mixed with putty, without injury. They thrive on the linseed oil used in the manufacture of this most unsavoury side-dish and the whitening which forms the other ingredient of "pâté de putty" seems to neutralise the evil effects of the lead. The bearings of these facts are important from a sanitary point of view, as Prof. Storer shows that the effects of mice eating away the packing of valves, of drains, and closets is an immediate frustration of the best efforts of plumbers and sanitary engineers to keep human habitations free from sewer gas. Not content with mice, the Professor tried similar experiments upon rats, when it was found that "rats when kept upon a rather short allowance of oats, ate putty freely. Finally "the surviving rat was fed with 'plain putty' for a day or two, after which he received and ate (poor wretch) each day for two days a ball of putty made with a mixture of equal parts of slaked lime and whiting. He was next given a ball of putty made from a mixture of one part of oxide of zinc and three parts of whiting, together with $2\frac{1}{2}$ grammes of oats, and although he ate very little of the ball he died soon afterwards." The chief result of these experiments appears to be the injury rats and mice may do to houses and the curious protecting effect of whitening as an antidote to such active poisons as red and white lead and carbonate of baryta. Experiments upon the germination of weed seeds and a special instance of the resistance of clover seeds to water form two very interesting notes bearing directly upon well-known phenomena often ascribed by the ignorant to spontaneity of growth. The extraordinary irregularity of periods necessary for the germination of certain weed seeds is very clearly shown. "Of 400 seeds of shepherd's purse (*Capsella bursa pastoris*) three germinated on the fifth day and three on the seventh day, then none until the 145th day, when four germinated. Seven seeds germinated on the 1173rd day, or after an interval of about three years and two months—in all 18 $\frac{1}{2}$ per cent. to that date." Many similar cases are cited. Another article is upon "cherry stones eaten by domestic pigeons," which appears unpromising, but is rendered interesting by this versatile observer. Prof. Storer is evidently a man who is not likely to allow any natural phenomenon to pass unnoticed.

JOHN WRIGHTSON

LETTERS TO THE EDITOR

[The Editor does not hold himself responsible for opinions expressed by his correspondents. Neither can he undertake to return, or to correspond with the writers of, rejected manuscripts. No notice is taken of anonymous communications.]

[The Editor urgently requests correspondents to keep their letters as short as possible. The pressure on his space is so great that it is impossible otherwise to insure the appearance even of communications containing interesting and novel facts.]

Clifford's Common Sense of the Exact Sciences

IT does not seem to me necessary to reply to the charges made against Clifford by Prof. Tait in your issue of June 11—charges which, when freed from "mystery and insinuation," amount to accusations of plagiarism and inaccuracy—for Clifford's reputation is unlikely to be in any way affected by what Prof. Tait may write. But I do feel it necessary to make a remark on the last paragraph of his review. He therein accuses me of "mystery and insinuation," weapons which should not be employed in connection with Clifford's name. He does not do me the scant justice of publishing the footnote on which he passes these strictures. That footnote runs as follows:—

"A still more serious delay seems likely to attend the publication of the second part (*kinetic*) of Clifford's 'Elements of Dynamic,' the manuscript of which was left in a completed state. I venture to think the delay a calamity to the mathematical world."

When I wrote the footnote, I knew—

(1) That the manuscript was in existence, a fact with which any one who had examined the bibliography attached to the mathematical works must have been acquainted.

(2) That this manuscript, unlike that of the "exact sciences," had not at that time found a publisher, and therefore was more likely to be seriously delayed.

(3) That the mathematical world had been so far forgetful of its own interests as to raise no demand for its publication.

My note was written with the express purpose of recalling the attention of those who valued Clifford's work to the existence of this manuscript, in order that a general demand for its publication might produce a publisher. Those who find "mystery or insinuation" in this, or in whom this can "strike a jarring chord," must be singularly constituted individuals. The note had on the face of it an obvious purpose; that purpose, I am happy to know, it has to some extent helped to accomplish.

University College, June 12

K. P.

ON "K. P.'s" note, which has been communicated to me by the courtesy of the editor, I desire to make one or two remarks.

In writing my notice of Clifford's book I endeavoured to state clearly the impression which its perusal had produced in my own mind, and to say a few fitting words as to the special qualifications of the author. I must have sadly failed in this endeavour if in what I have written there can be found either mystery or insinuation, still more so if there can be found "accusations of plagiarism and inaccuracy." But of course even an Act of Parliament has to be construed after the letter, the declared intention of its framers notwithstanding. On reperusing my notice, however, I still think that it expresses what I meant to say, and that it cannot bear the construction put on it by "K. P."

The remarks I made on the foot-note to the Preface accurately described the impression which it produced on me, and which I am sure it is likely to produce on the majority of thoughtful readers. So strongly did I feel this impression that, when I finally returned my notice for press, I specially requested the editor to try to obtain for me an elucidation of the mystery. This has been—in part at least—supplied by Mr. Tucker's note.

Whether "R," who writes in NATURE of this week, be really a "(so-called) metaphysician" or no, he certainly expresses himself in the language of that school; for he mildly characterises as "not sufficiently guarded" the statement that a figure, obtained in a certain way, will be a cube:—whereas it obviously may be any rectangular parallelepiped whose edges are commensurable. But I did not blame Clifford for having made this statement; I merely said that it "ought not to have escaped correction." Perhaps even that expression is too strong. I have lately learned by experience that over-zeal on the part of a press-reader may sometimes render abortive the most sedulous care on the part of an author. Over and over again I have had proof-sheets, marked "*press*," returned to me with a learned query at the phrase "feet per second, per second"; and in one or two instances the supposed blunder has been rectified after all in spite of me.

June 26

P. G. TAIT

Recurrence of Markings on Jupiter

IN connection with my remarks on this subject (NATURE, xxxii., p. 31), and the suggestive coincidences which appear amongst certain drawings obtained in about the years 1857 and 1859, 1870 and 1872, and 1885, as to large elliptical markings in the southern hemisphere of Jupiter, I would further add that in about 1843 a remarkably large spot was visible, which may possibly be connected with the phenomena of more recent occurrence. Prof. Piazzi Smyth mentions in the *Observatory*, vol. iii., p. 450, that, in consulting some old observations preserved in the note-books of the Rev. H. C. Key, he found "a view of Jupiter, with not only the dark belts admirably drawn, but between them, in stronger black colour, a long oval spot. This spot, too, was so precisely the shape and size of the red spot which has of late been attracting the surprised attention of observers, that I could not but jump to the almost self-evident conclusion of their both referring to the same body, appearance, or phenomenon." The drawing alluded to was made on June 4, 1843, and Mr. Key described it as a "horizontal black spot in the light space between the two principal belts." In Chambers' "Descriptive Astronomy" (2nd ed., p. 107) it is stated, "In 1843 a very large black spot was observed by Mr. Dawes," and this object is doubtless identical with that figured by Mr. Key. It will be important to compare the observations and to learn whether these spots were situated in approximately the same latitude as the red spot of our own time.