

chemical preparations, &c. whether of the animal or vegetable kingdom.

Those, who imagine, that all salts and oils hurt the vegetating force of matter, have fallen into a great error; for from whence can such a vegetating force proceed, but from a due mixture and modification of the salts and oils with the earthy principle, which all the world allows to be of itself inert?

It is true indeed, that a very large portion of salts or oils renders substances antiseptic, or very slow either of vegetation or putrefaction, as is well known with regard to sea-salt, a large quantity of which preserves substances from putrefaction; though, as the learned Dr. Pringle observes, a smaller one rather forwards that process, as it does likewise vegetation. Castor, which as I formerly observed, is antiseptic, seems to owe this quality to nothing else but a large quantity of a sluggish fetid oil, which it contains.

LXXXIII. *An Account of a Cure of a paralytic Arm, by Electricity: In a Letter from Cheney Hart, M.D. to Mr. William Watson, F. R. S.*

Salop, March 20, 1756.

Read Mar. 25, 1756. **T**Hough 'tis a long time since I had occasion to write to you, yet I take the liberty of now troubling you with a letter, to acquaint you with the case of a young woman I lately have had under my care at the infirmary here, upon whom

whom the electrical operations have had greater good effect than I have ever else been able to observe. Elizabeth Stokes, aged twenty-three, a very lusty and healthy woman, was, in the beginning of January last, seized with a rheumatic kind of pain in her right arm, particularly about the wrist; and in two or three days time afterwards, the finger and thumb of that hand contracted up so close, that they could not be opened with any force the girl herself could use to them. In this manner she continued till January 17, when she came to our infirmary: her hand and fingers then seemed to be greatly swelled, but close drawn together; her arm was pained from the contraction of her hand; and from a creeping pain she felt about her wrist and elbow, she was apprehensive those joints were about to be drawn up as the hand. She had at this time lost all kind of sensation in the hand itself, which felt cold to the touch, and looked livid. In every other respect she was in perfect health. Imagining the contraction a consequence of the rheumatic pain, I advised her to the use of gum-guaiac. twice a day, with a julep of spir. mindereri, &c. as in our own Pharmacopeia, and to rub the part affected well, thrice a day, with a flesh-brush, and afterwards with linimentum saponaceum. This she continued five days without the least observable alteration; when finding her no better, I directed our apothecary, Mr. Winnal, to draw the electrical sparks from the contracted hand, and to communicate the shock also, by means of the wire-chain tied about her wrist from the suspended phial. This he undertook to do on Friday the 23d, and for the first half hour the girl did not seem at all sensible of the

electrical strokes; but after about 30 minutes, she said they gave her pain in that hand, and in about ten minutes more her fingers began to tremble and open so much, that we could easily separate them, and by degrees extend them all. After this the shock was given to the palm of her hand, to each finger separately, and to the thumb and wrist for about ten minutes longer, when the whole were become perfectly pliable and soft, and she could open and shut the hand herself, without assistance, and without pain; though she found herself unable to use those fingers very freely, they being very weak, as well as that wrist. We then rubbed the hand and wrist well with opodeldoc, and wrapt it up close in flannel, and recommended to her to repeat the rubbing it frequently through that day, and continue her guaiacum as before. She remained very easy and well all day, but at night her hand began to be more painful, and she expressed a great fear, lest it should contract again, as she felt a creeping pain in all the inside of her arm. However, by repeated friction with the flesh-brush and opodeldoc, this went off, and next morning she had no complaint in her arm or elsewhere. She was again electrified this second day about the hand, which remained open and pliable enough, and the operation was repeated every day for a week after, (tho the contraction never returned again) till the shock began to be so painful, that she desired to be excused from it any more, and, as she seemed quite well, she was discharged as cured from the infirmary on January the thirty-first.

As she was a working servant to a family in the country, she returned to her business with the same ease

ease as formerly before this contraction, and continued well till on February ninth or tenth, when being obliged to wash clothes from morning till night, that same evening after the washing was finished, she felt her fingers and arm grow painful first, and in less than an hour's time they contracted, as they had done before. Attempts were immediately used by herself and the family to draw the fingers open, but in vain, and whenever they tried to force them open, they gave the girl most violent pain through that whole arm. On this she was brought back to our infirmary again, Feb. 13, and electrified as before, in the presence of myself and several gentlemen of this place. Her hand was now as closely contracted as seemed possible for the fingers to be drawn, and she had no sensation of heat or cold upon it, nor pain. The wire from the suspended phial being tied round that wrist, she applied her hand to the electrified conductor, and received repeated strokes, and some very strong ones, for 40 minutes before she felt any pain from it, or the fingers relaxed any at all; and we rubbed her frequently with the flesh-brush betwixt whiles, and tried to stir her fingers. After about 45 minutes, she said, each time she received the electrical shock, it gave her much pain, and then her first finger began to move a little, after that the second, and the third, and the thumb, till at length they were all opened and relaxed, and by repeated frictions and electrical strokes, for about an hour and 20 minutes, the motion of the hand was quite restored. I then directed it to be rubbed well with opodeldoc and covered with flannel, to keep it warm, and heard no more of her till seven o'clock

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at night, when her arm was become vastly painful, her fingers trembled and drew up a little, and the inside of the fore arm felt all knotty, and as if the muscles there were drawn like cords, and the whole hand and arm was sore: In this case I would have had some blood taken immediately from that arm; but upon inquiry I found her menses were upon her since the electrifying in the morning. I therefore only ordered a blister above the elbow of that arm, and a proportionate quantity of tinctura Thebaica to be added to the linimentum saponaceum, with which her fore arm and hand were to be well rubbed. These applications soon took off the threatening symptoms, and next morning she was easy; the knots in her arm almost quite disappeared, and she could move her fingers very well. She was electrified the second day about ten minutes, but no longer, as it seemed unnecessary; and from this time was electrified no more, but continued the anodyne liniment every day, with the use of the flesh-brush, for about ten or twelve days longer, when she appeared perfectly well as before, and her fingers could be used and moved with ease. Nevertheless, to prevent a return, I directed an issue to be cut in that arm, and worn constantly, which she had done, and she had also a strengthening plaister about her wrist, as she said that was weaker than it should be. This was the whole of her treatment. She was kept a patient here till this day, March 20, when, as her disorder has no more returned, and she can move her fingers perfectly well, she was discharged from hence cured.

I will not weary you with remarks upon this case, nor on the strong hints it affords of the wonderful  
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force and virtue of electricity in rheumatic or spasmodic disorders. Certainly it is worth while to make further experiments to ascertain its use in medicine, as well as in philosophy. The Swedish experiments made by Dr. Zetzell, (as related in the *Gentleman's Magazine*, 1755, p. 314) directed me to the trial of it in this case, wherein I have the pleasure to see an admirable agreement in the effect here and in Sweden. As such therefore I send this account to you, which, if you think it may be of use, you are at liberty to communicate to the gentlemen of your Society, for whom I have a great esteem, and should be glad to hear, at your leisure, from you, what new discoveries have been made by any of you this winter, in any of the arts or sciences. I must now beg leave to conclude with subscribing myself,

Dear Sir,

Your very obedient humble servant,

Cheney Hart.