending to some horses suffering from this disease, was accidentally inoculated in the cheek. An inflammation followed and a typical vesicle was developed. The cheek began to swell considerably, and, being so close to the eye, he began to fear an injury to his sight, and went to Dr. Buller, who, no doubt, can corroborate these statements.

Dr. SMITH, referring to the differential diagnosis between horse-pox and "grease," thought that the course and termination was sufficient to distinguish them. Horse-pox does not last two or three months, as "grease" often does. Like all the acute fevers, it is a self-limited disease. "Grease" is looked upon as a neglect on the part of the groom to properly dry the horse's feet.

Dr. ELDER thought that there were still one or two links wanting to complete a valuable

piece of evidence. He understood that the groom did not have the pox at all, and it seemed that the connection between the sickness of the cow and that of the horses is not clearly established. There is nothing more common than for cows to have cow-pox, and that this cow should have it at the time that the horses had horse-pox may at the most be only a coincidence. If the pox had been taken from the horse and put into the calf, then it would have been a direct piece of evidence. As it is, the calf was inoculated from the cow, and the resemblance of the calf's disease to cow-pox may, after all, be due to that, and not horse-pox, being the true malady of the cow.

Dr. ADAMI stated that this was purely a preliminary communication, and the experiments reported are only the beginning of a series of experiments. He had already taken material from the horses, also a scab from one of the grooms that has had horse-pox, and intended inoculating them in cows. With regard to the matter of "grease," one important point is the duration of the disease. "Grease" is a long disease; it does not have the stages of horse-pox. Horse-pox is a papular eruption, followed by the coalescence of the papules, the formation of vesicles and the development of the vesicles into pustules. Finally, you have the rupture of these pustules, the formation of little ulcers and the healing of those ulcers, leaving behind a permanent cicatrix. "Grease," on the other hand, is not characterized by pustules, but rather by pus. It is simply a superficial inflammation of the skin, which goes on to suppuration. This refers to typical cases. Of course, there are atypical cases where it is not so easy to separate them. He had seen a case of horse-pox in Montreal where regular suppuration took place, with great swelling and tenderness, but this is exceptional. He was not properly acquainted with all the manifestations which "grease" may undergo, nor could he give what he felt to be an adequate history of its course and termination, although he can detect it readily enough when he sees it. "Grease" is a subcutaneous as well as a cutaneous affection, and he doubted whether it has any counterpart in the human being. With regard to horse-pox granting protection against small-pox, this is as yet an unsettled point. In the last few years a good many experiments have been made in this direction, and many of them seemed to declare that it did protect; others have doubted it. Among grooms, twenty or thirty years ago, when horse-pox was more prevalent in the Old Country, it was believed that it did protect, but this is also a matter which requires to be thoroughly investigated, and a complete series of experiments is urgently required.

*Epithelioma of the Soft Palate, etc.*—Dr.

H. D. HAMILTON, after stating that he had to thank Dr. George W. Major for the permission to utilize material from his clinic, read the report of the case, as follows:—

R. H., female aged 45; unmarried; a domestic servant; lived in Montreal.

First applied for relief at Nose and Throat Department of the Montreal General Hospital in November, 1891, complaining of soreness of the throat and painful swelling of the glands of the neck, both on the right side.

*Present Illness*—Began in the summer of 1891 as a small sore on the soft palate to the right of the middle line. This was described as a "pimple, about the size of a split-pea, painful and red like a burn." When this had been noticed one month, a doctor was consulted, who used a paint, which, the patient says, cured the spot.

A few weeks later a similar sore appeared nearer the right, on the soft palate. This was treated as before, with no effect; the spot increased in size and the glands of the right side of the neck became swollen and painful, and when this had been going on for three months the patient applied at the hospital in November, 1891.

Through the winter of '91-92, patient applied at irregular intervals at the hospital, and her condition seems to have remained about the same, with the exception of marked increase of pain in throat and neck when she was exposed to a cold. (She was able to keep on with her work.) When I first had the opportunity of seeing patient, June, 1892, she complained of difficulty in swallowing solids. The ulceration had then attacked the right posterior pillar of the fauces and the pharyngeal wall immediately behind.

Her case was followed up through the summer and winter of '92, during which time this discomfort varied in degree, but flesh was lost steadily, and the ulceration gradually spread towards the left, both by way of the post-pharyngeal wall and the soft palate, so that at the New Year, the left cervical glands had also become involved, and the patient was obliged to give up work and come to live with a married sister in the city.

The tongue was attacked first in January, 1893. The patient was suffering from "la grippe," when an acute glossitis occurred. The swelling subsided in a few days, leaving a deep ulceration in the right side of the tongue opposite a decayed lower tooth. The tooth was drawn, and soon the tongue returned to its normal size, leaving a painful ulcerated spot marking the position of the tooth.

At this time the patient had been six months without solid food; pains shooting from the angles of the jaw towards the ears and vertex were almost constant. (Hearing was not impaired.) Nutrient enemata had to be com-

menced on the 19th of February last. The throat became so painful during an acute inflammation that the patient could swallow nothing. Feeding by soft rubber catheter was tried, but produced too much pain and retching. After a few days, liquid food could again be taken in small quantities, but enemata were constantly used from that time. The ulceration of the tongue had now been present one month, and had become surrounded by a hard mass the size of a marble. The voice was now noticed hoarse for the first time.

One week later, February 26, 1893, the floor of the mouth became rapidly swollen and very painful, the discharge from the mouth became blood-stained and foetid, and the patient coughed frequently. Lungs on examination found clear.

Patient was admitted into the General Hospital on 9th of March, where she remained for one week, having the artificial feeding regularly attended to, both by stomach tube and enemata. On returning home she kept her bed; took nothing by the mouth; her mind wandered frequently; the blood-stained foetid discharge from the mouth was very offensive.

March 27th the patient died suddenly after a large quantity of blood escaped by the mouth and nose. When seen earlier in the day, the wasting and weakness were very marked. The mind was weak. Pulse 124, small and thready; respirations 20; temperature (under the tongue) 97 2-5° F. No pain complained of.

*Personal History*—Negative, patient's habits being regular and her health always good before this disease began.

*Family History*—Father died of cancer at age of 55 years. (His tongue had been removed for this disease by Dr. Shepherd.)

General condition has been sufficiently described, except that the heart gave a faint systolic "bruit" over the mitral area early in the course of the illness.

Post-mortem examination could only be partial (by the wish of the family), so I endeavored to get as much of the diseased pharynx and larynx away as possible. The stomach and liver were roughly examined, but only a small infarction on the surface of the liver was found.

When the floor of the mouth, tongue, larynx and commencement of œsophagus were removed, the naso-pharynx could be felt a crumbling mass of superficial ulceration. The whole of the soft palate was absent; no bare bone could be felt. The parts removed showed bone attacked, viz., the greater ala of the hyoid bone on the right side. To enumerate the parts affected, we have the walls of the pharynx and naso-pharynx, the soft palate, fauces and tonsils, the larynx externally and internally on the right side. Externally the superior ala of

the thyroid cartilage was absent, and internally the disease had reached the true vocal cord. The right half of the epiglottis was removed by ulceration, and the tongue immediately in front was infiltrated throughout its whole width, while the right side towards the tip was deeply ulcerated. The glands affected were beneath the jaws and the anterior cervical chains on both sides.

The course taken by the disease, as far as can be made out by the clinical observations, was as follows: First, the right side of the soft palate and the cervical glands on the right; the pillars of the fauces, the tonsil and the side of the pharynx on the right. Then the back of the pharynx, the remainder of the soft palate, the left tonsil, fauces and anterior chain of glands. Towards the end the right side of tongue and glands below the jaw, and the interior of the larynx.

Sections from the tongue and left anterior pillar of the fauces were removed for microscopical examination. Dr. Adami kindly made the examination, and with his consent I will quote what was written at the time concerning the two sections:

"Sections from the tongue and palate are atypical epithelioma, that is, the masses of cells passing down from the epithelium into the deeper tissues are small and devoid of cell nests, so that at a very little distance from the surface the growth might easily be mistaken for a true carcinoma."

If I may impose on the time of the Society for a few minutes more, I should like to draw attention to a few characteristics of this disease accurately borne out in this case.

Epithelioma of the tongue runs a rapid course; the lymphatic glands are soon infected, and death follows in a short time.

Again, in malignant growths of rapid course, there is more than the usual tendency to be atypical.

Epithelioma of the tongue is seen to be influenced by irritation as a cause almost more than any other growth. In this case the tongue was affected within three months of the end. The microscopical examination has proved the growth to be atypical. The onset of the disease with the irritation of a root of a tooth against an acutely swollen tongue is significant.

I have gone thus fully into the case, for the following reasons:—

Firstly, this is a case where the cancer clearly began in the soft palate and fauces—not at all a common occurrence.

And, secondly, since the variety of the growth is the same in both, the interesting question arises, viz.: May the recent involvement of the tongue not be due to direct infection, the tongue being constantly in contact with the diseased palate and fauces? An avenue for infection was widely opened by the irritation of the tooth described.

Lastly, it is worth noticing the effect of "Influenza" in this case. Several times during the earlier part of the winter the patient came complaining of rapid onset of pain and swelling of the throat and neck, making it next to impossible to swallow or even open the mouth. The skin over the glands would then be red and tender. The attack of glossitis accompanied one of these attacks, and most likely depended chiefly upon the epidemic.

Dr. ADAMI:—Dr. Hamilton's cases interested me a great deal. It is so rare to have two forms of carcinoma occurring in the same patient at the same time, that although this conclusion that the two forms were present was forced upon me as the result of first sections, I was unwilling to believe it, and have spent two days cutting and preparing more than half a dozen portions of the tissues, with the result that I am glad to retract my previous report. First of all, taking the facts as they come, in examining the tongue one is no doubt dealing with an epithelioma, though unfortunately this inflammatory condition, coupled with a foul sanious discharge, and the time that elapsed before the post-mortem was made rendering the whole surface more or less disintegrated, made it difficult to be certain. I find a proliferation of the epithelium; that proliferation is not the same as in the typical epitheliomatous proliferation. In some regions one sees a proliferation affecting the ducts of the glands passing down the lower portion of the tongue, and again one sees these glands undergoing malignant change. In all sections examined there is this curious absence of well marked "cell nests;" there are cell nests, but they are poorly developed. In the lower portion of the tongue the appearance is very similar to what one gets in scirrhus cancer, long thin lines of cancerous cells separated from each other by marked fibrous stroma. Then one sees the infiltration between the masses of the cells.

Going, then, to the fauces, there is here complete absence of anything like true epithelioma; in its place there is a carcinomatous appearance. However, in sections made to-day, in some regions nearer the tongue than those first made for Dr. Hamilton, one sees similar appearances to that found in the tongue, so now I say that throughout we are dealing with an atypical epithelioma. The epithelioma seems to spring from the lower portion of the epithelium, loses its appearance very rapidly, and soon grows to resemble ordinary gland cancer. When I came to examine the right vocal cord, there I found purely inflammation and no carcinomatous appearance whatever.

*Neurasthenia of the Stomach.*—Dr. GUNN read his paper on this subject.

THE PRESIDENT took exception to one of Dr. Gunn's statements, viz., that "anorexia nervosa" never occurs in the male sex. Most of the

senior medical men in this city remember a case of the medical student named Brown who was suffering from this disease. He was looked upon as the most perfect type of the living skeleton that had ever been known. One of the most important of Dr. Gunn's remarks is that every case requires to be treated on its own merits. A great many of these cases are certainly very difficult to cure, and in the vast majority of them it requires a man like Weir Mitchell to be successful. There is something about the mental type of the man that is essential to success in such states. There is one form of treatment that Dr. Gunn forgot to mention, namely, hydro-therapeutics. Winternitz, in Europe, treats with cold water, but he is no more successful than Weir Mitchell.

Dr. LAFLÉUR said that about three years ago he had seen a case of "anorexia nervosa" in the male. The man had at the same time another neurosis, that increased very considerably the difficulty of the forced feeding treatment, viz., persistent eructations. However, when last heard of he was very much improved. In Johns Hopkins Hospital, Baltimore, they have had some experience with the Weir Mitchell treatment, having as a rule quite a number of patients in the private wards suffering from general neurasthenia, and many of them suffering from gastric disorders. He corroborated the statement that the treatment is very successful when properly carried out; but it requires a special type of man, one with unusual tact and persuasiveness, to carry it out, and unless thoroughly enforced it is worse than useless, it is really harmful.

Dr. WYATT JOHNSTON remembered a case which would probably come under the category of neurasthenia of the stomach, although not anorexia nervosa. The patient, a man slightly over 40 years of age, fairly healthy as a rule, fairly strong, from time to time suffers from the most severe attacks of what it would be impossible to describe as being anything but nervous dyspepsia. The attacks come on gradually; food begins to disagree with him. He has a great inclination to take food, but its inception causes him pain, and again pain is felt more when food is not taken. There were never any definite signs pointing to an organic disease, such as ulcer; there were never any hæmorrhages or any definitely localized pain. These attacks used to reduce him to a perfect skeleton. They lasted several weeks, and during that time it was impossible to do anything for him. At the end of that time he got perfectly well, and remained so for a year or more. One peculiarity he had about him was that when he began to get well he would diet himself, and, in spite of the extremely small quantity of food ingested, managed to perform a very unusual amount of active exercise. One slice of bread and three glasses of milk was his

average daily allowance, while at the same time he walked from 10 to 15 miles daily, besides other active employment. Notwithstanding this discrepancy between the quantity of food taken and the amount of work done, he gained flesh, and picks up rapidly. Between the times he enjoys good health, but is any day liable to one of these severe attacks of gastric pain.

Dr. GUNN, in reply, said he was very glad to hear of cases of anorexia nervosa appearing in the male, as it corrects a wrong impression hitherto existing in his mind. This impression he received from the author quoted in his paper, who states positively it never appears in the male; and the cases mentioned here tonight he had not seen reported anywhere.

#### THE LATE DR. WILLIAM F. HUTCHINSON.

At a meeting of the Executive Council of the American Electro-Therapeutic Association, the following resolutions on the death of Dr. William F. Hutchinson of Providence, R.I., were unanimously adopted:

Whereas, it becomes our painful duty to announce the death of Dr. William F. Hutchinson, one of the foundation fellows of the American Electro-Therapeutical Association, as well as the first vice-president of the same; and

Whereas, in his death we lose a warm and faithful friend, a valued associate and an accomplished member of the profession, therefore be it:

*Resolved:* That this Association desires to place on record its appreciation of his genial spirit, his active co-operation in the work of the Association and of his deep interest in the scientific question to his chosen profession.

*Resolved:* That we express our sincere regret and heartfelt sorrow at his death.

*Resolved:* That we tender to his sorrowing family an expression of our profound sympathy in their great loss.

*Resolved:* That a copy of these resolutions be sent to the bereaved family; to the Medical journals, and that they be entered upon the minutes of the Association.

AUGUSTIN H. GOELET, M.D.	} EXECUTIVE COUNCIL.
W. J. MORTON, M.D.	
G. BETTON MASSEY, M.D.	
ROBERT NEWMAN, M.D.	
CHARLES R. DICKSON, M.D.	

WM. J. HERDMAN, M.D., *President.*

MARGARET A. CLEAVES, M.D., *Secretary.*

New York, N.Y., December 13, 1893.

---

**THE CANADA MEDICAL RECORD.**

PUBLISHED MONTHLY.

Subscription Price, \$2.00 per annum in advance. Single Copies, 10 cts.

**EDITORS:**

A. LAPHORN SMITH, B.A., M.D., M.R.C.S., Eng., F.O.S.  
London.

F. WAYLAND CAMPBELL, M.A., M.D., L.R.C.P., London

**ASSISTANT EDITOR**

ROLLO CAMPBELL, C.M., M.D.

Make all Cheques or P.O. Money Orders for subscription or advertising payable to JOHN LOVELL & SON, 23 St. Nicholas Street, Montreal, to whom all business communications should be addressed.

All letters on professional subjects, books for review and exchanges should be addressed to the Editor, Dr. Laphorn Smith, 248 Bishop Street.

Writers of original communications desiring reprints can have them at a trifling cost, by notifying JOHN LOVELL & SON, immediately on the acceptance of their article by the Editor.

---

MONTREAL, JANUARY, 1894.

---

**LODGE DOCTORS.**

The question, whether physicians, in justice to themselves as well as in justice to their professional brethren, should accept the position of doctor to a lodge has lately raised a good deal of discussion, more especially during the last few years, during which the practice has become more and more abused. While it is quite true that the majority of workmen are unable to pay the ordinary tariff of fees, yet in most cases they could pay more than the amount which the lodge doctor at present receives, namely, one dollar per annum, including medicine. It is true also that the principle on which benefit societies are founded is that only a small proportion of the total number of members may be expected to be sick and requiring medical attendance or the financial assistance of the lodge at a time, and that the well ones will contribute towards the expenses of the sick and disabled member. So far, the principle is a good one, encouraging providence or the providing during health for a time of sickness; on the other hand, the tendency is to depreciate the value of the services of physicians in general, for when a man belonging to a lodge who only pays one dollar a year is stricken down with typhoid fever, and receives fifty visits from the lodge doctor, he will be strongly under the impression that the dollar which he has paid is an ample recompense for those services which are really worth from fifty to one hundred dollars.

Another objection to lodge work is the tyranny which the managers of lodges often exercise over the lodge doctor. As it costs no more for a night visit than a day one, the lodge doctor is often summoned at times which are most inconvenient for him to attend; and while he would probably suit his own convenience in the case of an ordinary paying patient, he might not dare to do so in the case of a lodge patient, lest the latter should complain to the lodge and thus have him dismissed. These remarks have been suggested to us by the appearance of a well written letter by Dr. R. Ovens of Forest, Ont., which appears in the *Ontario Medical Journal* for November. In this the doctor states that he felt that his remaining the court physician for the two lodges in his town was an injustice to himself and to the other physicians of the place; and feeling that it was unfair for him to thus obtain an undue advantage over the other physicians, he generously acted on his convictions, and asked each court to relieve him from being a court physician, with the result that they decided to abolish that part of their constitution which required them to have a lodge doctor. The same patients still employ him, but instead of paying him only one dollar for fifty visits, they are paying him fifty dollars at least for the same work; and as people value what they get very much in proportion to what they pay for it, it is likely that his action in obtaining the abolition of court physicians of lodges has raised the status generally of the medical men in that town. It is true that the physicians to great railway and other corporations are in much the same position as the lodge doctor, only on a larger scale, and eventually something should be done to put a stop to that; but in the meantime we believe it would be for the welfare of the profession generally to refuse to hire themselves out to lodges for less than a quarter of their proper remuneration.

This, however, brings up another point which we have discussed already several times in these columns, and that is: what are the poorer classes of laboring men to do for medical advice? It is utterly impossible for them to pay a dollar a visit for every time any member of their family is ill, and yet they must be attended by someone. The view we have always taken on this point is that the young

doctor who has little expenses to meet, plenty of time on his hands and a great deal of experience to learn, should be ready to attend these patients for a sum quite within their means to pay. We have often been struck by the hardship and even cruelty which is inflicted upon an honest laboring man by charging him the full fees for medical attendance. In addition to the enormous cost of medicines, a laboring man receiving one dollar a day—and there are thousands of them who do not average more than that, taking into account the time lost by bad weather, short time, lack of employment, etc., and having to pay rent, fuel, taxes, and to provide food and clothing for himself and wife, and perhaps a half a dozen or a dozen children—cannot afford to pay a dollar a visit.

The proper course, we believe, would be for the young doctor to attend the case faithfully, making as many visits as are necessary and providing medicine himself, and to charge him for only every third or fourth visit; if possible, obtaining his fee in cash. We know of many instances where a poor man's life has been made miserable by the running up of large bills on the same scale of prices as are charged to wealthy men—bills which the poor man can never hope to pay. We have even known these bills to be placed in the hands of a lawyer for collection, thereby adding costs to swell the amount.

Rather than that anyone in our noble and liberal profession should be the cause of such a hardship, it will be better to attend these cases at the dispensaries or hospitals for nothing.

This, however, the poor but respectable citizen does not ask or wish; he would much prefer to pay in proportion to his means, as well as his millionaire fellow-citizen. We shall never cease to cry out against the great disparity in the charges made to the millionaire and to the struggling laboring man for the same service. Much of the abuse of hospitals, dispensaries and lodges is due to the comparatively exorbitant charges made by some of the younger practitioners. All these evils could, we believe, be abolished if the young practitioner would charge and collect as much as, and no more than, the poor but honest workingman can afford to pay.

## NEWS ITEM.

The undersigned chairman of the American National Committee of the International Medical Congress, which was postponed from September 24th on account of Cholera prevailing in Italy, has been notified by the Secretary-General that the Congress will be held at Rome from March 29th to April 5th, 1894. Instructions and documents relating to the journey, etc., are promised for the near future.

Yours very respectfully,

A. JACOBI, M.D.

110 W. 34th Street, New York,

November 17th, 1893.

## PAMPHLETS.

EXERCISE FOR PULMONARY INVALIDS, by Charles Denison, A.M., M.D., Denver, Colorado.

OUTLINES OF OBSTETRICS. A syllabus of lectures delivered at the Long Island College hospital. By Charles Jewett, A.M., M.D., Professor of Obstetrics and Pediatrics in the college, and Obstetrician to the hospital. Edited by Harold F. Jewett, M.D. Philadelphia: W. B. Saunders, 925 Walnut Street, 1894. Price \$2.00.

CONNECTICUT STATE MEDICAL DIRECTORY. Dedicated to the Medical profession of Connecticut. Containing a carefully prepared list of physicians, dentists and druggists, together with colleges, hospitals, medical associations, and societies throughout the State. 1893. The Danbury Medical Printing Co., Danbury, Conn.

DE LA MÉNINGITE TUBERCULEUSE CHEZ L'ENFANT, par le Dr. E. Schoull, de Troyes. Vient de paraître. Société d'Éditions Scientifiques 4, rue Antoine-Dubois, et Place de l'École-de-Médecine, Paris. Prix: 3 francs; envoi franco contre un mandat.

L'auteur, dont la compétence dans l'étude de la tuberculose s'est affirmée déjà par plusieurs travaux importants sur ce sujet, est convaincu, à l'encontre de la plupart des contemporains, de la guérison possible de la méningite tuberculeuse. Ayant en vue surtout un *but pratique*, il s'est abstenu de détails trop étendus sur l'histoire et l'anatomie pathologique de cette affection, mais a développé avec soin les chapitres si importants du diagnostic et du traitement. Ce petit livre sera lu avec fruit par tous les praticiens; il sera de même utile aux mères, à qui sont indiqués les moyens de préserver, dans la mesure du possible, leurs enfants plus ou moins prédisposés, et d'appeler à temps le médecin quand apparaîtront les signes précurseurs de cette terrible maladie.



## BOOK NOTICES.

THE MEDICAL NEWS VISITING LIST FOR 1894. Weekly (dated, for 30 patients); Monthly (undated, for 120 patients per month); Perpetual (undated, for 30 patients weekly per year); and Perpetual (undated, for 60 patients weekly per year). The first three styles contain 32 pages of data and 176 pages of blanks. The 60 Patient Perpetual consists of 256 pages of blanks. Each style in one wallet-shaped book, pocket-pencil, rubber, and catheter-scale, etc. Seal Grain Leather, \$1.25. Philadelphia: Lea Brothers & Co., 1893.

The Medical News Visiting List for 1894 has been thoroughly revised and brought up to date in every respect. The text portion (32 pages) contains the most useful data for the physician and surgeon, including an alphabetical Table of Diseases, with the most approved Remedies, and a Table of Doses. It also contains sections on Examination of Urine, Artificial Respiration, Incompatibles, Poisons and Antidotes, Diagnostic Table of Eruptive Fevers and the Ligation of Arteries. The classified blanks (176 pages) are arranged to hold records of all kinds of professional work, with memoranda and accounts. Four styles are now published: Weekly (dated, for 30 patients); Monthly (undated, for 120 patients per month, and good for any year); Perpetual (undated, for 30 patients weekly per year); and Perpetual (undated, for 60 patients weekly per year). This last style consists of 256 pages of assorted record blanks, without text. The Medical News Visiting List adapts itself to any system of keeping professional accounts. Each style is in one volume, bound in handsome red leather, with pocket-pencil, rubber, and catheter-scale; price, \$1.25. When desired, a Ready Reference Thumb-letter Index is furnished, which is peculiar to this Visiting List, and will save many-fold its small cost (25 cents) in the economy of time effected during a year. In short, every need of the physician seems to have been anticipated in The Medical News Visiting List.

THE PHYSICIAN'S VISITING LIST FOR 1894, published annually for 43 years Lindsay & Blakiston, Philadelphia. Price, \$1.

The fact that this Visiting List has been published annually for forty years is sufficient guarantee of its excellence and popularity. In addition to the visiting list proper, it contains easily-accessible suggestions upon many of the emergencies that may arise in a physician's practice, as when he is too far from home to learn from his text-books the antidote

for a poison that may have been swallowed, or the proper method of resuscitating a half drowned person. True, he should know these things, but who does not occasionally forget when he most wishes to remember? There are also dose-tables, tables of the metric system, a list of new remedies, rules for examining urine, a table for calculating the period of pregnancy, and other equally useful information. The arrangement for entering patients, visits, consultations, etc., is exceedingly simple, and the whole makes a thin, compact, and easily carried volume.

## PUBLISHERS' DEPARTMENT.

### A TOO COMMON AFFRONT TO THE PROFESSION.

About a year since, the *Journal of the American Medical Association*, in an editorial article, referred in unqualified language to the strained relations which it asserted were existing between physician and druggist: the salient cause being the habit of counter-prescribing, coupled with the more vicious habit of substituting. Since then, if we may judge from the tone of the bulk of new literature being sent out, the substitution habit is shown to be the one great enemy overtopping all others to successful medical practice.

We do not mean to assert that pharmacists are given to the habit. On the contrary, we believe a large majority of them to be entirely free and above suspicion. Still, the fact remains that substitution is practised to such an extent as to engender anxiety and timidity on the part of prescribing physicians.

Persistent effort at substitution is but a commendation of the genuine product sought to be imitated, and the practising physician is quick to recognize the fact. And, once recognizing it, his confidence in the genuine is strengthened, while at the same time he is forced into the unpleasant attitude of maintaining a constant wariness over his prescriptions.

As fairly typifying this condition, we give below an extract from a letter from Dr. Bostick, of Galena, written Oct. 24th, 1893, to the Antikamnia Chemical Co. This letter is, by the way, a fair prototype. He says:

"I became dissatisfied some time since with the action, or rather non-action, of what I supposed to be Antikamnia. I began to look into the matter, and discovered the druggist had been substituting in my prescriptions. I then had him get me tablets which I felt quite sure he, with any appliances he had, could not imitate, since which time I have been entirely satisfied with its action. I am satisfied that much *stuff* is sold and palmed off as Antikamnia, much to the detriment of your article, which has proven so very satisfactory to me. In many cases where quinine is indicated, I cannot prescribe it on account of its action on the brain, unless with Antikamnia, which seems to remove the objectionable feature."

The foregoing will surely justify all practitioners, where they may have cause to suspect they are being subjected to any such practices, in insisting upon the perfect integrity of everything they specify in their prescriptions. *The doctor has the highest and best right to insist that no worthless substitute be imposed upon his defenceless patient.*—*Courier of Medicine*, Nov., 1893.