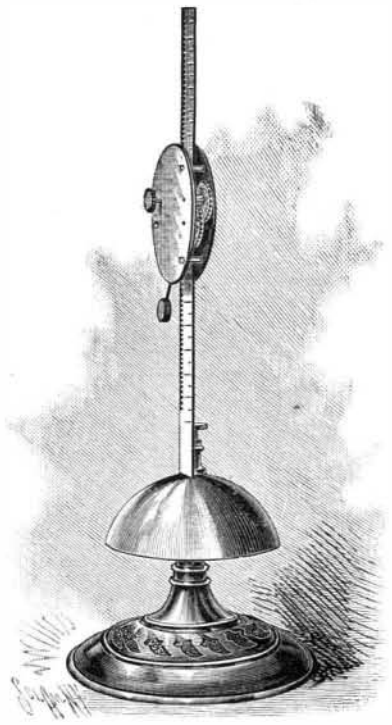
A GRAVITY-OPERATED TIME ALARM.

The device shown in the accompanying illustration contains no actuating springs, but depends solely for its operation on the descent by gravity of the casing on the post on which it is held. The post has on its front a graduation indicating hours and minutes and subdivisions, and on one edge of the post are rack teeth terminating some distance above a gong or bell. In a frame or casing fitted to slide vertically on the post a transverse shaft is mounted to turn and slide, the shaft projecting beyond the front plate, where it is provided with a button. On this shaft is a pinion meshing with the rack teeth of the post, from which the pinion is disengaged by pressing the button to slide the shaft inward, a spring normally pressing the shaft outward, so that the pinion will be in mesh with the rack teeth. The shaft also carries a gear wheel meshing with a pinion on another shaft, to which is secured an escapement wheel, adapted to be acted on by an ordinary escapement secured on a shaft rocking in suitable bearings. The escapement shaft is connected with a pendulum extending through the bottom of the casing. To set the alarm, the button on the front of the casing is pressed inward, to disengage the pinion on the main shaft from the rack teeth of the post, and the casing is raised the desired distance, as indicated by the graduation, to allow for the time which must elapse before the alarm is to be sounded. When pressure is removed from the button the pinion engages the rack teeth, and, the pendulum being started, the casing commences to move down the post by its own weight, the movement, however, being gradual, on account of the action of the pendulum and the escapement. The moment the pinion on the main shaft leaves the last tooth of the post the casing drops upon one end of a striker, causing the gong to be sounded. This alarm is designed to be a very convenient one for photographers, chemists, dentists, school and music teachers, cooks, etc., as well as business men generally. It has been patented by Mr. S. E. Jones, room 8, No. 69 Dearborn Street, Chicago.



JONES' TIME ALARM.

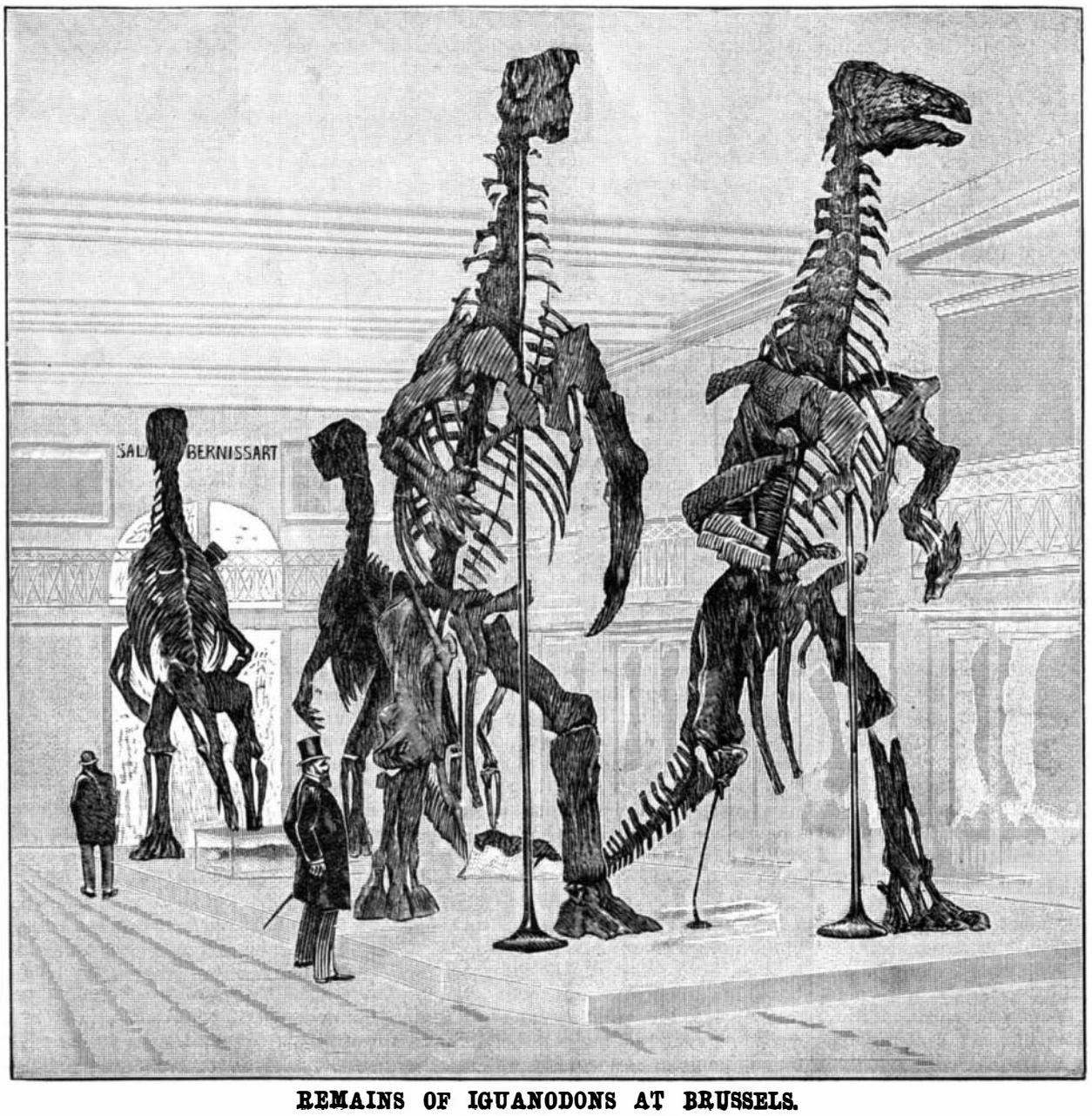
Twelve Years with Ensilage.

In 1880 I built a 300 ton stone silo, in two compartments, and afterward a smaller one of wood. As a result of my experience, have reached the following conclusions:

That stone, for a permanent silo, where the conditions are such that the cost is not excessive, is the more economical. That in a stone, cement-lined silo not a pound of ensilage need waste or deteriorate. That a covering of trash, closely packed deep enough to take up the mould, *i. e.*, as deep as the air penetrates, is better than weighting. I discontinued weighting years ago. That, be the time for growth long or short, Southern white is the best corn to plant, because of its quick growth and great productiveness. That, if cut at an early stage of growth, the ensilage is more acid, but is relished by cattle, and is excellent food. That the best period for cutting is the roasting ear stage. Last year much of my corn stood until the kernel shrank and hardened, with the result that a large proportion of the kernels were voided whole, and, reasoning from analogy, I think it a fair inference that the stalk is less digestible after hardening than when in its more succulent state. That the best distances for planting are about four feet apart for the rows, and one foot for kernels in the row. This will give full-sized stalks and ears. Many of the ears stand nine feet from the ground where I am now cutting. That it is dangerous to feed finely-cut cornstalks, whether dry-cured or ensiloed, to horses or mules.—*A. J. Coe, in the Country Gentleman.*

THE IGUANODONS AT BRUSSELS.

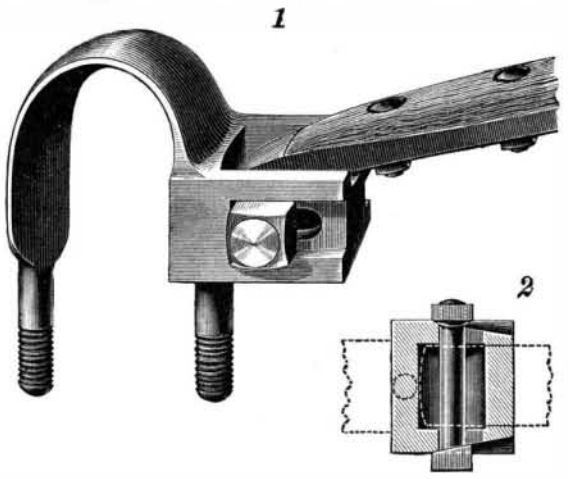
In the year 1878 the miners employed at the Bernissart Colliery, Belgium, while engaged in a gallery some three hundred yards below the surface, came upon an immense chasm containing a quantity of bones. Some large teeth were forwarded to a professor in Louvain University, who presently pronounced them to be the teeth of the iguanodon, a gigantic extinct reptile, whose remains had up to that time been rarely discovered. One of the few previous finds of the kind was made in the year 1830 in our own county of Sussex. On that occasion Cuvier, the celebrated naturalist, pronounced that the specimens sent him appertained to the iguanodon tribe. Perceiving the importance of the Bernissart discovery, the Belgian government took the matter up, and excavations were vigorously prosecuted, with the result that upward of 100 tons of bones were sent to Brussels, in twenty-two wagons. To protect them from perishing from exposure to the air, the bones—which had been carefully numbered according to the position where they were found—were coated with plaster and wrapped in cloth. When this covering was removed the bones were dipped in boiling gelatine, which restored their original firmness, and then—twelve years being consumed in the operations—the five skeletons exhibited in the Natural History Museum at Brussels were laboriously built up out of these fragments. As our engraving shows, the iguanodons were creatures of great size and of a kangaroo-like appearance, from their habit of standing on their hind legs. It is supposed that their tails, which were very thick and heavy, acted as a balance, enabling them to maintain this upright position. Their diet consisted of vegetables, fish, and insects. Their remains were found buried in an alluvial deposit left by the periodical river floods. We abridge the above from a very interesting paper in the *Independance Belge*, by M. Hector Chainaye. Our engraving is from a drawing by M. Cassiers.—*The Graphic.*



REMAINS OF IGUANODONS AT BRUSSELS.

AN IMPROVED COUPLING.

The extremely simple form of thill coupling shown in perspective and in horizontal section in the accompanying illustration is anti-rattling, and has neither springs nor washers; the coupling may also be advantageously employed with pump rod connections,



SMITH'S THILL COUPLING.

and for many similar purposes where simple, efficient, and noiseless connections are desirable. It has been patented by Mr. Marcellus T. Smith, of Northport, N. Y. The thill iron has a circular rear end and a circular eye, the iron fitting a semicircular socket open at the top and for a portion of its bottom, the usual form of clip being made integral with or attached to the rear surface of the socket. The front wall of the socket has a beveled shoulder on its inner face on which the thill iron rests when in normal position, and in one of the outer side walls of the socket is a semicircular recess tapering outward toward the front, the deepest portion of the recess being at the front end of the socket. An aligning recess is formed in the other outer side wall of the socket, the other recess being square in cross section, and both of them forming grooves or channels, through which, near their shallow ends, are elongated openings through which is passed the coupling pin, of a diameter to snugly fit the eye of the thill iron. The inner face of one head of the pin is square in section and beveled to fit the inclination of the square channel in one of the outer sides of the socket, as shown in Fig. 2, the opposite threaded end of the pin receiving a nut whose inner face is convexed to fit the circular groove or channel in the other outer side of the socket. When the thill iron is placed in the socket and the nut is screwed well up to place in the circular channel, the eye of the thill iron is carried to a firm, positive, and non-rattling engagement with the wall of the socket chamber, and should the nut in time become slightly loosened, from wear or otherwise, it can be readily tightened to bring the thill iron into position where it will not have the slightest lateral play.

Common Turpentine and Larch Turpentine.

If a few drops of common turpentine in a test tube are covered with 5 parts ammonia of specific gravity 0 96, the turpentine forms a milky emulsion and soon gelatinizes. Larch, otherwise known as Venice turpentine, remains apparently unaffected, but if constantly stirred up it becomes a solid, colorless mass.—*E. Hirschsohn.*