

IT SET HIM THINKING.

A story told by a good-natured Anglican parson has the merit (says the *Lee Maria*), of injecting a little humor into the dreary dispute about Orders. He was riding one day in a jaunting-car near the Lakes of Killarney, whose famous echoes sometimes repeat a sound as many as eight times. Wishing to "take a rise out of the driver," the clergyman said: "Do you know, Pat, that there are none but Protestant echoes here?"—"No, sir, I niver hard it; and I don't believe it either," was the reply. "Well, you shall hear it very soon," said the Anglican. Arriving at a favorable spot, he called out softly, raising his voice to a loud pitch on the last word: "Do you believe in Pio Nono?" and the echo replied: "No, no! No, no! No, no!" Pat was delighted at the joke; and, rubbing his hands gleefully, said: "Behold, whin I drive one of the *raal* clargy here, won't I have the sport out of him!" And the parson began to reflect on the validity of his Orders.

THE EVOLUTION OF DONKEYS.

In a small town in North Wales the town clerk and the local auctioneer met in a public house at Christmas-tide. They were having a quiet chat, when the auctioneer espied Pat pass by.

Thinking he could have a joke at Pat's expense, he called him in and said:—

"They tell me, Pat, you are good at conundrums."

"Shure, I'll have a flop at one," said Pat.

"Can you tell me," said the auctioneer, "how there are so many more donkeys in Egypt than in Wales?"

"I can easily answer that," said Pat. "In Egypt they let them be donkeys for ever, while in Wales they make auctioneers of them."

Collapse of auctioneer.

Science Notes.

PREPARATIONS FOR THE NEXT ECLIPSE.

THE principal English astronomers have now mapped out their stations for the eclipse of January next along the line of totality crossing India in a south-westerly direction. It is desirable for the proper record of the phenomena, that the observations should be approximately continuous, so as to be reciprocally complementary. Sir J. Norman Lockyer and Mr. Fowler will establish themselves at Ratnagore on the west coast. The Astronomer Royal, Dr. Common, and Professor Turner will take up their position at a point where one of the two principal railways from Bombay to Poona is crossed by the shadow track, and Professor Newall will station himself at Wardha, where, with a large spectroscope, he will seek to estimate the rotation of the corona by the spectroscopic displacement of its lines.

THE BURNING TREE OF INDIA.

There has lately been added to the collection of plants at the botanic gardens at Madras, India, a specimen of a strange tree, writes an East Indian correspondent to London. It is in size scarcely more than a bush, but other individuals of its species are known to have attained, in their habitat in the Himalayas, Burmah and the Malacca Peninsula, the dimensions of a large tree, from fifty to seventy-five feet in height. The Madras specimen is surrounded by a strong railing which bears the sign: "Dangerous: all persons are forbidden to touch the leaves or branches of this tree." It is, therefore, a forbidden tree in the midst of the garden, but no one is tempted to touch it, for it is known to be a "burning tree." This name is a misnomer, for the tree stings rather than burns. Beneath the leaves there are stings comparable to those of nettles, which, when touched, pierce the skin and secrete a fluid which certainly has a burning effect. The sting leaves no outward sign, but the sensation of pain exists sometimes for months, and is especially keen on damp days, or when the place which has been wounded is plunged in water. The natives in the part of Burmah where this tree grows are in such terror of it that they fly when they perceive the peculiar odour which it exhales. If they happen to touch it, they fall on the ground and roll over and over on the earth with shrieks. Dogs touched by it yelp and run, biting and tearing the part of the body which has been touched. A horse which had been in contact with a burning tree ran like a mad thing, biting everything and everybody that it could reach. A missionary at Mandalay, who investigated a leaf of the plant with his forefinger, suffered agony for several weeks and for ten months felt occasional pains in his finger.

THE PHILOSOPHER'S STONE AT LAST.

If the accounts in the New York *Tribune* of Dr. Emmens's success in converting silver into gold should be substantiated by further inquiry, the 19th century may boast, as its crowning achievement, of having realised the visions of medieval alchemy in its search for the philosopher's stone. The discoverer of the process, a trained chemist, has since April deposited in the Assay Office of New York seven ingots, weighing from seven to 17 ounces each, which have been examined and reported on by experts. They are declared to consist of a mixture of gold and silver, and to contain from two-thirds to three-fifths of the former, while Dr. Emmens avers that practically the only material used in their production was a quantity of Mexican dollars, containing an alloy of a tenth of copper, but no gold. This mixture he finds in some way to facilitate the process of conversion, the agent of which is enormous mechanical pressure. Of course until the process is conducted under the eyes of disinterested witnesses its genuineness cannot be accepted as proved, since as yet we have only the discoverer's *ipse dixit* to vouch for it, but it is, in any case, an interesting subject of speculation. A pressure of 250 tons to the square inch, which Dr. Emmens hopes to raise to 800, is exercised for 10 days or a week at a time, in what he calls a "force

engine." Faint flecks and streaks of yellow first appear in the white metal, until the former becomes the prevailing colour, and there is a stage of the process in which he considers it to form an intermediate substance which he calls argentaurum. When the final transmutation takes place this substance disappears, and the percentage that is not transformed into gold reverts to its original state of pure silver. Gold would thus be shown to be only a condensed form of silver, a supposition in which there is no inherent impossibility. The two substances are in one sense closely connected, and are placed by Professor Mendeleef in a class, comprising also sodium and copper, between the members of which a certain relationship is established by the ratio between the figures representing their atomic weights. There is, however, a gap in the series between gold and silver, and Dr. Emmens conjectures, although it remains to be experimentally investigated, that his intermediate metal, argentaurum, may supply the missing link in the chain. Up to the present he has only succeeded in transmuting five or six ounces of metal at a time, but with a greater number of machines of course the quantity treated could be increased. Another important point as to which we have no information, is the cost of the process. An essential distinction between the two metals is shown by the difference of their chemical affinities, or power of entering into combination with other substances.

For Our Young Readers.

LESSONS IN PHYSIOLOGY.

THE following is an old rhyme which has assisted many boys and girls to locate and remember the bones in the human body:

How many bones in the human face?
Fourteen when they're all in place.

How many bones in the human head?
Eight, my child, as I've often said.

How many bones in the human ear?
Four in each, and they help to hear.

How many bones in the human spine?
Twenty-four, like a climbing vine.

How many bones in the human chest?
Twenty-four ribs and two for the rest.

How many bones in the shoulders bind?
Two in each—one before, one behind.

How many bones in the human arm?
In each arm one: two in each forearm.

How many bones in the human wrist?
Eight in each if none are missed.

How many bones in the palm of the hand?
Five in each, with many a band.

How many bones in the fingers ten?
Twenty-eight, and by joints they bend.

How many bones in the human hip?
One in each, like a dish they dip.

How many bones in the human thigh?
One in each, and deep they lie.

How many bones in the human knees?
One in each—the kneecap, please.

How many bones in the leg from the knee?
Two in each, we can plainly see.

How many bones in the ankle strong?
Seven in each, but none is long.

How many bones in the ball of the foot?
Five in each, as the palms were put.

How many bones in the toes—half a score!
Twenty-eight, and there are no more.

And now altogether these many bones wait,
And they count in a body two hundred and eight.

And then we have in the human mouth,
Or upper and under, thirty-two teeth.

And now and then have a bone, you'd think,
That forms on a joint or to fill up a chink—

A sesamoid bone or a wormian we call,
And now we may rest, for we've told them all.

SELF-MADE MEN.

Columbus was a weaver. Franklin was a journeyman printer. Pope Sixtus V. was employed in keeping swine. Burns was a ploughman. Æsop was a slave. Homer was a beggar. Daniel Defoe was apprenticed to a hosier. Demosthenes was the son of a cutler, while Virgil was the son of a baker. Ben Jonson was a bricklayer. Cæsar was a common soldier. Gifford and Bloomfield, poets, were shoemakers. Belzoni was the son of a barber. Blackstone