ACCIDENTAL COLOURS.

To the Editor of THE LANCET.

SIR,—A better explanation of accidental colours than M. Cuvier has given at page 629 of THE LANCET, may be found in Dr. Darwin's Zoonomia, vol. i., pages 15 to 25 inclusive. M. Cuvier's experiments are, in reality, nearly the same as the illustrations of that eminent philosopher; and I am inclined to think that M. Cuvier is indebted to Dr. Darwin for his information.

"Palnam qui meruit ferat."

I am, Sir, yours, very respectfully,

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LUNATIC PAUPERS IN THE COUNTY OF
MIDDLESEX.

From the returns which have been made on this subject, it appears that there are 397 male pauper lunatics in this county; females 546; sex not mentioned 20; total 873. Of this number, 409 have been more than five years in an "unsound" state of mind.

ON THE EXTRACTION OF TEETH.

By JOHN PALMER DE LA FONS, Esq.

At a period when almost every art has attained so high a degree of perfection, it is truly surprising, and much to be regretted, that so important an operation as that of tooth-extracting, instead of advancing, should have retrograded—that a set of dental instruments, under the mask of *improvement*, should be so clumsily constructed as to be readily mistaken for a *farrier's tools*.

Medical men, whose experience in this department of surgery is often unavoidably very limited, confiding in the misrepresentations of persons interested in deceiving them, are led to provide themselves with instruments so ill-contrived, and of such *preposterous* dimensions, that they seem best adapted for a *speculative consignment to the kingdom of Patagonia*.

Few subjects have exhausted so much time to little purpose as the attempt to discover a means of extracting teeth in a direction perpendicular to their axis. For this purpose, a variety of contrivances have been produced, many of them very ingenious; but all, one after another, have sunk into oblivion at a very short date from their appearance—a disappointment that would have been spared to the inventors of them,

had they commenced by acquiring a thorough knowledge of the form of the teeth, of the power requisite to detach them from their sockets, of the fragile nature of decayed teeth, and the structure of the alveolar processes; then, supposing them to be acquainted only with the first principles of mechanics, they must have perceived the above-mentioned project was absurd in the extreme, and one they could not have entertained for a moment, had they comprehended the action of that most useful and admirable contrivance, the key instrument. He who does not clearly understand the application of this instrument, is utterly unfit to operate in cases of importance.

Considerable ingenuity has been displayed in some of those contrivances that were expected to act by placing the fulcrum upon the adjoining tooth, or teeth; a method that, for very obvious reasons, cannot possibly succeed. Others again, possessing no talent for invention, have contented themselves with introducing, as a *novelty*, an instrument that has been in use from the *remotest ages*—a pair of pincers!! GREATLY improved, by being made of the most *gigantic* and *appalling* dimensions.

That the use of such an instrument is highly objectionable in all cases where the key is generally used, will be very evident, if we reflect that the teeth hold so tightly by reason of their diverging, crooked, and otherwise misshapen roots, that the most powerful and continued efforts to remove them in that way will prove unavailing; unless, to be sure, breaking can be called removing.*

On reference to fig. 1, the objections may be readily traced. To detach the tooth A, from its socket B, in giving the unavoidable movement from *side to side*, (from C to D, for instance,) the point E being *fixed*, which is not the case with the bolster, if the tooth offers much resistance, the handles must be grasped with extraordinary force, or the jaws of the instrument will *open*, on attempting to incline it in that direction; consequently the greater portion of force so applied, is admirably calculated to wrench off the crown of the tooth, as represented by the dotted lines across the tooth at F.

If the pincers, under this form, are objectionable, how much more so are they for extracting the *dens sapientiæ* and others, where, the jaw not extending sufficiently to apply them in the favourite perpendicular direction, it is necessary to curve them,

* Those who pretend to operate in this manner are so well aware of this fact, from experience, that they have been frequently *detected* exhibiting their *infallible* pincers with one hand, while the *key* was *concealed* in the other.

so as to act at right angles with the handles ; consequently the operator must use great additional force, having, as it were, to raise a considerable weight at the end of a lever ; so that, admitting he has power to remove the tooth, it so suddenly yields, that the violence of the jerk very often either fractures or loosens one of the teeth in the opposite jaw, which the operator can no more control, than he could avoid falling, if, in pulling an immense weight, the cord he held were suddenly, though not unexpectedly, to break.

Another insurmountable objection, is the length of time required for loosening a tooth with the pincers ; for, in defiance of the favourite *perpendicular* action, the tooth will not stir till it has been most forcibly worked to and fro during some time, as the crown would break off sooner than it would yield to a dead pull ; and thus it receives the very lateral action so strongly and so sagaciously opposed.

Lastly, the pincers cannot be used with a chance of success where the crown of the tooth is much decayed ; for, in the effort to loosen it, the pinch requisite to prevent the instrument from slipping, would be unavoidably greater than the remaining substance of the tooth would allow without breaking.

The preceding observations will suffice to shew the impolicy of attempting important operations with the pincers, or any other means by which it is proposed to lay hold of the tooth between two *cutting* edges.

With the assistance of the drawing,

fig. 2, a few words will be sufficient to *prove* the decided superiority of instruments constructed upon the principles of the key. The bolster and claw, G H, are represented as fixed on a decayed tooth A, preparatory to its extraction from the socket B. The power is applied to the bolster, so as to turn it round, this moves the joint I in the dotted curve J, and pulls the claw H in the direction of the line K L, along which the tooth, having no direct support, is pulled by the claw on one side, (as shown by the dotted lines,) and tilts on the part N of the socket as a fulcrum ; this being opposite the bolster, the pull varying from the direction K L to O P ; this widens the socket and gradually detaches the tooth, first from the side M, under the claw, while the excellent position of the bolster causing a fulcrum N so low down the socket ; the upper portion of tooth becomes a powerful lever to move and detach the bottom, beginning first at one side, and stretching the socket, so as to make room for it the easier to slip out ; thus the parts are easily and gradually loosened, but in quick succession, thereby avoiding all that violence of tug and shock that must attend perpendicular extraction, as it is erroneously called. The quantity of tilt is here greatly exaggerated to make it visible, much less being sufficient to loosen the tooth.

Instruments on this principle are the only ones that can be applied to stumps having no upper portion to lay hold of.

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