be present during the operation. The gas was administered by Mr. Wells, and the operation performed without any apparent suffering on the part of the individual operated upon. I afterwards questioned him in regard to his sensations during the extraction, and he assured me that he had not experienced the slightest degree of pain. At this time, the comparative merits of the gas and of rectified sulphuric ether-vapour were discussed, and I gave it as my opinion, that the nitrous oxide gas was the safest, inasmuch as the after-effects of this gas are not so unpleasant as from the ether-vapour. I also take this occasion to assert, from my positive knowledge, that the ether-vapour was administered very soon after this period, and prior to 1845, for the performance of a surgical operation.

In conclusion, I beg leave to offer it as my opinion, that the man who first discovered the fact that the inhalation of a gaseous substance would render the body insensible to pain during surgical operations, should be entitled to all the credit or emolument which may accrue from the use of any substances of this nature. This is the principle—this is the fact—this is the discovery. The mere substitution of ether-vapour, or any other article, for the gas, no more entitles one to the claim of a discovery than the substitution of coal for wood in generating steam would entitle one to be called the discoverer of the powers of steam.

Hartford, March 21st, 1847.

E. E. MARCY, M.D.

This is to certify, that during the last two or three years I have been familiar with the successful operations of Mr. Horace Wells, and other dentists of this city, in extracting teeth, without pain, by the aid of nitrous oxide gas, and he alone was regarded as the author of this discovery.

Hartford, March 27th, 1847.

G. B. HAWLEY, M.D.

I, John M. Riggs, surgeon-dentist, of the city and county of Hartford, State of Connecticut, in the United States of America, being of lawful age, and duly sworn, do depose and say:—

That on or about the first of November, one thousand eight hundred and forty-four, I was consulted by Horace Wells, surgeon-dentist, of the city, county, and state as aforesaid, as to the practicability of administering nitrous oxide gas, prior to the performance of dental or surgical operations.

Thinking favourably of the suggestion, it was decided to make trial of the gas in question; and on the day following, per agreement, the protoxide of nitrogen was administered to Horace Wells, aforesaid, at his request, and I extracted one of his superior molar teeth, he manifesting no signs of suffering, and stating that he felt no pain during the operation.

Encouraged and gratified with the success of the first experiment, the aforesaid Wells and myself continued to administer to various individuals the said gas, and to extract teeth while under its influence, in the presence of several gentlemen, until fully satisfied of its usefulness and applicability in surgical operations. I further affirm, that the said Wells avowed his intention to communicate the discovery to the dental and medical faculty, and, in pursuance of that intention, proceeded to the City of Boston, State of Massachusetts, for that purpose: whilst I continued to use the said gas with great success—the patients assuring me they felt no pain.

JOHN M. RIGGS.

I, the undersigned, resident of Hartford, Connecticut, do hereby testify, that more than two years since I submitted to the operation of having a tooth extracted, while under the influence of nitrous oxide gas. According to the best of my recollection, this was in the month of November, 1844. The gas was given, and the tooth extracted, by Horace Wells, dentist, of Hartford; and I do further testify, that the operation was attended with no pain whatever.

MYLO LEE.

During the winter of 1844, I learned that Dr. H. Wells, dentist, Hartford, Connecticut, had discovered the mode of extracting teeth without pain. This was accomplished by administering to the persons operated upon, exhilarating gas or vapour, which, it was asserted, rendered the human system insensible to pain. At first, I was incredulous of the fact, and received the assertions of individuals familiar with the operation, with a degree of distrust. Being, however, by invitation, a personal witness of the process of extracting teeth without pain, under this new mode, discovered and practised by Dr. Wells with so much apparent success, I was induced to submit to a personal operation, that I might test its utility. The Dr. was most successful—extracting for me a

large, firmly-set bicuspid tooth, without the slightest sensation of pain.

I also witnessed, soon after, a repetition of the same process, by Dr. Wells, upon several individuals, accompanied, in every instance, with perfect success.

F. C. GOODRICH.

Hartford, March 27th, 1847.

Hartford, March 27th, 1847.

I hereby testify, that more than two years prior to this date, on being informed that Horace Wells, dentist, of this city, had made a valuable discovery, by which means he could extract teeth without pain to the patient, which consisted in the use of stimulating gas or vapour, I inhaled the exhilarating gas, and under its influence had six extracted without the least pain. I would further state, that for more than eighteen months from the time I first submitted to this operation by the application of gas, I heard no other name mentioned as the discoverer, except that of the above-named Horace Wells.

J. GAYLORD WELLS.

1843, Main-street.

A little more than two years since, I learned that Dr. H. Wells, dentist, of this city, had made the discovery, that by the use of an exhilarating gas, or vapour, he could render the nervous system insensible to pain under severe surgical operations, and that he was using it in his practice with success. Having an opportunity to witness its effect upon several persons, during the operation of extracting teeth, I was so delighted and surprised with its manifest success, that I desired a trial of it upon myself. The gas was accordingly administered, and two carious teeth were extracted from my lower jaw, without the least suffering on my part, though ordinarily, owing to the firmness with which my teeth are fixed in my jaw, I suffer extreme pain from their extraction.

Hartford, March 25, 1847.

WM. H. BURLEIGH,

Editor of the "Charter Oak."

TO WHOMSOEVER IT MAY CONCERN :

We, the undersigned, physicians of the city of Hartford, State of Connecticut, U.S.A., do hereby certify, that we know, and have conversed with, the persons whose names are appended to the above affidavits—viz., Wm. H. Burleigh, J. G. Wells, F. C. Goodrich, Mylo Lee, and place implicit reliance upon the statements made therein by each of them, to wit:—That the operation of extracting one or more teeth, without producing any pain whatever, was performed upon each of them by Horace Wells, surgeon-dentist, of this city, at or about the time specified by them respectively, in their several affidavits above referred to.

We take pleasure, also, in expressing our entire confidence in the integrity of the said Horace Wells, than whom no person in our city is more favourably known as a gentleman of honour and integrity. We know, moreover, that he has for several years past successfully devoted himself to subjects pertaining to invention and discovery.

S. FULLER, M.D.

DAVID S. DODGE, M.D.

GEORGE SUMNER, M.D.

P. W. ELLSWORTH, M.D.

BENJ. ROGERS, M.D.

GURDON W. RUSSELL, M.D.

L. B. BERESFORD, M.D.

G. P. HAWLEY, M.D.

H. ALLEN GRANT, M.D.

E. R. HUNT, M.D.

WM. JAMES BARRY, M.D.

DAVID CRARY, M.D.

E. E. MARCY, M.D.

JOHN SCHUE, M.D.

C. A. TAFT, M.D.

HENRY LEE, M.D.

I certify that the foregoing document is subscribed by the principal surgeons and physicians of the city of Hartford, in the State of Connecticut, U.S.A.

ISAAC TOUCEY,

Hartford, March 29th, 1847.

Governor of the State of Connecticut.

Correspondence.

EXTERNAL EMPHYSEMA.

To the Editor of THE LANCET.

SIR,—I believe the occurrence of external emphysema as a complication in phthisis is very rare. I therefore make no apology for forwarding you some particulars of a case which I recently met with.

W. W—, a young farmer, aged sixteen, came under my care in November last, with the ordinary symptoms of incipient phthisis. He had had a cough about six months; there was emaciation, quick pulse, and the other general symptoms, with a dull sound on percussion under the left clavicle, and complete absence of the respiratory murmur at that part.

The right lung appeared healthy. The case went on in the usual way, and after about a month, signs of tubercular softening became evident, and hectic more completely set up; while gurgling and pectoriloquy were heard where the respiratory murmur was first absent. There were no sputa, the patient swallowing all. About the 9th of February, dyspnoea became very urgent, and soon increased to orthopnoea. On the 16th I noticed considerable tumefaction of the face, particularly about the left eye, which I found, on touching, to be emphysematous. This same condition I traced down both sides of the neck, and over both shoulders, but it was more distinct on the left side. The dyspnoea now was somewhat decreased. The next day the emphysema had extended down the arms and over the whole of the chest, behind and before, and also over some portion of the abdominal parietes. On the 18th I noticed, under the left scapula (clavicle? Ed.) a spot about an inch in diameter, acutely sensible to the touch; gargouillement was also loudly audible in that situation. He died suddenly on the 19th. Notwithstanding my urgent entreaty, a post-mortem examination was not allowed.

Remarks.—The orthopnoea seemed to indicate perforation of the lung, and consequent pneumothorax, which might be followed by ulceration and perforation of the pleura costalis. Or, the communication might have been caused by an abscess making its way to the surface through an adhesion between the pleuræ; in which case the purulent collection could not have been contained in the usual sac of condensed cellular membrane. Did the painful spot under the clavicle indicate the situation where the abscess would have burst, if it had reached the skin in the ordinary way? Or, lastly, it is possible that the air might find its way by the side of the great vessels in their course up the neck, the tumefaction being most evident on the left side of the neck, in the first instance.

M. Louis does not mention the occurrence of emphysema as a sequence of perforation of the lung. Mr. Kelly (*Edin. Med. Commentaries*) mentions a case of anomalous disease of the lungs, in which emphysema followed on the second day, after a violent fit of coughing. The pleura was tapped and the patient recovered; but dying a twelvemonth subsequently, after six weeks' illness from cough, hectic, &c., an examination disclosed an extensive adhesion in the situation where pain had been felt at the time emphysema occurred. In the "Cyclopædia of Practical Medicine," two cases are recorded; one, by Dr. Duncan, no post-mortem appearances mentioned; the other, by Dr. Halliday. In the latter the patient had not been ill more than two or three days before the appearance of emphysema, after coughing and great dyspnoea. It was ascertained that a vomica had found its way by a small opening into the sac of the pleura, and that the air which escaped thence had passed through another small opening in an inflamed spot on the pleura costalis. My friend, Dr. Dymock, of Louth, who saw the preceding case with me, stated that he had met with a solitary case, where an affection of the chest was followed by an abscess pointing at an intercostal space, the spontaneous opening of which was preceded by diffuse emphysematous swelling on the anterior parietes of the thorax. This patient recovered.

I do not find any cases recorded, in the few works to which I have access, of emphysema interrupting the usual course and hastening the fatal termination of tubercular phthisis.—I am, Sir, your obedient servant,

Lincolnshire, April, 1847.

R. U. WEST.

FRACTURES AND AMPUTATIONS.

To the Editor of THE LANCET.

SIR,—I was much gratified with the cases of injuries of bones, &c., related by J. Prior, Esq., in your valuable periodical. I have been induced thereby to offer a few practical observations relating to that subject; for I fear that old rules of practice are too much observed, and the knife too frequently resorted to.

Having lived several years at one of the largest ironworks in the world, I have had frequent opportunities of seeing the most severe accidents, and I can bear ample testimony to the successful termination of many such, even where the joints, muscles, and vessels, have been extensively involved, and which, at the first glance, seemed to require amputation. Such an operation, however, the patient dreads, and implores you to preserve his limb even at the cost of his life. After this appeal the leg would be placed in the most favourable position, and I can safely add, that in three cases out of four, such cases would terminate satisfactorily; Nature aiding the cure in a manner not to be credited save by those who have witnessed it. To those gentlemen who practise in the coun-

try, and who are obliged to trust entirely to their own judgment, and have seen but few serious accidents, I would say—Before you amputate, let your patient take his chance, provided his constitution is good; and I am sure, from my experience, that the result will not disappoint.

But when severe accidents happen to the inhabitants of large towns, who lead dissipated lives, dwell in ill-ventilated courts, and are badly fed and clothed, and whose constitutions are consequently vitiated, they are not likely to do well, and, therefore, amputation may, in general, be resorted to as the safest and best remedy.—I remain, your obedient servant,

J. DAVID, M.D.,

Formerly Assistant-Surgeon to the Nantyglo and Beaufort Ironworks.

THE AGE OF MANUALS.

To the Editor of THE LANCET.

SIR,—The times are strangely altered, and the profession strangely degraded, since the Royal College of Physicians could entertain the idea of sending forth its splendid edition of the works of Harvey in its original Latin.

Where would such a work find its readers and purchasers now?

So far from being able to read a work, however transcendent its merit, in *Latin*, we have even works—and such works!—translated from the *French*, for our fallen profession in the present day. Is it not lamentable that any amongst us should be found incapable of reading the work of Louis in his own words?

I saw even Bell's immortal work in English, and in his own peculiar style, advertised to be sold at *half price* a few months ago.

But this is the age of Manuals. Our pupils must have medicine "made easy" for them, just as you give pap to infants; something very light of apprehension and digestion. The noble work of Müller, though placed before them in excellent English, is too difficult for them, forsooth, and they purchase, in its place, every trumpery Manual and compilation by persons who never did anything but *read* on physiology.

All this excludes, in their turn, every good and original work and monograph; it makes superficial students, and degrades our profession in its very principles.

The fault lies with our examining bodies. Let them only require the student to be "up" and well read in certain well-selected original works, written by authors who have *seen* the things they describe; let them, in a word, exact from candidates for medical honours and privileges a thorough acquaintance with standard medical works, and reject all cramming or grinding from manuals, compilations, or other trashy books of this kind, and all will be well. Then will our students possess solid and enduring attainments; then will they go forth worthy of our profession and its great names; then will appropriate and worthy books be written and published for them; then will our profession be raised indeed.

I am, Sir, your obedient servant,

London, April, 1847.

A LOOKER-ON.

House of Commons.

THE MEDICAL PROFESSION.

Mr. WAKLEY brought in his Medical Profession Bill, and it was read a first time.

On the proposition that it be read a second time, on Wednesday week,

Mr. WAKLEY expressed his hope, that on the second reading of so important a Bill, he should have the support of her Majesty's ministers; and that they would not refuse what was termed a government night for one of its stages.

MEDICAL REGISTRATION COMMITTEE.

SEVERAL correspondents have suggested that such a committee should be immediately formed, for the express purpose, and for that purpose only, of organizing a system for instantly petitioning Parliament in favour of the Medical Bill now before the House of Commons. We certainly should be glad to see such a committee formed, and we would aid its labours by every means in our power. But by whom is the work to be commenced? Two or three gentlemen have stated that they shall attend at the Freemasons' Tavern, Great Queen