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THE CHINESE BUILDING AT THE PARIS EXHIBITION.

Between the Japanese building and the Spanish is that of the Chinese exhibitors. It is a big square edifice, all black and white diaper, having a brilliant door of vermilion studded with gold, groups of sculptured figures of painted wood for its decorations, edifying Chinese inscriptions on the door posts, and unglazed windows filled with a lattice work of carved fine wood. The double crown at the summit of the building, above the door, is of black wood, and its upturned points have a startling effect. In the Chinese part of the Exhibition will be found many beautiful fabrics of silk brocade, enamel, porcelain, jewelry, and other elaborate productions of that industrious people.—*Illustrated London News.*

The Tasimeter and Magnetization.

After perusing an account, in a recent number of the SCIENTIFIC AMERICAN, of Edison's tasimeter, it occurred to one of us to apply it to detect, and, if possible, to measure, the elongation and shortening which, as discovered by Joule, are produced in a bar of iron by magnetization and demagnetization. Accordingly, to test whether the effect could be observed in this way, a rough specimen of the instrument was constructed, and with it some preliminary experiments made, an account of which may interest the readers of *Nature*. A small cylinder, about half a centimeter in length and diameter, of the carbon used for Bunsen's cells, rested with its ends, which were slightly rounded, in contact with two brass plates, one of which was fixed to a rigid upright attached to one end of the base of the instrument, while the other, resting with one end on the base, formed a spring, which in its normal position just touched the end of the carbon. A coil containing four layers of insulated wire, six turns to the layer, was wound round a tube, ten centimeters long and eight millimeters in diameter, and fixed with its axis in line with that of the carbon cylinder. A piece of iron wire was then placed in the axis of the tube, with one end resting against the spring, and the other in contact with the end of a screw working in a nut fixed to a rigid upright at the end of the base remote from the carbon. By means of this screw the pressure of the iron bar on the spring, and consequently of the spring on the carbon, could be varied at pleasure.

A terminal of copper wire was attached to each of the brass plates bearing on the carbon, and joined up so that the carbon, plates, and terminals formed one of the resistances of a Wheatstone's bridge, in connection with which a battery of one Daniell's cell and a very delicate Thomson's reflecting galvanometer were used. When the iron wire forming the core of the electro-magnet had been so adjusted that there was only a very slight pressure on the carbon, the resistances of the bridge were arranged to make the deflection of the galvanometer produced by the current from the battery nearly zero. The galvanometer and battery keys were then put down, and the current allowed to flow through the bridge during the remainder of the experiment. The electro-magnet was then excited by the current from three of Thomson's tray Daniells. This produced a deflection of the image on the galvanometer scale of about fifty divisions in the direction indicating a diminution of the carbon resistance, which must have been caused by change of contact produced by increased pressure on the spring. The length of the iron core of the electro-magnet had therefore been increased by magnetization. When the magnetizing force was removed the image immediately returned to its former position. As a verification that the diminution of resistance indicated by the bridge arrangement was caused by elongation of the iron core, the adjusting screw was turned forward through a very small distance, when the deflection was found to be in the same direction as before. When the screw was brought back the image on the scale returned towards its zero. Experiments with various strengths of current gave perfectly accordant results.

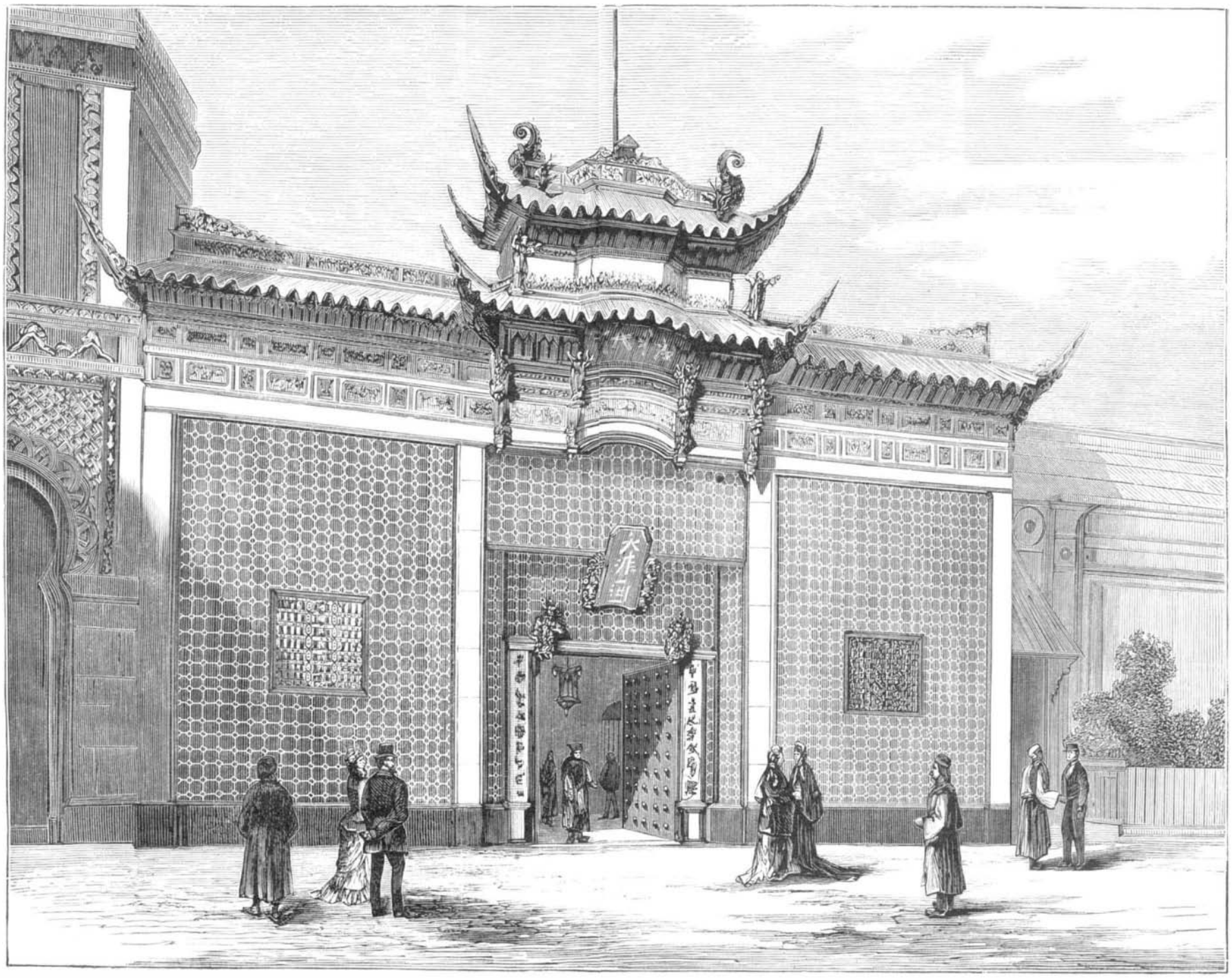
We hope by replacing the comparatively rough adjusting screw by a micrometer screw to be able to make some measurements of the exact amounts of elongation or shortening produced in a piece of soft iron or steel by given changes of magnetic intensity. It may be remarked that this method of measurement could be advantageously applied in cases where the amount of change of dimensions to be discovered or measured is very small, but the force which it could be arranged to produce abundant.—*Andrew Gray and Thomas Gray in Nature.*

University of Glasgow, July 12.

Influence of Electricity on Evaporation.

In the *Comptes Rendus* it is stated that Mascart arranged a series of small evaporating basins under conductors, which were kept in a constant electric state by a Holtz machine, moved by water power and placed under a glass case, in which the air was dried by vessels containing sulphuric acid.

The experimenter found that the evaporation was constantly increased under the electrized gratings, whether the electricity was positive or negative, evaporation being sometimes doubled.



THE PARIS EXHIBITION—THE CHINESE BUILDING.