THE LARGEST SAURIAN.

Professor O. C. Marsh has recently received a collection of reptilian remains from the crustaceous deposits of Colorado, among which he has found portions of an enormous dinosaur which he states is larger than any land animal hitherto discovered. The dinosaurs were a tribe of immense saurians, having many mammalian characters, such as a medullary cavity in the long bones, short pachyderm like feet, a sacrum of five united vertebræ, and a lateral motion of the lower jaw. They include the iguanodon, megalosaurus, &c., herbivorous and carnivorous. The alligator belongs to the same order. The reptile discovered by Professor Marsh probably measured from 50 to 60 feet in length. It was herbivorous and seems quite distinct from any species hitherto described. The name *Titanosaurus montanus* has been applied to it.

THE lustre of morocco leather is restored by varnishing with white of egg.

DOUBLE SCREW.—At a recent English exhibition, a novel form of arrangement of the dual engine was shown by Mr. Somerset Mackenzie. Great increase of power is obtained in screw-propellers by using two screws rotating in opposite directions, one taking the water of the other. By the use of hollow shaft and double engines this can very easily be accomplished, but Mr. Mackenzie has discovered how to do it with one cylinder—that is, he gets two reverse rotating motions from the action of one cylinder and piston. How this is managed it is not very easy to explain without the aid of diagrams, but we may state that while one shaft is driven by an ordinary crank the other is driven by a kind of slotted crank, with its head passing round the other shaft as it rotates. This is the arrangement in the vertical engine; that of the horizontal, which is about to be put in a boat recently constructed, is somewhat modified but the same in principle.

LOCKING MINER'S LAMPS.—A very simple and at the same time effective method of locking miner's lamps has been adopted at the Atherton collieries, near Manchester, England. The ordinary locks and keys, which are so easily tampered with, are entirely discarded, and a soft metal bolt supplies their place. Before the lamps are given out from the office each top is secured down by one of these bolts, which, after being pushed through a slot, is flattened and stamped at both ends by means of a machine constructed for the purpose. Once fastened in this manner the lamp cannot be opened without destroying the bolt, which is only extracted when the lamp is again brought up from the mine, and the impressed stamp at either end effectually prevents any other than the one issued from the office being placed in its stead.

WRITING ON GLASS.—A writer to the *English Mechanic* says: Suppose you wish to write some letters in gold on a window, go outside, sketch off your letters with soap or chalk on the outside of glass; that done, take a pinch isinglass between your finger and thumb and dissolve it in a cupful of water; wet the inside of your glass opposite your sketched letter with this, and apply gold leaf with gilder's "tip" immediately; allow the inside of window to get thoroughly dry. The time this takes will depend on the surrounding condition, but it must be dry. Now you make a correct "pounce" of the letters on a piece of paper and hold this steadily against the gold that you roughly laid on the glass, while with some powdered chalk in a small muslin bag you gently beat the paper on the pounced holes. Remove paper, and you have the outline of your letter in chalk on the gold. Point them neatly in with japan gold size and white lead; allow to dry, th n with clean cold water wash off your surplus gold leaf.

WAX POLISHING.—There is no particular art in wax-polishing floors, &c., the principal requirement being plenty of elbow-grease and a go d hard brush. The floor, after being well scrubbed should be allowed to dry. When dry it was painted over with a large, soft whitewash brush dipped in oak stain. This was allowed to dry in 24 hours. The floor was then gone over with thin size, and this was in turn allowed to dry in 24 hours. After this the floor was painted over with a kind of varnish made by dissolving beeswax in spirits of turpentine, the proportions being about a pound of wax to two quarts of turps. The wax was shredded, placed along with the turps in a stone bottle, and the whole placed on the hob and frequently shaken. When this varnish had soaked well in, the whole surface was polished with a rather hard brush until a good surface was obtained. Special brushes, adapted to polishing waxed floors, are sold by oilmen.

TRY TO STOP COUGHING.

A gentleman called upon us recently, says *Hall's Journal of Health*, who actually escaped from the fangs of consumption some years ago; and we are induced to present the circumstances: "You speak of coughing continually. Let me suggest to you the query whether this is not unnecessary and injurious? I have long been satisfied, from experience and observation, that much of the coughing which precedes and attends consumption is voluntary. Several years ago I boarded with a man who was in the incipient stages of consumption. I slept in a chamber over his bedroom, and was obliged to hear him cough continually and distressingly. I endured the annoyance, night after night, till it led me to reflect whether something could not be done to stop it. I watched the sound which the man made, and observed that he evidently made a voluntary effort to cough. After this I made experiments on myself, and found that I could prevent myself from coughing, sneezing, gaping, &c., in case of the strongest propensity to these acts, by a strenuous effort of the will. Then I reflected that coughing must be very irritating and injurious to the delicate organs that are concerned in it, especially when they are in a diseased state. What can be worse for ulcered bronchia, or lungs, than the violent wrenching of a cough? It must be worse than speaking. A sore on any part of the body, if constantly kept open by violent usage, or made raw again by a contusion just when it is healing (and of course begins to itch), will grow worse, and end in death. Certainly, then, a sore on the lungs may be expected to terminate fatally if it is constantly irritated, and never suffered to heal; and this, it seems to me, is just what coughing does for it. On the strength of such considerations as these, I made bold to ask the man if he could not stop coughing. He answered no. I told him what I thought about it, as above. He agreed to make a trial; and, on doing so, he found, to his surprise, that he could suppress his cough almost entirely. The power of the will over it increased as he exercised it, and in a few days he was mostly rid of the disposition to cough. His health, at the time, evidently improved, and when I last saw him, he was in strong hopes of getting out of death's hands."

A PHILADELPHIA firm has six orders on hand for engines and boilers to be shipped to various cities in Germany. They have also received enquiries from Sweden.

HOW TO SOFTEN RESIN.—Melt the resin, and while in a state of fusion add tar. The proper degree of hardness can be ascertained by dropping a small portion of the melted mass into water.

A LEADING house in Sheffield ordered of an American firm in one lot, about two months since, 22,000 dozen of hickory and ash shovel and other kinds of tool handles. These have since been made and shipped, and have arrived at their destination.

THE opening meeting of the Edinburgh and Leith Engineers' Society for the present session, was held a few evenings since, under the presidency of Mr. Robert C. Reid, C.E., when Mr. David N. Westland, C.E., delivered the inaugural address on "A Practical View of Civil Engineering."

THE deepest pit in South Staffordshire, it is worthy to note, is that of the Walsall Wood Colliery Company, who have just completed the sinking of a 15ft. shaft, and, at a depth of 545 yards, have passed into the valuable deep coal of the Cannock Chase district. The aggregate thickness of the several seams passed through is 40ft.

DESTRUCTION OF PHYLLOXERA.—A French and Swiss commission has made experiments with anhydrous sulphurous oxide under the supervision of Prof. Raoul Pictet, of Geneva, and we are informed found extraordinary results. Those who have seen boiling water instantly frozen or fire extinguished in a second by this remarkable agent will not be surprised to learn that it has been found to annihilate the enemy of the grape.

UPWARDS of 250,000 pistols have been made at Norwich, Connecticut, this year, and orders are increasing, compelling the works to run day and night. The Bridgeport cartridge works make some 700,000 cartridges a day. They have supplied Russia with 40,000,000, Turkey with 70,000,000, and have just got an order for 80,000,000 from Italy. The Russian and Turkish inspecting officers have been working side by side in the factory. The Turkish Government are now building a cartridge manufactory upon their own soil, the machinery for which is now being made at the Pacific Ironworks, in Bridgeport, Connecticut.