

devoted their time and attention to the investigation of the properties of the blood—the most important fluid in the animal machine—that fluid which is the nourisher of the frame, and from which all the secretions are derived; it will not readily be credited that such a *soi-disant* philosopher as Mr. Shute could have discovered any phenomenon relative to the properties of this vital fluid, that was not previously well known to every tyro in the profession, of the most ordinary capacity. Your correspondent, after making some common observations on the coagulation of the blood, proceeds to state, that “as I never met with an instance of the kind before, and find *only two* cases, recorded by Hewson, as something similar, I intend to repeat the bleeding at the end of a week, in order to afford another specimen of so curious an appearance.” Thus, Mr. Editor, singular enough, does it appear to me that Mr. Shute, not quite satisfied at the recovery of his patient after the first bleeding, states his determination of performing a second and unnecessary operation at the expiration of a week, merely in order, as he says himself, to afford another specimen of blood of so curious an appearance. From what cause Mr. Shute was unable to find a number of cases on record in which the blood presented the appearances under consideration, I am unable to comprehend, unless I attribute it to his intellectual faculty for marvellousness having far outstripped his industry in the pursuit of medical research. On referring to Mr. Hewson’s experimental inquiry into the properties of the blood, I find that this great man has devoted a whole chapter to this subject, in which, after having referred to a number of authors that have recorded cases, he relates six cases himself, and likewise says that he heard of the same appearance having been observed by the learned Sir John Pringle, Dr. Pitcairn, Dr. Hunter, Dr. Watson, Dr. Bromfield, Dr. Garthshore, and Dr. Fothergill of Northampton. I shall here, for Mr. Shute’s information, refer to a few more authors where he may readily find some cases recorded, and at the same time satisfy himself that he has not the remotest claim to be considered the discoverer of this phenomenon—a phenomenon that has been noticed by authors out of number, from Hippocrates down to the present time. There are in Morgagni two instances,* in Tulph. one,† in the Philosophical Transactions some instances,‡ in Sekenekius’s Observations two cases are related from other authors,|| in the twenty-fifth volume

of the London Medical Repository, four cases are mentioned, in the fourth volume of the Medico-Chirurgical Review some cases; and this white appearance of the blood is also mentioned by Dr. Venables, in his work on dropsy. In concluding the few observations I have felt myself called upon to make, in reply to Mr. Shute’s communication, I would seriously entreat him to keep in mind the remark of the celebrated Hooker “that an uncultivated mind, like unmanured ground, will soon be overrun with weeds.”

I remain, Sir,

Your obedient servant,

NARRATOR VLRS.

ON THE EXPANSION OF THE HORSE'S FOOT.

By MR. G. CLARK, Veterinary Surgeon.

To the Editor of THE LANCET.

SIR,—My attention has been drawn to a letter that recently appeared in your pages, from the pen of a Veterinary Surgeon, who, as it were in despair, has had the boldness, I may say the effrontery, to deny the expansion of the horse’s foot.

This assertion, and the “experiments,” as they are called, by which he attempts to substantiate it, would have deserved no reply from me, had it not been followed by another letter, (p. 685,) of very high pretensions to superior knowledge and success in practice; hence, lest any of your readers should suppose that his arguments are unanswerable, I shall offer a few observations respecting them.

In order to overthrow, or set aside, the clear proofs of its expansive powers, which anatomy and every-day experience afford to all who have investigated the subject, Mr. Caleb Morgan thinks it enough to report the results of certain equivocal trials made with the calipers, by himself and a mathematical friend, on the feet of some young horses. Nubia had stated, in the Sporting Magazine, that the foot would expand considerably under the weight of the horse, when quietly standing with one leg raised from the ground. Mr. Morgan states that this did not take place in the feet that he tried, and therefore denies the expansive quality *in toto*. Now, without refusing some degree of credit to both of those statements, we must remember that it is not every one who can make an experiment properly, and also that the result depends very much on the manner in which it is done, and that nothing is easier than to make an experiment not succeed when we wish a different result.

That this organ is naturally elastic there

* Morgagni Ep. xlix. Art. 22.

† Tulph. Obs. lib. i. cap. 53.

‡ Philosoph. Transact. Nos. 100 and 142.

|| Sekenekii. Obs. lib. iii.

can be no doubt, since we see, in its component parts, machinery expressly for this purpose, the frog being obviously given to fulfil this office; and in an experiment made with care, by Mr. Bracy Clark himself, in the presence of Lord Morton, this expansion was most apparent.

This is an experiment (requiring some degree of skill, and, if not well performed, very inconclusive), which would succeed when tried on full-grown and elastic feet; in the cart horse it might possibly fail, from the thickness and rigidity of the horn, and also in the young colt, from the imperfect development of the elastic parts, and, most curiously, Mr. Morgan has selected this sort of foot for the purpose of his experiment; had he known how to conduct it properly, and taken a full-grown foot, he would have found a different result.

With regard to the general question, I know not whether to attribute it to the dulness of his perceptions, or to the "mist" which he says "envelopes the subject," that he "never could discover this much talked of expansion, or opening and collapsing of the foot of the horse." I beg leave to ask this gentleman if he has never seen a horse come up from grass, without shoes, with feet half or three quarters of an inch wider than they were before? Has he never seen the heels of a common shoe rubbed bright, by the ineffectual attempts of the foot to expand in spite of the nails! And, above all, has he never applied his thumb and finger to the heels of a well-worn, expansion shoe, and seen the shoe and foot collapsing and expanding under the operation? If he has not done this, let him do it the first opportunity, and it will lead to a discovery which it seems he could not make before.

The above are evidences of the expansive nature of the foot, that have come under the observation of most men, and are easily comprehended by even the meanest groom's capacity. But there are others, drawn from a consideration of its anatomical structure, which I had almost forgotten to adduce, for his assertions are such as to make us forget that he is a veterinary practitioner, who has actually dissected the foot, and in so doing could hardly have avoided perceiving, when it had been once pointed out to him, the elastic principle that pervades it.

For example, could he not discover that it was cleft posteriorly beyond its centre, and was filled up by a highly elastic organ, rendered still more so by a series of arches forming somewhat the figure of an inverted w (Λ), all having the obvious office of expansion, and power of dilatation? Can he tell us for what purpose the frog was given, being an elastic substance, nearly as much so as Indian rubber, if it was not to expand under the weight? In fact, the foot is

fraught with proof sufficient of the existence and necessity of this indispensable principle in all feet; but as it is impossible, especially for Mr. Caleb Morgan, and those who are by inclination blind, to see this expansion when the animal is trotting or galloping, and equally impossible to calculate the increased force with which by such momentum it meets the ground, which must be many times that of the mere weight; so we are forced to draw such conclusions from the structure of the part, and the apparent intentions of nature. And how much greater is it then, than while standing in a state of perfect rest, when the weight alone, opposed as it is by the friction that takes place between level surfaces (that is between the flat hoof and the flat stone), which might not in all cases be sufficient to produce a very sensible effect, and which friction should be guarded against in making the experiment. But to return: we must not forget to consider the spirit, whether partial or impartial, in which an experiment is performed. Now Mr. Morgan reminds us of those reasoners who make all their facts bend to a predetermined opinion, for he tells us "These experiments, &c., were originally intended as an answer to some letters in the Sporting Magazine."

I shall not pretend to pursue this very candid writer through all his last desultory communication; it seems to have been written without any very consistent motive, except that of persuading your readers that he employs the best workmen in London, and has been enabled to keep the feet sound, and in the same form as nature made them. This is effected, he states, by the use of "a modified specimen of Mr. Coleman's original thin-heeled shoe" which has produced the "happiest results." Now as this gentleman has so great an antipathy to theory, or anything that bears the appearance of reasoning, I shall not stop to prove, though it might be done in a few words, that if he employs a shoe nailed in the common way, it must produce the same effect in contracting the foot as the ordinary shoe of common farriers, whether made with thin heels or not. This question has been discussed in THE LANCET before, and need not be repeated here. It is trifling to inquire whether the assertions, for they are no other, which he makes about his success in shoeing with the thin-heeled shoe, are fallacious, or otherwise. Let Professor Coleman, and those who have tried and rejected it in the army, determine by what magical skill Mr. Morgan and his men can do what they and the college, and even the original proposer, Lafossa himself, have all failed in.

I shall confine myself to a single illustration, with which he has forgetfully furnished me. Any other fact he might dispute, but this is alone sufficient. He says, at the

conclusion of the first letter, p. 686, "I have often occasion to rasp the quarters to the blood, previously to turning out." Now for what purpose, and in what cases, may I ask, is he "so often" obliged to "rasp the quarters to the blood, and turn out;" the answer is, in cases of *contraction!* Every gentleman who has kept a stud knows, to his cost, that this is the last resource of the ignorant farrier who has ruined his horse, and a futile one it is. To "rasp the quarters to the blood, and turn out!" These are the "happy results" of the thin-heeled system above alluded to.

I am, Sir,

Yours, &c.

CHARLES CLARK.

Veterinary Infirmary,
Stamford-street, March 15, 1829.

GLASGOW ROYAL INFIRMARY.

COMPOUND COMMINUTED FRACTURE OF THE CRANIUM.

JOHN MALCOLM, aged 46, was admitted on the 11th of February, under the care of Dr. Couper, with a compound comminuted fracture of the cranium. On the evening of that day, while at work, a stone had fallen from a height of fifty feet, and struck him on the head, directly over the sagittal suture. Both the parietal bones were fractured, and the pieces into which they were divided, depressed to a considerable depth. Notwithstanding the extent of the injury, the bleeding had been trifling; but his breathing, on admission, was oppressed and stertorous, the countenance ghastly, and the pupils dilated. The arms and legs were also affected with convulsive tremors, and the pulse small and frequent. A consultation was immediately summoned, and, in the mean time, till the arrival of the surgeons, warm baths were applied to the feet. Having met, Dr. Couper proceeded to enlarge the wound of the scalp, and remove the fragments with the elevator and forceps. A small opening was seen in the dura mater, having been perforated by a detached portion of bone. The edges of the wound being afterwards brought together, were retained by straps of adhesive plaster, and over these a compress and bandage were applied. Immediately after the operation, the pupils became more natural, and the breathing easier. He was ordered a purging bolus, to be taken early the next morning.

12. During the night he had slept a little. The bolus had produced a stool. The left leg and arm were partially paralysed. He complained of pain in his head, around the

wound. The pupils were natural; pulse 86, and full. He was ordered to be bled to sixteen ounces, and, three hours afterwards, two ounces of the infusion of senna were to be given, should it be required.

14. He had slept ill during the preceding night, and the pain in his head was more severe. His bowels were open, but the paralysis of his left side continued; his pulse was 100, and full. Sixteen ounces of blood were ordered to be taken from the arm, and, towards the evening, it was to be repeated, if necessary. Early the following morning he was to have six grains of calomel, and, three hours afterwards, two ounces of the infusion of senna.

15. As was directed, he was bled the day before to the extent of a pound; and it being again thought proper to repeat the venesection during the evening, a pound and a half more was taken away. To-day the pain in his head was considerably better; the dressings were removed; his pulse was 96, and soft. The infusion of senna was ordered immediately, and, three hours afterwards, a purging enema.

16. He was every way much altered for the worse; he had slept none, but continued raving during the whole of the night, and, at the usual visiting hour, was quite incoherent. The dressings were again changed; the wound looked healthy, and had adhered. The paralysis still continued, the eyes and muscles of the left being drawn over to the right side of the face. His bowels were open, pulse 90, and full. The bleeding was repeated.

17. Some slight relief was said to have followed the bleeding, but during the evening it was repeated without any benefit. To-day he is comatose, pupils dilated, and breathing laborious; his pulse 120, and feeble.

18. He died at half past twelve, P.M.

19. The body was inspected to-day twenty-four hours after death. The skull-cap being removed, the opening was seen to be of a triangular form. A portion of the internal plate of the right parietal bone was depressed, without any corresponding appearance on the external side of the skull. On removing the dura mater, a thick layer of pus was seen extending over the whole of the right, and, although not in such quantity, also over the left hemisphere of the brain. The lower surface of the cerebellum was slightly covered with pus, and between the cranium and base of the brain, there was an effusion of serum, to the extent of two or three ounces. The substance of the brain itself was healthy, nor was there any diseased appearance in the ventricles. Neither the chest nor abdomen was opened, nor were the students suffered to examine the diseased appearances, after Dr. Couper had left