Progress in Science.

Modelling African Mammals

THE Museum of Natural History, New York, has just commenced active work in the preparation of a very extensive and representative collection of the great mammals of Africa. This noteworthy and comprehensive exhibit, will afford when completed, in the near future, one of the most impressive and instructive panoramas of the mammal and bird fauna of the Dark Continent to be seen. The new plastic handicraft to be employed in modelling and sculpturing the animal forms in clay is well nigh revolutionary in its technique, and the artistic and life-like results, the absolute permanence, produced by plastic methods cannot be approached or equalled by mechanical taxidermy. All far-sighted naturalists agree that at the present rate of slaughter, the African game will be killed off more rapidly than it breeds. The commercial and resident hunters, and not the gentleman sportsman and the limited scientific collectors, are the real exterminators. Except in the great game preserves, in the course of a half a dozen decades, more or less, it is thought that the big game of British East Africa is foredoomed to disappear, the largest species first. A feature of the forthcoming installation is that many of the large, showy animals and birds will be represented in a series of picturesque family and habitat groups, arranged in characteristic attitudes. One of the pictures shows the manner of fitting and trying on the skin, which is adjusted as snugly as a glove over the sculptured form of the zebra manikin.

One of the most historic and commanding of African mammals just mounted is "Caliph," the hippopotamus, which for thirty years was the leading centre of attraction in the Central Park menagerie. This great beast was the largest and most celebrated hippo in the world, the veritable Goliath of his race, being twelve feet long, fourteen feet in circumference, and weighing four tons when alive. In his special hunt for these creatures on Lake Naivasha, British East Africa, ex-President Roosevelt is reported not to have secured any specimen approaching the extraordinary size of "Caliph." Owing to the great bulk of the hippo and the peculiar difference of texture of the skin of a water-living animal from the land-living types, it required a more careful and different scheme in the manipulation and final fitting on and adjustment of the skin. The working of the huge skin into the numerous deep folds and wrinkles, especially around the massive head, neck, and legs, which are all marvellously brought out on the manikin, was a most difficult and painstaking task. The great skin weighed twelve hundred pounds when first removed from the body, and in some parts was six to eight inches thick. The skin was shaved down to only sixty-eight pounds for final use. During the first stages of the building up of the animal's form, the interior resembled a section of an underground tunnel or "sub-way," as six workmen with electric arc lights could move about with ease in the spacious interior of the great hippo's body. The accompanying illustration shows the giant form with a group of children to show the comparative size.

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Novel American Clock.

According to the "Buffalo Express" of July 29, to an American inventor has fallen the task of making a radical change in clockmaking—the first departure, he says, in 300 years. Samuel P. Thrasher, of Hartford, Connecticut, has two of his clocks on view in the city—one in the rooms of the Chamber of Commerce and Manufacturers' Club, in the Coal and Iron Exchange, and one in the lobby of the Hotel Iroquois, a master clock, showing the secret of his device, practically a clock without wheels. The clock tells its own story, and it tells time, the way railroad time-tables are printed the world over. Instead of reading "a quarter to three" on a dial, the new clock indicates "2.45" in plain numerals, with the seconds described on a graduated arc, so that an observer sees the hour, the minute, and the second at a glance. Mr Thrasher has brought the attention of the New Industries Committee of the Chamber of Commerce and Manufacturers' Club to his invention. They were so favourably impressed that a special committee was appointed to go to the home of the inventor in Connecticut, and look over the plant and secure other information that was desirable. C. H. Bierbaum, consulting engineer, of Buffalo, made a thorough examination of the new clock at the request of the New Industries Committee, and in his report states: "The clock itself is unique, and from a purely horological point of view is somewhat radical in its departure from the established practice, in that it does not use the conventional escapement; the pendulum is entirely free at its point of suspension; the necessary energy to keep it vibrating is imparted to it by a gravity weight; this gravity weight is tipped at a time when the arc of vibration of the pendulum becomes a minimum. The energy for operating the clock is supplied in the form of an electric current; the strength of the same can in no possible manner affect the accuracy of the clock. The mechanism of the clock is very ingenious, though extremely simple."

TRYING AND FITTING ON THE SKIN OF A BRITISH EAST AFRICA ZEBRA ON THE MANIKIN.

Ptomaine Poisoning.

The remarkable outbreak of ptomaine poisoning (says an English exchange, though the hints come in "pat" enough after the Onehunga case) should warn people to be very careful about food at this season of the year.

Meat and fish may be apparently quite sound, while they are really poisonous. Sometimes they are in this state before they are killed, and the only precaution possible in these circumstances is to use sparingly while the warm weather lasts those kinds of food which are most likely to be poisonous.

The worst are sausages, pork pies, cold pork and cold ham eaten several days after being cooked.

Veal has also a bad record.

Potted meats and some kind of tinned meats, such as brawn, are more or less dangerous in hot weather. And even beef has poisoned a good many people. Especially in the case of corned beef, care should be taken that it is not made of stale beef.

Mutton seems to be absolutely safe. No case of poisoning has been traced to it.

So are all kinds of fowl, except cold duck and cold goose.

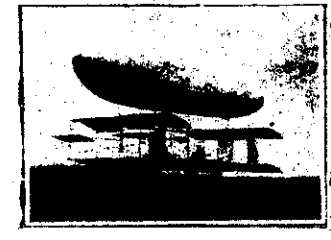
Among fish, mackerel has the worst reputation. It decays very rapidly, and should be eaten only when quite fresh. All surface fish have this drawback, including herrings, mullet, sprats, etc.

The deep sea fish are the safest—namely, soles, cod, turbot, halibut, skate, etc. Mussels are especially dangerous.

Over-ripe cheese and ice cream sold in the street have many cases of poisoning to answer for.

By avoiding the frequent use of the foregoing and taking care that all food is stored in a clean, cool, well-ventilated place, one can almost certainly secure oneself against the danger of ptomaine poisoning.

THE MOUNTED "CALIPH," THE WORLD'S GREATEST HIPPOPOTAMUS, WHO WAS 12 FEET LONG AND WEIGHED FOUR TONS WHEN ALIVE.



Combined Aeroplane and Dirigible Balloon.

The interesting photograph reproduced herewith shows the latest balloon and aeroplane combination which has been brought out abroad. The aeroplane in this instance consists of two short biplanes arranged in tandem, with the motor placed just at the rear of the forward biplane and the aviator located in front of the rear biplane. Above the aeroplanes, and rigidly attached to their framework, is a small cigar-shaped gas bag, which is intended to produce a partial lift of the entire apparatus, thus causing it to rise easily in the air with a very short run over the ground. This machine, which is the invention of M. Cesar, is fitted with a 50 horse-power 4-cylinder Prissi and Berthaud motor. One of its quite novel features is the use of balancing planes in front of the foremost of the main planes, not only for side equilibrium, but also for steering the machine up and down. These two planes are worked together as a horizontal rudder when it is desired to rise or descend. Several more or less successful trials of the machine have been made.