

put on additional clothing, feeling certain that we should experience a temperature below zero before we reached an altitude of five miles; but, to my surprise, at the height of 14,500 feet, the temperature, as shown by all the sensitive instruments, was 31°, and at each successive reading up to 19,500 feet the temperature increased, and was here 43°. When we had fallen somewhat, the temperature again began to decrease, and with extraordinary rapidity, and was 16° or 27° less than it was 26 minutes before. At this time, about eleven a.m., we were at a height of five miles. When the balloon had attained a height of four miles, I wished to descend for one or two miles, and then to reascend; but Mr. Coxwell felt certain we were going too near the Wash to enable us to make a dip and then reascend. Our descent began a little after eleven, Mr. Coxwell experiencing considerable uneasiness at our too close vicinity to the Wash. We came down quickly, passing from a height of 16,300 feet to one of 12,400 between 11:38 and 11:39. Immediately afterwards we entered a dense cloud, which proved to be no less than 8,000 feet thick, and in passing through which the balloon was invisible from the car. Mr. Coxwell had reserved a large amount of ballast, which he discharged as quickly as possible to check the rapidity of the descent. However, we came to the earth with a very considerable shock, which broke all the instruments which I had been unable to pack up. The descent took place at Langham, near Oakham. The first ascent from the Crystal Palace took place on the 30th of July. The balloon left the earth at 4:40 p.m. The temperature declined instantly. A height of 7,000 feet was reached at about six o'clock, and the descent began about 6:15. It was rather rapid, but quite under control, and we reached the earth at Singlewell, near Gravesend, at 6:30. Another ascent was made from Wolverhampton on August 18. In about ten minutes we passed through a fine cumulus cloud, and then emerged into a beautiful clear sky, dotted over with cirrus clouds. The descent was made when we had reached an altitude of 24,000 feet. We reached the earth at Solihull, about seven miles from Birmingham. The second ascent from the Crystal Palace took place on the 20th of August. The balloon started at 6:26 p.m. At 6:37 the height of three-quarters of a mile was attained, and the air was so tranquil that we were still over the Palace. At 6:43, when at the height of nearly a mile, we passed through a thick mist, the earth being just visible. We continued for a time at this elevation, and then descended 200 or 300 feet. We kept at this height till 7:2, when Kennington Oval was in sight. At 7:9 St. Mark's Church, Kennington, was exactly underneath us. The hum of London was heard, and there was scarcely a breath of air stirring. We then descended gradually, and at 7:12 the lamps were being lighted over London, and the hum of the great city increasing in depth. At 7:20 shouting was heard of people below who saw the balloon. At 7:40 Mr. Coxwell determined to ascend above the clouds, and at 7:47 we were nearly a mile high, the temperature being 45 deg. We still ascended till the clouds were below us tinged with a rich red. At 7:52 the striking of a clock and the tolling of a bell were heard. It was quite dark below, but the sun tinged the tops of

the clouds. At 8:5 we were above the clouds, and it became light again, and the hum of London died gradually away. After this we descended, and London was again seen, but it now presented the appearance of a conflagration of enormous extent, the sky being lit up for miles around. We descended in the centre of a field at Mill Hill, about a mile and a half from Hendon, and it was resolved to anchor the balloon here for the night, with the view of making an early morning ascent. By half-past four a.m. we again left the earth. There were in the car, besides Mr. Coxwell and myself, Captain Percival and my son. At 4:53 we were above a mile high; we were just entering a cloud. At 4:57 we were in cloud, surrounded by white mist. The light rapidly increased, and gradually we emerged from the dense cloud into a basin surrounded by immense black mountains of cloud far above us, and shortly afterwards we were looking into deep ravines of grand proportions, bounded with beautiful curved lines. By 5:31 we were somewhat less than three miles high, at which elevation we continued about half an hour. During our descent I noticed the loud ticking of a watch. Captain Percival said he could not hear it. He was seated and I was standing, and after some experiments were made, it was found that when the ear was on the same level as the watch no sound was heard, but it became remarkably distinct on the ear being situated above it. At the height of two miles the barking of a dog was heard. We gently reached the ground at Dunton Lodge, near Biggleswade. On the 1st September another ascent was made from the Crystal Palace. The wind was E.N.E., the sky was almost covered with cirrostratus cloud, the horizon was moderately clear. The ascent took place at 4:40 p.m. The balloon rose to the height of half a mile in four minutes. At this time the whole of the river Thames from beyond Richmond was in sight. At 5:31, when we were about 4,000 feet high, clouds had formed following the whole course of the Thames from the Nore up to the higher parts of the river, and extending but little beyond its sides. The clouds were parallel to the river, following all its windings and bendings. At this time it was about high water at London Bridge, so that the formation of the clouds is connected with the warm water from the sea. The balloon fell at 6:15 near Woking. The most important ascent took place from Wolverhampton on Sept. 5. It commenced at 1:3 p.m. The temperature of the air was 59°, at the height of one mile it was 39°, and shortly afterwards we entered a cloud of about 1,100 feet in thickness, in which the temperature fell to 36½°, and the air was saturated with moisture. We reached two miles in height at 1:21, three miles at 1:28, and four miles at 1:39. In ten minutes more we had reached the fifth mile, and the temperature had passed below zero, and then read minus 2°. Up to this time I had taken observations with comfort. I had experienced no difficulty in breathing, whilst Mr. Coxwell, in consequence of the necessary exertions he had to make, had breathed with difficulty for some time. Mr. Coxwell ascended into the ring, and I endeavoured to reach some brandy which was lying on the table, at a distance of about a foot from my hand, but I was unable to do so. My sight became dim. I looked at the