which points the ice had either all volatilised or had become detached from the bulb. This appears improbable from our present ideas concerning latent heat, but it is nevertheless a fact. If I can make the necessary arrangements it is my intention to show the experiment at an early meeting of the Chemical Society, when it will be open to criticism.

In regard to the remarks contained in the former part of Mr. Hannay's letter, I of course did not bring forward the *first* proposition in my letter as anything new, but merely to show that my experiments confirmed the previous conclusions of others on the critical temperature. THOS. CARNELLEY

Firth College, Sheffield, September 27

A Peat Bed in the Drift of Oldham

IN NATURE, vol. xxii. p. 460, there is a description of a bed, or rather beds, of peat in the drift at Oldham. A few days ago I had an opportunity of examining the section described by Mr. Jas. Nield, and under his guidance, but I differ from him in opinion as to the age of the peat. The section occurs on the steep sloping side of a valley, and just above it there is an exposure of sand covered by boulder clay. In my opinion some of the latter has simply slipped down, off the sand, on to the surface of the peat at a lower level; or it may have been excavated and thrown down for the purpose of obtaining the underlying sand. Besides, the principal bed of peat rests on blue silt, which again rests on boulder clay. The upper bed of peat occurs at one end of the section, and both ends present the appearance of a talus of *débris* from a higher level. Still the section is somewhat obscure, though a few hours' digging at a right-angle to its present exposure would probably prove the blue silt and peat to be more recent than the boulder clay, although the latter is certainly the highest bed in the section as at present exposed. However, geologists are indebted to Mr. Nield for calling attention to the section, and no doubt he and others will take means to prove the true position of the peat, which is sure to attract considerable attention.

G. H. MORTON

122, London Road, Liverpool, September 18

Hardening of Steel

I SHOULD have, had circumstances permitted, thanked Mr. Walter R. Brown for his kind response to my letter, "Iron and Hydrogen" (NATURE, vol. xxii. p. 220), and for the reference to Mr. Anderson's report, with which I was unacquainted.

The points mentioned by Mr. T. W. Giltay certainly seem somewhat to controvert the theory of alloyed hydrogen; but thinking over the facts some time ago it struck me that the aqueous vapour in the air would be a source for the gas as in chilling beneath water. It would be interesting to know whether mercury, as commonly used, is not also faintly alloyed with hydrogen.

For my own part, I am inclined to the carbon theory, but the facts were brought forward with the idea of seeing them discussed, and a somewhat obscure but important subject brought to light. H. J. JOHNSTON-LAVIS

Mosquitos

SEEING in NATURE, vol. xxii. p. 11, the use of infusion of quassia recommended, and being a great martyr to mosquitos, I immediately set to work to brew two or three gallons with all the energy with which I had already tried many remedies and nostrums.

The basements of nearly all the good houses here in Naples are used as stables, and consequently form a great attraction for these insect pests.

This large quantity of very concentrated infusion was disposed of as follows:—The whole of the bed-room walls, ceiling, carpet, and furniture were gone over with a Lister's vapour carboliser containing the solution; sheets and night-dresses wrung out and dried before use, body sponged all over, and bed clothes re-sprayed with the solution each night.

This certainly was a fair trial, but the results after all this expense, trouble, bitter lips and mouth was a complete failure.

It really seems that the only true protection against mosquitos is the curtain with all its inconveniences.

September 21 H. J. JOHNSTON-LAVIS

GENERAL PITT RIVERS' (LANE FOX) ANTHROPOLOGICAL COLLECTION[1]

II.

OUTRIGGERS are very varied in their structure. In some canoes there are two opposite one another, one of which does not touch the water; it is merely a balance platform; in some both outriggers only occasionally touch the water. It is not improbable that the side-galleries of some junks are developed out of balance platforms, and that the ledges known as the "chains" of modern European vessels are of similar origin. The rudder is merely a development of the steering paddle. It is still merely a fixed paddle, being worked by an operator with his face in the direction in which the boat is moving, whilst oars have taken the place of all the other paddles of the boat.

Another series illustrates the origin of clothing. Clothing was derived, no doubt, partly from the development of ornaments, being originally entirely ornamental, as a large proportion of it still is, even amongst ourselves, and partly from gradual modifications of belts and such accoutrements, which served a useful purpose when put round the body as convenient appliances for hanging things to for carriage. A pocket is a luxury which a savage does not possess. He has to sling his little necessaries to his belt, or secure them in the lobe of his ear, or carry them, to his embarrassment, in his hand. Even in Japan the men are obliged to sling their tobacco-pouches and pipes from their belts by means of silken cords and the beautifully-carved ivory buttons or netsukes so well known in European collections. They have pockets only in their sleeves, and these are insufficient. The simple cincture is the sole clothing of the Andaman Islander. A bunch of pandanus slips is added in front in a further stage, and eventually a complete encircling fringe is reached. When paper cloth (tappa) has been invented, or woven material, this is substituted for the fringe, and a kilt is the result. In some parts of Great Britain dress has not advanced beyond this stage, or rather the primitive form of dress has been adopted as a curiosity. The sporran probably represents the original dress, the bunch of grass of the Andaman Islander, now worn over the kilt instead of as originally next the skin. At a further stage, the kilt being found uncomfortable, it was fastened together at one spot between the legs, and hence arose the idea of trousers, which, through the baggy Turkish inexpressibles, gradually developed into their present form.

The simple cloak of skin or tappa developed gradually into coats and various more convenient tight-fitting garments, but in all robes of ceremony the savage cloak form is still retained by the most highly civilised races. One of the latest additions made to his collection by General Pitt Rivers is a series of Britanny caps, showing the gradual development of all the strange forms in vogue in different districts, by means of the abnormal growth of the strings, crown, or front, of one simple type.

Another series shows the development of drinking-vessels of all kinds, starting from the natural vessels found ready to hand, such as human skulls, cocoanut-shells, gourds, and horns. From the cocoanut with a handle comes the ladle, and hence the spoon, and so on.

Another series is devoted to the development of musical instruments. Wind instruments are modifications derived from the horns of animals, spiral shells, reeds, bamboos, and bones. From these by gradual steps are attained the trumpet and spiral brass instruments, the curl of which probably came from the spiral shell; also pan-pipes, and hence organs, and flutes. As bearing on the origin of the bagpipes is exhibited a bag and whistle carried by Indians of the north-west coast of America to imitate the call of ducks and decoy them.

[1] Continued from p. 493.