

II. *The strange Effects of some effervescent Mixtures; in a Letter from Dr. James Mounsey, Physician of the Russian Army, and F. R. S. to Mr. Henry Baker, F. R. S. Communicated by Mr. Baker.*

Moscow, Sept. 20th, 1756.

Read Jan. 20, 1757. **M**R. Butler, a paper-stainer, trying to make some discoveries for the better fixing of colours, was put in great danger of his life by the following experiments :

Having put into one gallipot a quarter of an ounce of verdegriſ, and into another pot two leaves of false-gold leaf, to each he poured about a spoonful of aqua-fortis. They began immediately to ferment, especially the gold-leaf. He was very assiduous in stirring them, to make the solution perfect. Having nothing else at hand, he did this with a pair of small scissars, at arm's length, carefully turning away his face, to prevent the fumes from entering his lungs. He was called away, about other business, before he had quite ended his process; and soon after washed and shifted himself: but had scarce finished before he felt a burning pain in the ring-finger of his right hand, which he imputed to his having inadvertently touched the aqua-fortis. This increased every moment, and affected the whole hand with burning pain and swelling, which very soon subsided: but then it flew into the left hand, and, a few minutes afterwards, into the insides of his legs, as if scalding water had

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been thrown on them. His stockings being immediately pulled off, there appeared a great many red spots, as large as six-pences, something raised above the skin, and all covered with very small blisters.

In about two hours after the accident, I first saw him : he was very uneasy, complaining of pain, and great anxiety, at the pit of the stomach, as if a burning hot iron was laid on it : so he expressed himself. His pulse was regular, but slower and weaker than natural : he had a nausea, and complained of a very coppery smell and taste. I ordered some alkaline volatile medicines, and to drink small sack-whey. He vomited once, and had four or five stools, and then his stomach grew easy. But the scene soon began again with lancing pain in the left eye. He continued the same medicines, drank plentifully of the whey, and was kept in a breathing sweat, by which he found some ease at night : but whenever the sweating lessened, the burning pains returned in broad flakes, changing from one part of the body to the other ; sometimes with shootings in his eye, and sometimes along the penis, but he had no heat of urine. His pulse continued regular, but weak ; and in several places of his body such kind of spots struck out as those on his legs.

Monday, the third day, in the morning, after sleeping well, his pulse was somewhat raised, and he continued easy till about eleven o' clock, when the burning pains returned, shooting from place to place ; but always so superficial, that he could not distinguish whether it was in or under the skin. Rubbing the part affected with one's hand gave ease : but when the sweating went off, and the burnings and shoot-

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ings became insufferable, I always put him into a bath of hot water, with some wood ashes, kept ready in the room; which gave him great relief. This afternoon he felt violent burning pain in his great toes, and sometimes in his left hand, with shootings up to the shoulder. Once he cried out, in great pain, that his shoulder was burst; for he felt something fly out with a sort of explosion: but, examining the part, I found nothing particular. He observed, when the flaky burnings began, they were as if they kindled from a point, and flashed like lightning, as he termed it. He was very often tormented with such pains on the pit of the stomach; and this evening had shootings thro' the back, with a pain in the belly. He complained of a strong sulphurous smell, which, he said, was like to suffocate him; tho' his breathing seemed easy, and his lungs no way affected. In the night he was seized with great pain about the heart, and cried out violently, that his heart was on fire: but after taking a dose of nervous medicines, and being put into the bath, he was soon freed from this, and passed the rest of the night tolerably well. At the time of such violent attacks the pulse continued regular, but still slower and softer than usual.

Tuesday. He complained most of his toes, and now and then burning pains in the forehead.

Wednesday. This whole day it continued most in the toes of the left foot; but in the evening the pain on the stomach returned, which lanced to the left side, with dartings inwardly. He became so uneasy and restless, that I was obliged to add some opium to the other medicines; which answered very well.

Thursday.

Thursday. The pains kept most in the toes of the left foot.

Friday. Nothing particular, except his feeling, with sharp pain, a spark (as he called it) fly out of his right cheek, in the same way, he said, as that, which burst on his shoulder, but much less. He perceived no pain in that part before this; nor any thing after, besides a soreness, which lasted for some days. Hitherto he had been kept in a continual sweat: his appetite was greater than his allowance; his digestion good; and his rest indifferent. From this time he was not attacked by any violent symptoms; and could be quiet, tho' he did not sweat.

On Sunday he began to get out of bed; but was often seized with glowing pains, suddenly affecting different parts of the body; which seldom continued an hour in one part, but shifted from place to place: these he was troubled with, in a less degree, even long after he went abroad.

By care and watchfulness the violence of the symptoms were kept under; and, by the use of antidotes for poisons of the nature of what he received this from, the disease was overcome, and the patient recovered his perfect health and strength.