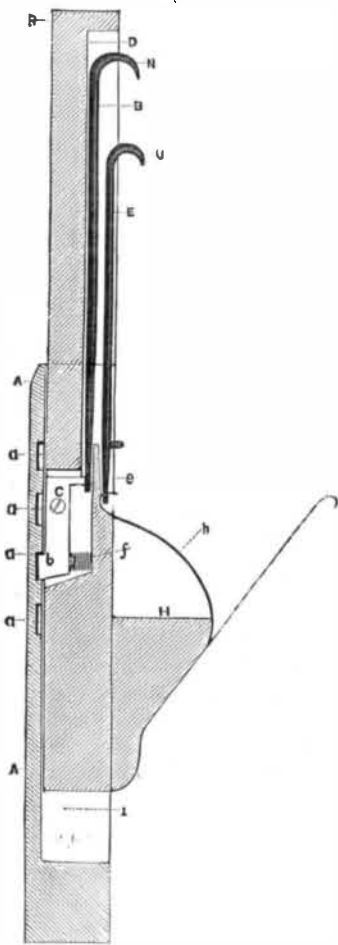


credit on the author, but also on the new, but energetic and accomplished, society over which he presides.

Plant Crystals.—At a recent meeting of the East Kent (Eng.) Natural History Society, Professor Gulliver, F.R.S., exhibited numerous drawings of *Raphides*, and other microscopic plant crystals, accompanied by explanatory remarks. From the latter we glean the curious and novel information that some trees and other plants, from stem to branches and leaves, are invested with a most delicate network, or tessellated pavement like mosaic work, of cells all studded with *spheraphides*, so that each cell is set and adorned with a gem of one of these beautiful crystals. The "Angelica tree" (*Aralia spinosa*) was said to form an example, beneath its bark or epidermis, of this external skeleton of crystalline tissue. And an internal crystalline skeleton was shown in other plants, including some *Leguminosae*, as may be well seen in the common white clover, the crystals being arranged in chains along the vascular bundles. Mr. Gulliver remarked that, boiling a portion of the plant before its examination, in the solution of caustic potash which is kept by druggists, exposes the crystals very clearly. He added that he had learned that the long crystal prisms of the iris tribe are admirably suited for experiments on polarization of light; and he believed that the whole subject of plant crystals belongs to the vast domain of the cell biography of plants, which has hitherto been too sadly neglected, but which must be diligently cultivated before we can hope for the most complete system of botanical classification and knowledge of the laws which govern the vegetable kingdom.

SHUTE'S ADJUSTABLE SAFETY STILT.

The accompanying engraving is a sectional view of a new stilt, which is so constructed as to be capable of being raised



IMPROVED STILT.

to any desired distance from the ground, and from which the wearer can release himself in case of falling by freeing a spring hoop which passes over the foot. The device is made in two parts, one having guides and sliding in a channel, I, in the other portion, A. There are recesses or indents, a, in the bottom of the channel, I, to any desired number. R is the handle, and H the foot piece made on its lower end. The handle is provided with a catch, b, pivoted in a recess at c, with a spring, f, placed behind to throw it outward; and the lower end of rod, B, sliding in a groove, D, made in the handle, is connected to the rear side of the catch at its upper end. When the rod, B, is pulled upward by the hook, N, the lower protruding end of the catch b is drawn in, when the socket, A, being moved a little up or down, and the rod released, the catch, b, will snap into any of the recesses, a, as may be desired to make the stilt longer or shorter, or the foot piece, H, nearer to or farther from the ground. In moving it up or down the handle, it is kept in proper position in the channel, I, by cleats fastened to the face of the socket, A. In the same groove, D, is a rod, E, held down by a staple, and spring hoop, h, is secured to the other side of the foot piece, H, which is sufficiently long to be bent inward over the foot piece. Its upper end is secured inside the latch rod, e. The object of this spring hoop, h, is to assist in securing the foot to the foot piece, H, and it may be released and the spring caused to fly outward instantly (as shown by dotted lines in the engraving), if there is any danger of falling, by pulling up the latch rod, E, by the hook, U.

For further particulars as to rights or for descriptive circulars, address the inventor, Mr. Charles S. Shute, Springfield, Mass.

TOO MANY NAMES.

Professor Hayden, at the late meeting of the Academy of Sciences, called attention to the inconveniences arising from the duplication and even multiplication of the same name, as applied to towns or geographical localities in this country. There was some discussion as to the best means of checking this source of annoyance to geographers and the Post Office people, and Professor Gilbert thought that the Land Office might in some way interfere to check the repetition in new towns of the West. But this would not help matters for places that are already named. For instance, the current *Post Office Guide* gives twenty-eight Washingtons, and fifteen places have Washington as a prefix, with the further designation of Corners, Court House, and in one case the euphonious Gulch. There are three New Yorks, seven Philadelphias, a dozen Bostons, sixteen Albanies, and thirteen Providences. The ubiquitous Smith has modestly given his cognomen pure and simple to but one town, but he lavishes it in connection with various endings. Smith has eight "Mills," three "Landings," twenty-three "Villes," besides innumerable "Fords," "Gaps," "Flats," and "Ferries." A few moments' examination of any gazetteer will show that this practice of multiplying names is degenerating into a nuisance, and, in directing notice to the fact that in fixing new localities through the surveys of the Western Territories the same multiplication is constantly occurring, Professor Hayden utters timely warning.

It is not so easy, however, to devise a remedy. Certainly any man who makes a clearing and builds a log cabin has the inalienable right to call his habitation what he likes; and if somebody else builds alongside of him, that somebody may designate his hut as he pleases. This is the English style, where everybody that has a country seat, if it is on only a twenty-five foot lot, calls it this or that Hall, or some other fine sounding name, and the Post Office people eventually learn and remember it. But if settler No. 2 agrees with settler No. 1 that both cabins shall be known as Paris, they are not infringing any law of the land; neither are settlers Nos. 3 and 4, who squat five miles off and agree to call their hovels Paris also. There is nothing in the Constitution about this, and we fail to see how the military or civil power could reasonably be requested to interfere and pull down one or the other Paris in the event of the owners thereof declining, like Romeo, to throw off the name which is no part of them. In fact we do not see how any reform could be made among the twenty-eight Washingtons, for example. Shall we establish a court and try the cause on the interference principle, making each town prove priority of application of name? The result would be twenty-seven nameless towns, and twenty-seven populations eagerly demanding information as to where they lived anyhow. Or shall we devise a system of geographical copyright or patent, so that any town which appropriates a "new and useful" name may have exclusive right to the same, after an official examination? The opportunity of calling into existence a new host of officials should render this scheme especially luring to the congressional mind; and the litigations incident to disputes between similarly named towns would be useful to the legal profession. The last resort is, when we take the next census, to require county authorities, in which there are similarly entitled localities, to alter the names. The State authorities might then carry through a like revision in cases where similar names occurred in different countries, and the United States Interior Department adjust matters where similar names occurred in different States. This would be a troublesome and probably costly proceeding, and the result now would be scarcely worth the labor; but, on the other hand, if similar names are to go on multiplying throughout the West as they have in the East, the line will have to be drawn somewhere, if only out of regard to the rising generation, who must study the geography of the country.

Photos in Colors.

The principle of the production of the Albert process for the production of colored photographic prints is that three negatives are made after the colored original, one in which the blue had no effect upon the plate, but all the other colors. This negative is used for the production of the Lichtdruck plate for blue color. In the second negative all colors take effect except yellow; in the third, all colors except red. The second negative, therefore, forms the Lichtdruck plate for the yellow; the third, that for the red color. All three plates are printed upon the same paper, and furnish the complete picture.

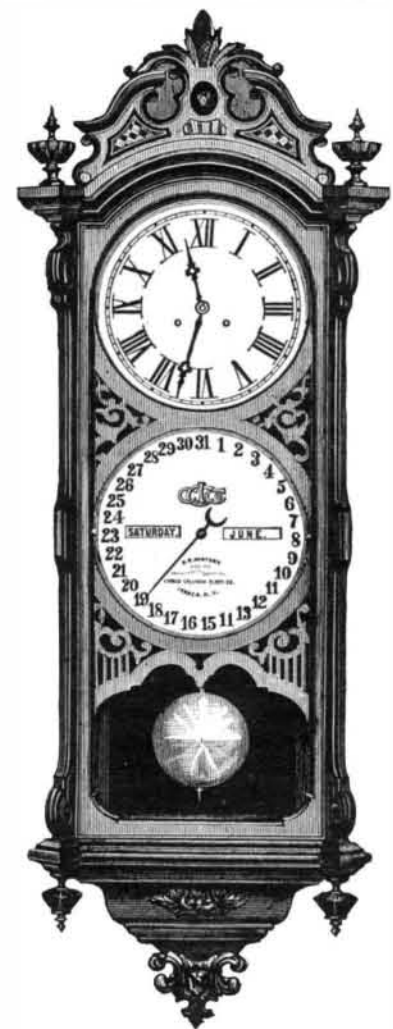
Gold Lace.

Gold lace is not gold lace. It does not deserve this title, for the gold is applied as a surface to silver. It is not even silver lace, for the silver is applied to a foundation of silk. The silken threads for making this material are wound round with gold wire, so thickly as to conceal the silk; and the making of this gold wire is one of the most singular mechanical operations imaginable. In the first place, the refiner prepares a solid rod of silver about an inch in thickness; he heats this rod, applies upon the surface a sheet of gold leaf, burnishes this down, applies another coating, burnishes this down, and so on, until the gold is about one hundredth part the thickness of the silver. Then the rod is subjected to a train of processes which brings it down to the state of fine wire; it is passed through holes in a steel plate lessening step by step in diameter. The gold never deserts the silver, but adheres closely to it, and shares all its muta-

tions; it is one hundredth part the thickness of the silver at the beginning, and it maintains the same ratio to the end. As to the thinness to which the gold coated rod of silver can be brought, the limit depends on the delicacy of human skill; but the most remarkable example ever known was brought forward by Dr. Wollaston. This was an example of solid gold wire without any silver. He procured a small rod of silver, bored a hole through it from end to end, and inserted in this hole the smallest gold wire he could procure; he subjected the silver to the usual wire-drawing process, until he had brought it to the finest attainable state—being, in fact, a silver wire as fine as a hair, with a gold wire in its center. To isolate this gold wire he subjected it to warm nitrous acid, by which the silver was dissolved, leaving a gold wire one thirty thousandth of an inch in thickness—perhaps the thinnest round wire that the hand of man has yet produced. But the wire, though beyond all comparison finer than any employed in manufactories, does not approach in thinness the film of gold on the surface of silver and gold lace. It has been calculated that the gold on the very finest silver wire for gold lace is not more than one third of one millionth of an inch in thickness, that is, not above one tenth thickness of ordinary gold leaf.—*Coventry Standard.*

IMPROVED CALENDAR CLOCK.

Our engraving represents an ingenious clock, wherewith is combined a calendar that perpetually indicates the hour of the day, the day of the week, the day of the month, and the month of the year. This calendar apparatus, being purely a gravity machine, not operated by any spring or levers, and requiring but a very slight weight to be raised



THE ITHACA CALENDAR CLOCK.

and dropped once in twenty-four hours, does not entail, we are informed, any perceptible labor upon the clock movement, as the necessary work is evenly divided through the whole twenty-four hours. The most delicate watch movement made, it is claimed, has ample power to operate the largest calendar. The apparatus within itself makes all the leap year changes, and if properly started (there being carefully printed directions with each clock), kept wound up, and running perpetually, will show upon its face accurately all the information above noted. Each calendar, before leaving the manufactory, is tested on a specially invented machine for that purpose, whereby all changes through eight years of time are repeated, so as to render a perfect record certain when the clocks go into service. The illustration represents a bank calendar clock with 12-inch dials, of the type often used by jewelers for regulators. For further particulars see advertisement of the Ithaca Calendar Clock Company in our advertising columns.

William Orton.

We note with much regret the death of Mr. William Orton, President of the Western Union Telegraph Company. Mr. Orton was a self-made man, beginning life as a printer's boy, and gradually rising through various positions in mercantile and political life, until in the office he last held he found ample scope for his great enterprise and rare executive ability. He possessed a ready appreciation of inventors' work, and was quick to advocate the adoption and use of new and improved devices calculated to add to the extension and efficiency of the telegraph system or the convenience of the public. He died at the age of fifty-two years.