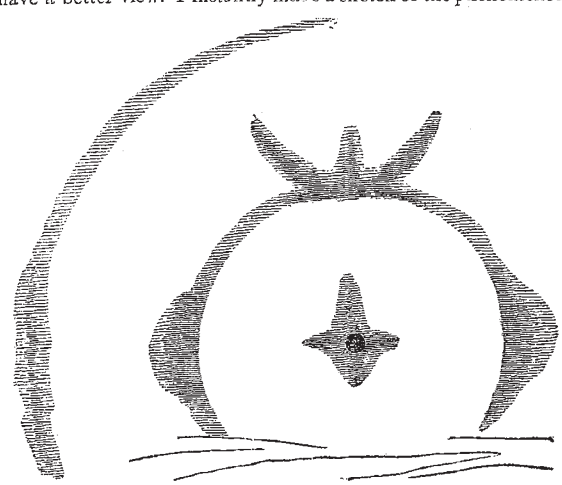
A. Lawson, at Brancepeth, near Durham, is so perfectly similar to its appearance as drawn and described to me by another observer at Woodburn, at the same hour on the same morning, about twenty-miles north-west from Newcastle, and about thirty miles from Durham, that its unusually bright appearance near Durham may not impossibly correspond with equally favourable views of it obtained by observers at more distant places. The sky, which remained clear during the day, clouded over towards midnight on the 13th, and the stars were completely hidden during the remainder of the night. A slight rain, which began in the morning, also continued to fall during the day of the 14th, and the sky here remained entirely overcast on that evening until after midnight. Shortly before four o'clock on the morning of the 15th the clouds cleared off, and the appearance of several meteors, one of which was as bright as Jupiter, gave evident signs of the progress of the November star-shower. The perfect clearness and darkness of the sky, in the absence of the moon, at the same time gave especial brightness to the meteors and to their phosphorescent streaks. Between four o'clock and the first approach of daylight, at six o'clock, thirty-two meteors were counted, or at the rate of sixteen per hour, of which three were as bright, or brighter, than first magnitude stars, nine as bright as second, six as bright as third, and eight no brighter than stars of the fourth or lesser magnitudes. Twenty-six of these meteors were directed from the usual radiant point in Leo, which on this occasion, although not very well defined, appeared to be approximately close to the star Zeta, in Leo's sickle. About one half of their number left persistent streaks, which sometimes appeared to grow brighter after the meteors had disappeared, and I vainly endeavoured to bring them into the field of view of the direct-vision prisms of a small spectroscope, the duration of the brightest streaks noted scarcely ever exceeding one or two seconds. A very brilliant meteor, casting around a flash like that of lightning, was seen here shortly after nine o'clock on the evening of the 13th (and its appearance was also noted at Woodburn), traversing the north-west sky. These particulars, imperfect as they were, unfortunately, rendered by the cloudy weather, are the only descriptions of the November star-shower which its appearance here has hitherto enabled me to supply.

Newcastle-on-Tyne, Nov. 17 A. S. HERSCHEL

"I had occasion to be at the station at 8.30 A.M. I then first saw them. The night had been hard frost with a clear sky. The ground was covered with hoar. There was no mist. The sun was intensely bright, but the air was very chilly. I went home and looked at my thermometer in the porch at the north side of my house; it stood at 29° F. I then went to the top of a hill to have a better view. I instantly made a sketch of the phenomenon,



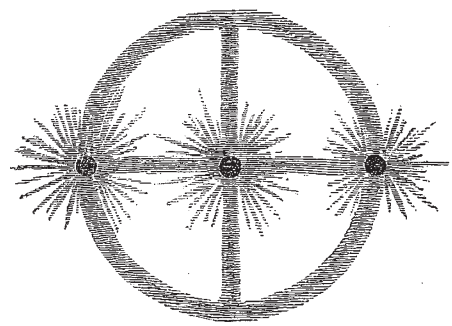
a copy of which I enclose. The lower part of the circle was hidden by a bank of dark clouds. The upper part presented the most marked appearance, and was intensely white. The lump to the north side was more intense in colours than the southern, but both were distinct as to quantity of reflected light. The colours were prismatic, but a bright amber prevailed. The disappearance began at a few minutes before ten, and by five minutes past ten all had cleared away. With the exception of the bank of clouds beneath, there were only a few pencils of cirrus cloud in the sky.

"Brancepeth, Durham, Nov. 13"

Paraselene

IN NATURE, Nov. 9, there appeared the description of a remarkable paraselene observed at Highfield House on the 25th of Oct. A similar phenomenon was seen at Penrith the same night from about 10.30 to 11. As this, however, differed altogether in detail from that observed by Mr. Lowe, I now offer a sketch of what we saw.

Thin mists and white flying scuds travelled across the sky. A luminous ring of perhaps at a guess 150° radius encircled the moon. Within this was a cross of the same brightness as the encircling ring. The bars of the cross were to the eye horizontal



and vertical, intersecting in the moon. Where the horizontal bar cut the luminous ring there were bright patches of light (mock moons), rivalling the moon, as seen through the mist, in brilliancy, but without its defined outline. Where the vertical bar cut the ring there was no increase of brightness. Such a portent in ages gone by might well have filled crusaders with hope, and perhaps thus turned the tide of battle on the morrow. We may make a useful note for future guidance by remarking what followed its appearance in this district. Up to the 25th we had for some time had very fine weather. After the 25th we had five stormy days of wind and rain. T. McK. HUGHES

The Solar Parallax

PROF. NEWCOMB wishes apparently to make this discussion as personal as possible. Though I do not intend to follow him in this respect, I must answer him.

He asserts that my abstract of his notes was inadequate; that I "hid the point of the most remarkable of" my "inaccuracies, and ignored the imperfections entirely." This is not so. My abstract was strictly accurate and very much fuller than the utter triviality of his objections warranted. I distinctly stated why I did not discuss the matters which he is pleased to regard as imperfect—his comments being too vague. But this was not ignoring them. His memoranda were not in a state to be printed in full, nor did he even hint that he wished them to be.

As he himself characterises my mistake about his own researches as "the most remarkable of my inaccuracies," it is fortunate that this mistake is also one I am forced to explain at length, owing to the tone Prof. Newcomb has taken respecting it. I certainly did omit a part of Prof. Newcomb's charge; but in his own interest, for it was worded in the very tone to which I now take exception.

In the first place, it is not to be inferred that, because an author comments on such and such a work, he thereby wishes it to be understood that he has himself studied the original memoir in which the work was presented to the world. For instance: many very eminent men have commented on the work of Adams and Leverrier in the matter of Neptune who have not read a line of the original reasoning of these astronomers. That I, of all men (who have expressed something like contempt for memoir-hunting, and have always cared rather to explain methods and describe facts than to write the history of astronomy), should be expected to read every memoir to which I refer, is preposterous in the extreme. It may seem only natural to Prof. Newcomb that when I heard of his having discussed the transit of Venus, I should hurry to obtain his memoir that I might study it *ab initio usque ad finem*; but, as a matter of fact, a paper of the sort, even if placed in my hands, would scarcely tempt me to take up my paper-knife.

Here are the facts of the case.

I read in the *Astronomical Register* a letter which may be called