The autopsy was conducted by one of the counsel and myself, *post-mortem* 18 hours. No abnormal appearances discovered save in the abdomen, where were found the effects of acute peritonitis. Fecal matter was abundant in the abdomen outside of the intestines. On the median line, about midway from umbilicus to the pubis, was a transverse rupture of the ileum, extending half way around it. Length of the ileum, from the rupture to the ileo-cæcal valve, three feet. J. Doe.

Cabot, Vt., March 29th, 1850.

[THE suggestions of our correspondent, Dr. Castle, respecting the importance of accurate scientific evidence in criminal cases, are important, and deserve the consideration of all medical men. His allusions to the witnesses in the Webster trial, however, are in several respects at fault. As to the chemical tests—to say nothing of the eminent qualifications of the experimenters—it might be supposed the prisoner, a most skilful chemist, would, if possible, instruct his counsel how to prove them inaccurate. Of the dentists whose anatomical knowledge he calls in question, all, it is believed, have had a regular medical education, and their proficiency as “anatomical and surgical” dentists is unquestioned here. With regard, also, to the carbonic acid gas, it was from the dissecting vault that Dr. Webster was said to wish to obtain it, and into which Littlefield lowered a light; and not the privy, in which the remains were found. This privy communicates with the tide-water, and when its walls were broken into, the air rushed through the opening and put out the light. If there had been any carbonic acid gas here, the water would have absorbed it.]

FALLIBILITIES OF SCIENTIFIC EVIDENCE IN MEDICAL JURISPRUDENCE.

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THE following remarks suggest themselves, arising out of the unhappy misfortune which has overtaken and brought Dr. Webster to take his trial before a jury of his countrymen, for the highest of all crimes—murder. As truth and facts are unquestionably the great *desiderata* to be arrived at in a court of justice, we might fear that they are too often sacrificed upon the altar of scientific incongruities. Feeling the importance, at this moment, of exposing the condition of scientific evidence, we are not unaware of the high ground which we assume, for we have plausible theories to contend with, the trammels and fetters of usage, and the wonderment of the admiring million, who, ignorant upon the chemical branch of natural philosophy, accept the results of scientific researches as the evidences of immutable truths. The fallibilities of scientific evidence is a subject of the highest importance. Not only a single individual or a family, but the community at large, are concerned. If scientific research related to our pleasure only, as chemical experiments are given in a lecture for our edification and amusement, it might be deemed of

little consequence ; but as it relates to life and liberty, it is of the most vital importance to our sublunary affairs. The records of important trials for the last thirty years afford many proofs of the expansive and elastic nature of scientific reasonings, and the philosophy (?) of scientific evidence. Fortunately, however, in these cases, in accordance with those immutable principles of an eternal justice, "murder will out"—but other overwhelming and attainable practical proofs have in an eminent degree been brought to bear and verified science, rather than science has elucidated and verified doubts ! The trial of Dr. Webster offers the same ground for argument as its predecessors. We will commence with that essential piece of humbug and superlaton, the proving of human blood in contra-distinction to the blood of animals and the periodic discharges of the catamenia in females. One witness in Webster's case states that the microscope is the best, the safest, and the most certain method of detecting human blood. In the case of Robinson's trial for the murder of Suydam (New Jersey), a chemist of high standing swore to a few spots of blood scraped from *new pine boards*, where it had dried and had been for several days. But no evidence was sought for, and none was given, to show what changes the turpentine of the wood had caused, how decomposed, or what effects the pyroligneous fluids had produced on these few spots of "male" human blood. In the case of Colt for the murder of Adams, spots of blood, ten or twelve days after, were scraped from the wall composed of common lime mixed with sulphate of lime. Now every physician knows that in case of emergency—say a person had swallowed oxalic, sulphuric or any other acid—if the patient were made to swallow a portion of lime wall, powdered, the lime would neutralize the acid. Yet we had no proof what changes this alkaline substance had produced on the blood "proved" to be human blood. It is true the microscope was not used. And it is true both these men were proved to be guilty of murder, not by the spots of blood, but by better and overwhelming evidence. Now in the case of Webster, we have, in addition to these wonderful scientific tests, the all-faithful and never-to-be-mistaken microscope. It sees fungi of such infinitesimal particles floating in and filling the atmosphere, that one of them, in comparison with the ultimate dilution of a homœopathic atom, would appear a huge mastodon. No doubt, ere long, we shall be warned of the danger of thinking, as our thoughts will not only be seen, but magnified to an extent that some dreadful disease, ten million times more destructive than the cholera, will be attributed to these imponderable and subtle agents. We saw the famous Dr. Lardner exhibit the "circulation of the blood" in a mosquito, with his powerful hydro-oxygen microscope. We saw, by means of *this* apparatus, a commotion in the belly of this magnified mosquito rhinoceros. It might have been the circulation of the blood (Dr. Lardner said it was), or the Asiatic cholera, or internal twitchings superinduced by mental anxieties ; we could never discover which. In the case of Madame Lafarge's trial for the murder of her husband (France), we published similar objections to the modes of testing suspected poisons in the human stomach ; for example, opium, nux vomica, essence of tobacco, arsenic, corrosive sublimate, &c. &c.,

which are often taken with beer, or by beer-drinkers. Now every body knows that this beverage is in many cases adulterated with the most poisonous drugs. Who shall swear to and prove the character of vegetable poisons under such circumstances? Will chemical science do it? Our objections attracted the attention of *Orfila*, the celebrated French toxicologist, who at once perceived the objections as we saw them, and the French press at the time acknowledged their obligations to Orfila for the progress of his research, in the science of toxicology. We have the following poisons in the various adulterated beers:—opium, extract of poppies, nux vomica, tobacco, coculus Indicus, oil of vitriol, copperas, &c. &c. In adulterated champagnes and other wines, sugar of lead and other mineral poisons.

The constitution and laws secure to us trial by a jury of twelve men. Yet we have the conviction of a man on trial for a capital offence resting upon the judgment—yes, we repeat, *resting on the judgment*—of one man, and that judgment dependent perchance, upon an *imperfect* test. What is the grand, the eloquent feature of the Anglo-Saxon race—their chivalrous trait? “*Fair play.*” The prisoner has no chance in such cases, *for who ever heard of a chemist discovering any other poison than that poison which he was directed to search for?* The prisoner can bring no evidence that the tests used were chemically *pure*; and if pure, that the process was conducted in a proper manner. The court awards the prisoner counsel, but no chemist to ascertain the true facts for him.

We have a witness that the skull of Parkman was fractured before death. He states that *such* fractures cannot take place after the bone has been burned. The defence is satisfied with *one* witness to prove that the same thing occurs to a burnt bone. Another witness swears the microscope to be the safest, best, and most certain instrument and method for ascertaining the identity of human blood! (Did he ever examine the whale’s or the sturgeon’s blood?) No testimony was deemed necessary denying its truth, or its fallacy. No! It is all-sufficient, and it only requires an eminent name to establish a theory for a fact, and to impress the assumption as a truth. The next scientific evidence is that of Dr. Keep. This gentleman stands high as a *mechanical* dentist; but is he an anatomical, medical and surgical dentist as well? Is he well acquainted with the *known* physiological laws governing the animal system, and their action upon the human jaw? It is not enough for a man only to know the superficial face of the flesh of the jaw as represented by a model, to empower him to swear to and identify a block, the *portion only*, without the gold, of a set of teeth, made to a gold plate, as resembling the “*outline*” of the burnt skeleton of the “*side*” of the jaw. To do so requires a proper anatomical education and knowledge. To upset this evidence, *one* dentist, only, is brought forward to prove the contrary; it is true, a talented dentist and a well-educated medical man. Dr. Morton’s evidence was professionally correct, with proper incontrovertible truths capable of practical proofs. Yet four or five dentists were thought necessary to rebut Dr. Morton’s testimony. Were these gentlemen anatomical surgical dentists? Could they have

undergone an examination upon the physiological, anatomical, and the relative anatomy of the jaws, as well as they did for the identification of a piece of burnt quartz, siliceous or feldspar? which, if the heat was so intense as partially to melt one part, would have *condensed* and altered the character of the other. By a most singular omission and strange infatuation, the very point wherein science could have been triumphantly made use of and brought into requisition to bear with singular fatality upon Mr. Littlefield's evidence with regard to the sink, was altogether omitted or lost sight of. Dr. Webster, it is stated, said in reply to a question, that he had an "*apparatus*" to obtain the gas from the sink. It is not usual for a chemist to use the word "*apparatus*" where a simple vessel will answer to dip with, and this gas is procurable by dipping for it, as for water. This carbonic acid gas, as is well known to the *medical* man, is exceedingly heavy, and can be poured from one vessel into another, as water is, although the gas is invisible. As I understand, Mr. Littlefield lowered down into the sink a light, which was immediately extinguished by the gas. Notwithstanding this phenomenon, he digs a hole through the side of the sink, and the draft of air rushes through the aperture with such force (*which way* is not stated) that he could not for some time pass the light through into the sink. If the draft of air came from the sink, his senses as well as the light would have been extinguished by the stifling and suffocating gas; and if the draft of air blew into the sink, the lighter gravity of the atmosphere would not have displaced the heavier gas; and even if a mixture of the two had taken place, the light when passed into the sink would not have burned. Notwithstanding all this, the candle burnt vividly in this hole of non-combustion, sufficiently brilliant to enable him to discover the remains of a human body. How the light was shaded to prevent its brilliancy of light between the optics and the object, making the remote obscurity more invisible, is not stated. A piece of common twine, "which can be sold at eighteen cents per pound," can be sworn to, but the really available portion of science fails, or is lost sight of, or when brought into requisition in nine cases out of ten has proved but a doubtful corroborative at best.

PENCILINGS FROM ABROAD.

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THE *unanimity* of the medical profession is the best possible resistance that can be offered to charlatanism; next to this, for want of special enactment, is the appreciation and reward by the civil authorities, of such distinguished services as may have emanated from an enlarged philanthropy, or have been the result of unusual investigation. Such safeguards, however, do not exist in England. The strife, which for so many months has disgraced the medical and surgical world, respectively represented by the Royal College of Physicians, and the Royal College of Surgeons, still rages with unabated fury. In the mean time the various ultraisms of the day, under cover of the smoke and dust of the allopathic struggle,