ANOTHER CROP OF HOWLERS.

The following answers to questions put during a recent examination are vouched for by a member of the State Education Department of New York:—

"The chamer is valuable for its feathers; the whale for its kerosene oil."

"There were no Christians among the early Gauls; they were mostly lawyers."

"Climate is caused by the emotion of the earth around the sun."

"A circle is a round, straight line with a hole in the middle."

"When Cicero delivered the oration he was a prefix."

"Sixty-gallons make one hedgehog."

"The stomach is just south of the ribs."

"The rosetta stone was a missionary to Turkey."

"The Government of England is a limited mockery."

"The chief ports of the U.S. are oysters, fishes, clams, and lobsters."

"Georgia was founded by people who had been executed."

"A mountain pass is a pass given by the railroads to its employees so that they can spend their vacation in the mountains."

"A mountain range is a large cook stove."

"The qualifications of a voter at a school meeting are that he must be the father of a child for eight weeks."

"Gravitation is that if there were none we should fly away."

"The stomach forms a part of the Adam's apple."

"A permanent set of teeth consists of eight canine, eight cuspids, two molars, and eight cuspidors."

"Typhoid fever can be prevented by fascination."

"Weapons of the Indians—bow, arrow, tomahawk, and warwhoop."

The following essay on a cow was written by a small boy in school:—

"A cow is an animal with four legs on the under side. The tail is no longer than the legs, but is not used to stand on. The cow kills flies with her tail. A cow has big ears that wiggle on hinges, so does her tail. A cow is bigger than a calf, but not as big as an elephant. She is made small so as she can go in a barn when no one is looking. Some cows are black and some can hook. A dog got hooked. She tossed the dog that worried the cat that caught the rat that lived in the house that Jack built. Black cows give white milk; so do other cows. Milkmen sell milk to buy little girls' dresses, which they put water in and chalk. Cows chew cuds, and each cow furnishes her own chew. That is all there is about cows."

SMILE RAISERS.

"What's the hardest thing about roller-skating when you're learning?" asked a hesitating young man of a rink instructor.

"The floor," answered the attendant.

"Please don't bother to see me to the door," pleaded the departing visitor.

"Really, it's no bother at all," the hostess assured her. "It's a pleasure."

Lady (to gardener): "Have you had your dinner, John?"

Gardener: "Not yet, ma'am. Hi must 'eat the greenhouse first."

"Dad, what are ancestors?"

"Well, my son, I'm one of yours. Your grandpa is another."

"Oh! Then why is it people brag about them?"

SCIENCE SIFTINGS

By "VOLT"

CENTENARY OF A GREAT DISCOVERY.

A centenary took place last February of one of the greatest discoveries by French scientists just one hundred years ago, when Andre Marie Ampere formulated the fundamental idea of the electric dynamo which has proved of such utility to the world. It is in America, in a town of New Jersey, called Ampere, that this celebration took place, because this locality owes its prosperity to Andre Ampere's discoveries. There is an old picture in existence which represents Ampere, with a piece of chalk in his hand, running after a carriage on the back of which he had begun to work out a problem while it was at rest. Andre Ampere was a good Catholic as well as a clever man.

NEW USE FOR WINDMILLS: GENERATION OF ELECTRICITY.

Many attempts have been made to solve the problem of efficiently utilising the winds as a means of generating electricity. The difficulties arise from the extreme variations in the force of the wind and from the liability, even in windy regions, to periods of calm during which no power at all can be obtained. These conditions suggest that wind power should be used only as an auxiliary to some other source of energy, such as the burning of coal or oil. Now that fuel of all sorts has multiplied in price, there is all the more reason for considering the possibility of turning the wind to account. Hitherto the usual plan has been to use a large slow-speed windmill to drive a dynamo at a high speed through gearing—a rather wasteful arrangement. During the war, however, there was in Great Britain a remarkable development in the design and construction of small high-speed dynamos on aeroplanes. These dynamos were direct-coupled to propellers, or rather "impellers," driven by the wind created by the aeroplane in flight. A British firm has devised a scheme for fitting three or more of these wind-dynamos on the swivelling top of a vertical pole; with a vane to keep them in position against the wind. Each equipment gives 60 watts, and the arrangement forms a cheap and efficient auxiliary to the ordinary country-house lighting installation. The energy produced is, of course, stored in accumulators in the usual way. The operation of the plant is entirely automatic, and it is so light and simple that it presents no obstacles in erection and maintenance.

COLORS OF BIRDS.

At the scientific meeting of the English Zoological Society, Mr. A. Mallock, F.R.S. F.Z.S., described the results of his investigations into the causes of the colors of birds. It has long been know that the visible colors of feathers were due either to the presence of pigments or to what is known as "interference," the result of a kind of structure like that of the surface of a pearl which reflects light in different ways, breaking it up into a shifting sheen of color. Mr. Mallock carried the analysis a stage further. He explained that if any object appears colored in white light, the matter of which it is composed must exercise some selective action on the composite light which falls on it, absorbing or transmitting certain colors and reflecting or scattering the remainder. In colors due to pigment the selection depends on the molecular structure of the matter. In the case of interference colors it depends on the gross structure of the matter. In any particular case it is not easy to distinguish, but there is a general test. If the color alters when subjected to pressure, it is a case of interference, because no ordinary form of pressure can reach molecules. The greater part of the colors of feathers is due to pigments, of the nature of which little is known. Only one, the red pigment of the feathers of turacu, is known to be soluble, and it is an odd fact that the solvent is slightly alkaline in water, such as rain water. The most brilliant coloring of birds is due to interference, and is produced by some structure of the feather where the spacing of the parts is a multiple of half the wave lengths of the light they reflect. Notable cases are humming-birds, sun-birds, birds of paradise, and ducks. In these the colors disappear on pressure, and the color-producing substance is in a very thin layer overlaying an intensely black substratum.