XLI. On the use made of zinc in China in regard to coin

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and ascites. I have hastened the cure of the latter by multiplied friction on the abdomen with the same solution.

MELOE CICHORII—*Mylabris cichorii* Fabr.; *Mylabre de la chicorée* Cuv.—Its colour is black. The head and breast are velvety. The antennæ become larger towards the end; and the elytra are marked with three yellow bands. It appears that it was this insect, very common in the East, which the antients employed as a vesicatory*: it is still applied to this purpose in China.

[To be continued.]

XLI. *On the Use made of Zinc in China in regard to Coin.*

By B. G. SAGE †.

ZINC, known in China and India under the name of *tu-tenag*, is employed there not only for alloying with other metals, but also by itself for making coin, as I have had occasion to ascertain, by trying a piece given to me by M. de Tersan. This coin was of the size of a franc, but not so thick. The centre exhibits a square hole three lines in diameter. On the two opposite sides there are Tartar characters. The two other sides have none. The reverse of this piece exhibits Chinese characters on the four faces of the square.

Having attempted to cut this piece with a pair of scissors, it broke: its fracture exhibited the colour and metallic facets of zinc: it showed also, like zinc cast into thin plates, a line which separates in two the plate of that metal. This stroke or line arises from the colour occupied by the centre of the cast zinc. This fracture of the coined zinc of China makes known that this semi-metal has been cast in order to be converted into money; for when the grain is compressed by the gradual pressure of the roller it ceases to be brittle, and exhibits no longer any grain. Zinc reduced to plates ceases also to emit the creaking noise of tin when an attempt is made to break it. This semi-metal, instead of breaking by the pressure of the roller, becomes more ductile the thinner the plates to which it is reduced.

The zinc of which this Chinese coin is made is exceedingly pure, and burns with the greatest activity at a degree of fire proper for fusing it and bringing it to a red heat: it is suf-

* Imperati, Linnæus, and Spielman.

† From *Journ. de Physique*, Fructidor, an 12.

ficient to bring it into contact with the air by removing the oxide or white calx with which it is covered.

The Chinese make a square hole in the centre of their coin, in order to file them on a packthread: by this precaution they prevent that infidelity too common in their commerce.

Having tried the silver which the Chinese employ for their jewellery, I found it to consist of one half copper.

XLII. *On the Use of the Amianthus in China.* By
B. G. SAGE*.

THE antients, according to Pliny, made incombustible cloth of the amianthus. In the library of the Vatican there is shown a handkerchief said to be made of this cloth. As to the moderns, I do not know that they make any use of the amianthus; but I saw, twenty years ago, paper made of this fossil flax by M. Levrier de Lisle, proprietor of the paper manufactory of Montargis. This paper, of which I still have a sheet, has cohesion enough, but it is not so smooth as paper made of hemp. It does not yield under the pen, and, if the ink is well gummed; one may write on it with ease and neatness. This paper placed on burning coals is not destroyed: it assumes there a bright gray colour, which arises from the size being charred. The characters traced out with ink on amianthus paper appear red after they have been thus exposed to the fire. If mucilage of gum adraganth had been used instead of size to reduce into paste the amianthus which has been subjected to the mill, the paper resulting from this process would have more cohesion, and be more proper for resisting the action of the fire. It is to be wished that M. Levrier de Lisle had been encouraged; for paper of amianthus might be of great utility for preserving deeds, as it resists the activity of the fire, from which they would be completely protected were they put into cases made of amianthus pasteboard.

The Chinese know, as well as we do, that the most violent fire is necessary to vitrify it, and that it does not become altered in a common fire: they therefore employ it for making furnaces. One which I saw represented a cylinder nine inches in height and six in diameter: towards the middle was a circular projection destined to support the

* From *Journal de Physique*, Fructidor, an 12.