XI. Account of a cavern discovered on the north-west side of the Mendip hills, in Somersetshire

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are in each side of each jaw five or six in number. In the lower jaw each grinder has two sharp points; in the upper jaw each, except the first pair, has three points.

The neck is very short, and so covered with hair as to be scarcely observable. The shoulders are high and round, with a deep cavity between them. The body at the shoulders is much wider than at the haunches. The buttocks are bare.

The tail is naked, round, and blunt: it is turned up at the end. A strong hooked claw in place of the thumb. No carpus nor metacarpus. Four long fingers serve to distend the membrane of the wing. The hind-feet have five distinct toes, with small sharp claws. The membrane of the wings joins the hinder legs and tail, but it is not nearly so long as the latter. A broad hairy list surrounds all round the body, and covers the bottom of the membrane.

The drawing and description were taken from a male. I could observe no nipples.

The natives of Bengal have only two names for all the species of bats found in their country. The large bats, which nestle on trees, and live chiefly on fruit, they call *Badur*: those which, like the one above described, inhabit caverns and old buildings, and live chiefly on insects, they call *Chamcheeka*.

Plate IV. represents the *Vespertilio plicatus* of nearly one-half its natural size.

XI. *Account of a Cavern discovered on the North-West Side of the Mendip Hills, in Somersetshire.* By GEORGE SMITH GIBBES, M. B. F. L. S.*

PERHAPS the following account of a cavern which I visited some time since may be acceptable, as we there see the process going on, which Nature employs to enclose foreign substances in the harder rocks.

At the bottom of a deep ravine on the north-west side of the Mendip hills, in Somersetshire, near the little village of Berrington, there has been discovered a cavern of considerable

* From the *Transactions of the Linnean Society*, Vol. V.

extent, in which was found a great collection of human bones.

As I have observed in this cavern many circumstances which appear curious to me, I beg leave to mention them, as I do not believe there is another place in the kingdom where the different stages (if I may be allowed the expression) of bones incorporating with limestone rocks can be so well seen. From the top and sides there is a continual dripping of water, which being loaded with a large quantity of calcareous earth, deposits a white kind of paste on most parts of the cavern. Many of the bones are incrusts with this cement, and a large proportion of them are actually fixed in the solid rock. I suppose, therefore, that this substance, which at first is in a state resembling mortar, by losing its water, hardens into a firm and solid stone. I had an opportunity of examining the process in every part. Had the cavern not been discovered, and these deposited substances not been removed, I do not doubt that the whole excavation would, in no great length of time, have been completely filled up. The water was still bringing fresh quantities of calcareous earth, and the bones were in some places completely incorporated with the solid rock. Every degree of intermediate solidity was plainly discernible. There were several nodules of stone, each of which contained a perfect human skull. The substance which is deposited from the water effervesces with acids, and has, in short, every character of limestone. At the further end of this very curious cavern, where the height is about fifteen feet, there depends a most beautiful stalactite, perfectly conical, which, when the cavern was first discovered, reached within an inch of a cone of the same kind which rises from the floor. By some accident a small part of the stalactite was broken off; but Nature is now busy in repairing an injury which had been done to one of the prettiest productions of her mineral kingdom. Had these two cones met, a beautiful column would have been formed of nearly fifteen feet in height. On striking this stalactite, a sound is produced similar to that of a bell, which may be heard at a considerable distance beyond the mouth of the cavern.

I examined the bones with considerable attention, and I found that there was adhering to the surface of many of them, a substance which resembled the spermaceti I have before described in the Philosophical Transactions for the years 1794 and 1795.

I have to add, that this cavern was discovered about two years ago by accident, and that no satisfactory reason has been given for this singular accumulation of human bones.

XI. Description of a Mercurial Air-holder, suggested by an Inspection of Mr. Watt's Machine for containing Factitious Airs. By WILLIAM CLAYFIELD.*

SEVERAL modes of counteracting the pressure of a decreasing column of mercury having been thought of, in conjunction with Mr. W. Cox, the following was at last adopted as the most simple and effectual:

Plate V. Fig. 1. represents a section of the machine, which consists of a strong glass cylinder A, cemented to one of the same kind B, fitted to the solid block C, into which the glass tube D is cemented for conveying air into the moveable receiver E.

The brass axis F, fig. 2, having a double bearing at *a, a*, is terminated at one end by the wheel G, the circumference of which is equal to the depth of the receiver, so that it may be drawn to the surface of the mercury, by the cord *b*, in one revolution; to the other end is fitted the wheel H, over which the balance-cord *c*, runs in an opposite direction in the spiral groove *e*: a front view of the wheel H is shown at Fig. 3.

Having loaded the receiver with the weight I, something heavier than may be necessary to force it through the mer-

* From an ingenious work lately published entitled, *Researches Chemical and Philosophical, chiefly concerning nitrous Oxyd or dephlogisticated nitrous Air, and its Respiration*; by Humphrey Davy, Superintendent of the Medical Pneumatic Institution.—This apparatus was first described in the Third Part of Dr. Beddoes's Considerations, but it has since received some improvements.