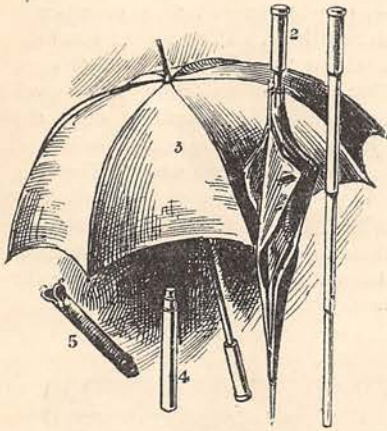


Correspondents are requested, when applying to the Editor for the names and addresses of the persons from whom further particulars respecting the articles in *THE GATHERER* may be obtained, to forward a stamped and addressed envelope for reply, and in the case of inventors submitting specimens for notice, to prepay the carriage. The Editor cannot in any case guarantee absolute certainty of information, nor can he pledge himself to notice every article or work submitted.

An Umbrella Cane.



There are canes or walking-sticks which hold or become swords, forks, and knives, geological hammers, tripods for cameras or seats, toilet cases, sketching boxes, writing standishes, fire-arms, candlesticks, drinking-cups, surgeons' instrument cases, portable briquette stoves, opera-glasses, and so on. The latest is an umbrella cane, which is shown in our figures, and requires very little description. As will be seen from Fig. 1 the stick consists of light tubes of celluloid, which fit into each other and enclose the umbrella seen in Figs. 2 and 3. When it rains the tubes are packed as in Fig. 4 and go into a leather case, Fig. 5, which is carried in the pocket. The device should be useful in our climate, where we are often in doubt whether to take a walking-stick or umbrella with us in going somewhere.

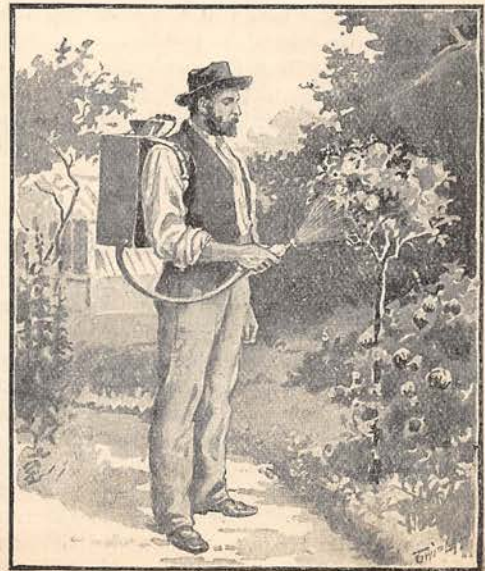
Close-Cutting Scissors.

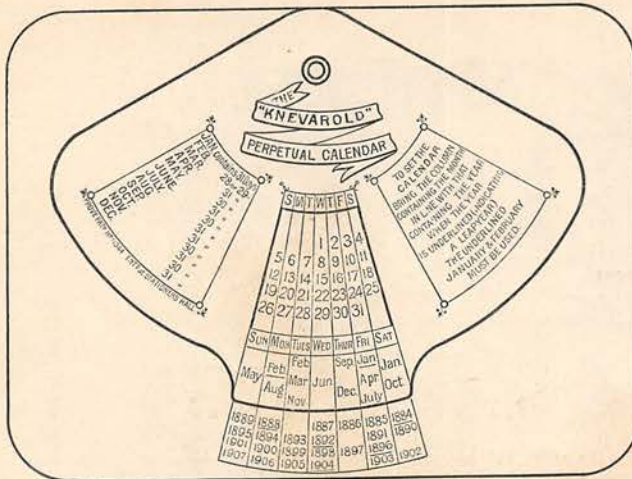
Some new scissors have lately been introduced for which many advantages are claimed. By means of a small spring attached to one of the blades, which does not at all interfere with the free use of the scissors, pressure is brought to bear so that in the act of cutting the blades "nip" one another, and work very closely together. The inventors assert that this en-

ures permanent keenness, and that, in consequence, the scissors never require to be ground, and always cut with a clean edge. Another advantage is that these patent scissors can be used with equal ease by the left hand or the right.

A New Garden Sprinkler.

It is quite unnecessary to remind gardeners and agriculturists of the absolute necessity of a good sprinkler, and a new one, "The Lenox," which has recently been patented, deserves wide attention. As seen from the accompanying illustration, the can, which is made of galvanised tin and is capable of holding twenty quarts, can be strapped on to the back, thus leaving the hands perfectly free. By means of the flexible tubing which connects the nozzle with the can, the sprinkler can be easily used for fruit





A PERPETUAL CALENDAR.

and vegetables growing near the ground, and, as it will also throw a spray fifteen feet high, it is equally serviceable for trees and vines.

A Perpetual Calendar.

The calendar shown in our illustration is made to serve for fourteen years, and has the advantage that when one year is out it can be set for the next—unlike the annual calendars so much in use. This is done by moving the fan-shaped portion at the top round its pivot until the columns containing the months and year are in line. It is made in several sizes, and a device for isolating the particular date in use can be added to it.

A New Tennis Scorer.

Tennis players will give a hearty welcome to a very useful little invention which has just been patented. It consists of a leather wristlet, in the centre of which is a metal dial marked with two sets of figures, from 0 to 6. Two movable hands or pointers are provided which can be easily adjusted to mark the number of games won and also the number lost, so that with very little trouble a perfect record, during the play, can thus be kept of the score of both sides. The wristlet is neat and not at all unsightly.

A Living "Jack-in-the-Box."

Everybody knows the toy which goes by the name of "Jack-in-the-Box," and how "Jack" is made to contract or extend himself by means of a spiral spring. Few people, however, have any idea that there exists round some parts of our coasts a zoophyte which can contract or extend its proportions at will. Such, however is the literal fact. The creature has no English name, so we must call it by that which naturalists have applied to it—Clavatella, which means "the little club-shaped animal." It belongs to the same sub-kingdom as the Sea-Anemones and Jelly-fishes, and, like them, has the property of benumbing its prey

by means of thread-cells, whence the Germans call all these creatures, "Stinging Animals." Clavatella has recently been recorded for the first time from the rock-pools between St. Helier and Gorey in Jersey. Professor Allman has spoken of the singular beauty of this little creature, and justly calls it "one of the most attractive and interesting of all the smaller tenants of the rock-pool." But when he says: "It can be easily detected," issue must be joined. When the creature has been once seen it is not difficult to find it again if the day be bright and the water unruffled. But if the sky be overcast and there be sufficient wind to agitate the surface of the water, it is an almost hopeless task to search for Clavatella. The best place to look is in the cracks of the limy weed, and in the angles of the pool; and the polypites, or separate individuals of the

colony, appear like tiny white threads. Directly a knife is brought near, down they shrink, and all trace of them is lost to view. Their length is about an eighth of an inch, but they may stretch to half, or even three-quarters of an inch, which is as if a man six feet high could increase his stature to twenty-four feet, or even thirty-six feet. This power of stretching itself gives the animal great advantage in procuring food, the supply of which is scanty in the pools in which it lives owing to the absence of green weed. The race is perpetuated by means of buds somewhat like tiny jelly-fish borne on each side at the base of the stem. When liberated these ramble about the weed in rock-pools, and in confinement they will often walk up the side of the aquarium.



A LIVING "JACK-IN-THE-BOX."

A Self-Closing Bracket Seat.

The folding wall or bracket-seat which we illustrate in Figs. 1 and 2 will recommend itself to those who wish to procure a seat without importing stools or chairs, when space is valuable.

On board ship, or in shops, carriages, and halls it will be very useful. It consists of a seat, S, of mahogany or other wood, which is ordinarily flat against the wall, or self-closed, as in Fig. 2, but is forced at right angles to the wall by the hand until

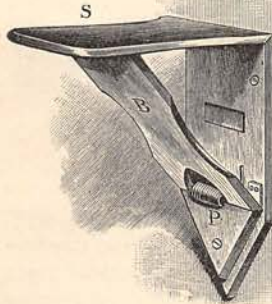


FIG. 1.

it is supported by the bracket B, which is opened out from the wall against the force of a spiral spring, P. As soon as the person seated rises up the spring, P forces the bracket B back to the wall, and with it the seat S, which is thus self-closed.

Two Useful Novelties.

There have been several attempts to produce a combined pen-holder and date-dial, and the most successful little novelty of this kind is one which has just been patented by Mr. L. A. Edwards. Through a small opening in the pen-holder is shown the date of the month, by figures printed on a narrow strip of tracing cloth. It is, of course, necessary to alter the date every day, but, by means of the little fixed rollers, this is quickly and easily done. The pen-holder is of the same size and weight as those generally in use.—The other novelty which we have to mention will appeal more to absent-minded persons than to ordinary individuals. It consists of a leather wristlet from which a pencil is suspended by means of a light chain several inches in length. The object, of course, is to prevent the pencil from being lost or mislaid. When not in use a clip is provided for holding the pencil, which is thus firmly and quickly secured.



BRACKET SEAT.
FIG. 2.

The Loco-weed.

The Texan pan-handle, or loco-weed (*astragalus legum*), is a species of vetch eaten by cattle which produces a kind of intoxication or madness in horses, making them unmanageable and easily knocked over. The plant grows in a vivid

green mat close to the ground, and keeps velvety all the winter. Horses are believed to acquire a craving for it, as men do for opium. In the Mediterranean countries there is another species of vetch (*lathyrus cicera*), which affects the eyes of both men and animals. Lathyrism, as the affection is called, has been cured by large doses of bromide of potassium, and "locoism" is checked by tincture of the muriate of iron.



A New Ironing Machine.

A simple machine for ironing linen and giving it a good gloss in half the time required for hand work is shown in our illustration. An adjustable spring bears on the iron, which can be heated by gas or a stove, and the laundress has only to move it about where she wishes. The pressure on the linen is adjusted by means of the spring.

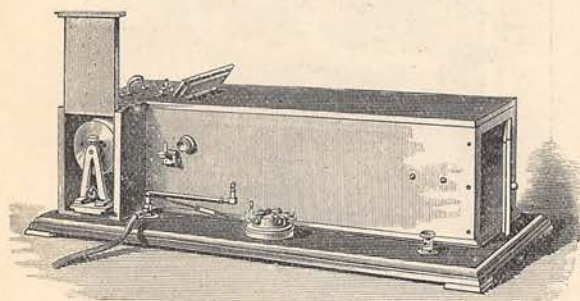
A Handy Ruler.

A combination "ruler"—the "Unique"—has been brought out which will be useful to many. The pen does not touch the rolling part but is drawn along a parallel bar attached to it, hence it is kept clean. Any number of lines equally spaced can be drawn by adjusting the roller to a brass indicator fixed at each end. The parallel bar is a scale in inches subdivided for use in ruling to scale; and the fingers do not obstruct the pen as in the ordinary ruler.

A Recording Pyrometer.

This ingenious instrument is the invention of Prof. Roberts-Austen, C.B., F.R.S., Chemist and Assayer to the Mint, and is based on the thermo-electric principle; that is to say, the fact that when two unlike metals are joined together, and the junction heated, a current

of electricity is generated in the metals. This principle which has been applied in the construction of the thermo-pile for generating electricity from heat direct was probably first suggested as the basis of a pyrometer by Becquerel the French chemist in 1826. The late Sir William Siemens constructed a successful pyrometer of the kind by making the electric current from the junction pass through a mirror galvanometer. The ray of light reflected from the mirror was caught on a graduated scale, and the movement of the "spot" of light on the scale showed the strength of the current. As this was proportional to the temperature the reading on the scale showed the heat of the furnace. Professor Roberts-Austen's pyrometer is an improvement on that of Siemens', inasmuch as he causes the spot of light to fall on sensitive photographic paper and then obtains a permanent record of its movements. The paper is wrapped round a drum turning by clockwork once in six, twelve

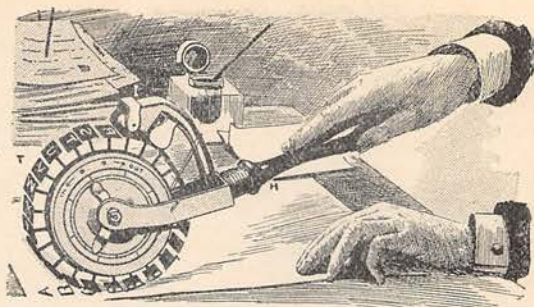


A RECORDING PYROMETER.

or twenty-four hours, as the case may be. The thermo-electric junction preferred is one of platinum and iridium as proposed by Professor Tait in 1873. The apparatus is used in metallurgy for showing the temperature of the furnaces.

The Year 2,000.

Prediction is in the air, and verily it would seem that we had reached that desirable time foretold by the sacred writer when even the "young men shall prophesy." Men of science, above all others, have recently shown a disposition to assume the prophetic



AN ADJUSTABLE INDEXER.

mantle. One informs us that man is becoming a toothless, toeless biped, all cerebellum, another that the microbe is the true sovereign of the world and will ultimately transform man into a new creature, another confidently asserts that we shall yet send telephonic messages to the planet Mars or see what is going on in Australia without leaving London, and so on *ad infinitum*. The latest prophecy is that of M. Berthelot, the famous chemist, who assures us that in the year 2000 there will be neither agriculturists nor butchers, for all our food will be prepared by chemistry from the carbonic acid and nitrogen of the air and the hydrogen of water. Our heat and motive power will be derived from the internal heat of the earth by means of deep shafts bored with diamond drills, the world will be redeemed from unsightly constructions and become a garden, while man, no longer condemned to toil for a coarse livelihood, will feast on the chemical dainties of the laboratory and devote his years to the intellectual works of his love and choice.

An Adjustable Indexer.

The woodcut illustrates an indexing tool, which consists of a series of type plates of the alphabet T, arranged round the circumference of a roller. By means of the handle H—the wheel is rolled along the page, and leaves the print of the letters as shown. The types are inked by small roller-pads, I, held in contact with them by curving springs. The spaces between the types, and consequently the letters, are adjusted by moving in or out the sliding spokes which carry them; and more than one colour can be used in the lettering.

HOLIDAY TOURS.

The EXTRA SUMMER NUMBER of CASSELL'S FAMILY MAGAZINE contains full particulars and actual cost of four enjoyable Holiday Tours, viz.—Belgium, Cornwall, Scotland, and North Wales and Ireland.

The Editor would be very glad to hear from any of his readers who may undertake one or other of these Tours, and would send him an account of their experiences (not necessarily for publication).