

different electrical combinations, thus varying the speed of the motor without the use of any wasteful resistance. The direction of rotation is also governed by the same switch, so that the operation of the motor is very simple, and it can be put in charge of an ordinary workman.

Any system of conveying the current from the dynamo to the locomotive can be used, either using the rails as one side of the circuit for the return of the current, or else employing a complete metallic circuit by the use of a double overhead trolley wire. In this latter case, a trolley pole, shown in the view, carrying at its upper end two trolley wheels for making running contact with the overhead wires, is attached on the rear of the locomotive car.

This mining locomotive is now being manufactured by the Sprague Electric Railway and Motor Company from designs made by Mr. I. E. Storey. One of the most noticeable advances made in modern mining science is the adoption of electricity as a medium for transmitting power and producing light, and

the same wires which supply current to the drill, and, when in such use, are connected in multiple arc across the main current wires.

These drills are manufactured and sold by the Sprague Electric Railway and Motor Company of New York, under patents granted to Mr. I. E. Storey. We understand that the Sprague Company is now at work on, and will soon be able to furnish, a number of special mining applications, among which is an electric percussion drill.

#### THE LATEST THEORIES ON THE ORIGIN OF THE ENGLISH.<sup>1</sup>

WHEN, one is sometimes tempted to ask in sheer weariness, will any man be able to say the last word on that question of the West which bids fair to be as eternal as any question of the East, — the question whether we, the English people, are ourselves or somebody else? That formula is not a new one.



ELECTRIC MINING DRILL.

such applications as the above indicate the growing demand of mining companies for just such apparatus, and the ability of the leading electric companies to supply the need.

#### ELECTRIC ROTARY DIAMOND DRILL.

THE accompanying view shows a new electric mining rotary drill which has shown good results in experimental work, and which will soon be applied to regular mining-work in several leading mines.

A good electric mining drill has always been desired by miners, and this drill seems to meet all the requirements. It is light, compact, simple, and easy to operate. The motor is completely incased, so that it is impossible for dust, dirt, or stray stones to lodge in the working parts. The whole drill is mounted on an adjustable frame, so that it can be very easily set in any position desired, or set at work at any part of the mine.

The current for operating the drill is supplied at a constant voltage or potential, the number of volts depending on the potential used for transmitting power throughout the mine. If lamps are needed, they can be supplied with current from

Some of us have, in season and out of season, through evil report and good report, been fighting out that question for not a few years. If it is wearisome to have to fight it out still, there is some little relief in having to fight it out in a wholly new shape and with a wholly new set of adversaries. It is an experience which has at least the charm of novelty when we have to argue the old question, who are we, whence we came, from a point of view which might make it possible, with the exercise of a little ingenuity, to avoid ever using the words "Celt," "Briton," or "Roman" at all. On the other hand, the strife in its new form has become more deadly; the assault has become more threatening. Hitherto we have fought for victory, for dominion, for what, if one adopted the high-polite style of a lord mayor's feast, one might call "the imperial instincts of the Anglo-Saxon race." We have had to fight to prove our greatness against people who told us that we were not so great as we thought. Angles and Saxons, we were told, were only one element, perhaps a very inferior element, in the population of Britain. Still nobody denied that we had some place in the world, some place in this island. It might be a very small place compared with that of the Celt who went

<sup>1</sup> From The Contemporary Review for January.