



Lightning to Order

Pacing the Wind

Aid for the Deaf

As You Wish It

Britain's Laboratory

IN spite of the general depression in trade in England, the electrical industry continues to make rapid and gratifying expansion. A factory has been established on the banks of the Severn in Worcestershire, with the finest electrical research laboratory in the British Empire.

A new township has arisen in the space of a few months in which hundreds of miners from the distressed

A man recently sentenced to fourteen days' imprisonment asked the magistrate to give him a month. He evidently wanted to be quite sure that spring-cleaning will be over by the time he comes out.

areas have found employment and comfortable homes. The new industry is for the manufacture of electrical porcelain and stearite insulators, hitherto imported from Germany and America.

It was demonstrated to a visitor, who was shown over the premises, that thunder and lightning could be made to order. The laboratory is a high rectangular building of concrete, and the transformers, insulators, copper sphere, condenser banks, and other electrical apparatus inside, gives one the impression of being in a gymnasium for giants. There is a rail to prevent visitors from touching the "parallel bars," gargantuan copper, "dumb bells," and strings of hanging insulators; for death stalks the floor at the bidding of a switch.

THE doors were closed and the lights turned off for the observation of the coronas and other discharges. Sparks began to flicker, says the onlooker, there was a staccato tapping as though a hundred typewriters were at work, and blue devil flames leaped about the room. Four hundred thousand volts of electricity. The blue lights flickered into the intensity of sheet lightning. Eight hundred thousand volts, and forked lightning played around the laboratory. The crackling swelled to a howling crescendo, and terminated in a giant thunderclap. One million eight hundred thousand volts, and the insulators passed the test. Then there was silence, and the lights were turned on again.

Until the establishment of this factory, the British Empire had no adequate research plants for work on high voltages. Once again, Britain has been a long time doing it, but has done it characteristically well.

AN instrument has been recently brought out that indicates the speed of the wind at any given moment. Ordinary anemometers give only the average speed for one minute, or for some other interval of time, during which their revolutions must be counted.

With the new instrument the velocity of the wind in feet per minute or miles per hour during gusts can be read off a dial at any given moment. A two-bladed windmill is mounted on the spindle of a tiny dynamo. This dynamo has permanent magnets like those of a magneto, so that current is generated even at low speeds, the voltage varying exactly with the number of revolutions. All that is necessary, therefore, to complete the instrument is a voltmeter, the scale of which is marked in wind velocities. These instruments will be invaluable for measuring the strength of wind gusts on exposed sites for bridges, factory chimneys and other structures.

An Underground Garden

Electrically Lit

WE have all heard of the hanging gardens of Babylon, of certain famous roof gardens, but it has remained for Viscount Fitzalan to establish an underground garden at Cumberland Lodge, Windsor Great Park. Here the plants and flowers, made to grow by artificial light and sunshine, create much interest. Fitted with two great ultra-violet ray lamps, suspended from the roof, and adjustable to any height, this cellar produces choice blooms and fruits which are not ordinarily obtainable until later in the season.

The cellar is kept at a moderate temperature, and the flowers are seldom given more than eight hours' "sun." A shaft of daylight is allowed to penetrate, and the subdued light from this simulates twilight, and the light of early morning, when the lamps are turned off. The effects are extraordinary in some cases. For instance, vegetable marrow seeds become hardy plants, ready to plant out, in 36 hours.

A Recent Invention.

TWO Vienna scientists recently demonstrated an apparatus which, in effect, is an artificial eardrum enabling deaf persons to hear by means

Oh! If I Were—!

OH, if I were a Static

Living in the atmosphere,
I'd never rudely splutter in
When folks are trying to hear.
I'd wander in the skyways,
North, south, and east and west,
At no time would I make myself
A nuisance and a pest.

And yet there are some people—
Oh yes, there's such a lot—
Who think their presence is
required
Exactly when it's not!
They've none of them discretion,
They none of them have tact;
You all should know this creature
—He's the "gooseberry" in fact!

Oh, if I were the Governor,
I'll tell you what I'd do,
I'd make their lives illegal,
"Gooseberry" and Static, too.
Their end should be decisive,
Satisfactory and abrupt;
No more they'd spoil our pleasure,
No more they'd interrupt!
—PAN.

of electric waves transmitted to the brain direct through the auditory nerve.

In the tests, a gramophone record was played in one room and the sound waves were transformed into electric vibrations which were carried by wire to another room. There deaf persons were able to hear the music merely by touching the wire to the ears.

At present the apparatus is complicated and dangerous, because the sounds, after conversion to electric impulses, are greatly amplified.

When cleaning gloves or clothes with benzine, dip the hands in a solution of alum and water to prevent the cleaning fluid from cracking or drying them.

SUFFICIENT light to illuminate the whole room, when required, is now possible from a portable table or floor lamp, with the aid of an adapter unit recently introduced. It makes two lamps out of one, an arc lamp and a flood lamp. The attachment is easily put on and, besides the smaller bulbs for reading, writing or sewing, has a powerful reflector that throws light from a large bulb upon the ceiling.

The lower portion of the reflector is of opal glass, which permits light to shine through the shade so that, when

"I lost £4 and one penny yesterday." "How?" "I offered Dora a penny for her thoughts." "Well?" "She was thinking I ought to take her out for the evening."

the big light is on, the others can be turned off. The effect is pleasing and restful to the eyes, adequate illumination is afforded, and the cost of a separate lamp is saved. The adapter will fit practically any electric floor or table lamp standard, and any shade can be used, if the opening at the top is at least six inches in diameter.

Shop Lighting

SOME very trenchant remarks were made by a Petone business man when recently advocating community shop-lighting and shop-window lighting after business hours.

It is impossible, he said, to over-estimate the psychological effect of the lighting of shop-windows, and the lighting up of streets on the public mind. Towns where the shop lighting is intermittent, and the shop lighting negligible, will not do as much business the following day as towns where bright lighting is a regular feature. Most of the young people of the town pass on their way to work before the shops are open. In the evening, by the time they return home, the shops are again closed. I have no hesitation in saying that the dearthness of streets at night and the lack of adequate shop lighting lose hundreds and thousands of pounds a year.

There are few women who will not bear out the truth of these remarks. Not only does it apply to those who must leave their shopping to others, but it is most often, when a leisurely inspection of the shop-windows is undertaken after business hours, that the vital choice is made.