A FEW NOTES ON EDISON AND HIS NEW STORAGE BATTERY.

ONE branch of electricity which has so far failed to keep abreast of the general advancement is the storage cell. The form in common use (the lead-sulphuric acid type) has proven very unsatisfactory and entirely inadequate for the many purposes to which storage cells are and could be applied; hence the introduction of a really good storage cell will be hailed with delight. The new nickel-iron cell of Edison may relieve the situation, for it has many excellent points, the chief of which is, that it is practically indestructible. Overcharging, which is ruinous to lead cells, has no injurious effect and it may be discharged completely without detriment. In fact, after being discharged on a short circuit through an ammeter, until the instrument indicated no current, on being charged again, the following discharge constantly gave better results than had been previously obtained from the same cell.

A reverse change, likewise, has no bad effects, although it necessitates a longer direct charge. There is heat generated in charging or discharging and no offensive odors are emitted. The plates will hold the charge for an indefinite time and the slightest tendency for the plates to buckle has not been discovered.

Its one deficiency is its low voltage.

The active material (whose exact composition is kept a profound secret) is compounded in the chemical laboratory, the chief ingredient being iron or nickel (for positive or negative plates) with graphite added to improve the conductivity. This material is compressed into cakes, which are enclosed in porous pockets of annealed steel and fitted into grids. The requisite number of nickel and iron grids are assembled to form a cell and immersed in a twenty per cent. solution of caustic potash. The potash does not enter into the chemical reactions which take place but acts merely as a conductor; the water, however, is decomposed during the process of charging, so that from time to time fresh distilled water must be added. Needless to say, no flame should be brought near the cell while charging, as a violent explosion would result from the combination of the hydrogen and oxygen.

The writer was asked to give a few words of advice to students who might entertain the idea of seeking positions in the country south of us, and perhaps these hints might help someone:

In the first place, don't underrate your own ability and don't hesitate to tackle a situation because the work is along a line in which your ideas are a little hazy; for in that case you have all the more to learn, and even if you don't retain the position, the experience gained will be extremely valuable.

Don't grumble when asked to work overtime—men who do just what they are paid for and no more should expect no increase in salary.

Here is a little incident, the moral of which may be well remembered: A dudish applicant, with an overwhelming sense of his own self-importance, once refused to perform some of the rough work attendant on an important experiment.

"Why should we only toil, the roof and crown of things?" he demanded, in substance, if not in phraseology. Edison indulged in no scathing rebukes, nor did he abruptly dismiss the applicant, as a less gifted psychologist would have done.

He simply apologized with elaborate courtesy for having taken the liberty of suggesting manual labor in connection with so distinguished an aspirant for electrical honors, and, rolling up his sleeves, plunged into the work himself, shrinking from neither dirt nor fatigue in the prosecution of his object.

The lesson was efficient and never required to be repeated. Edison himself seems to have been a precocious child, and possibly some budding genius in science may discover in his own mind like propensities with those that possessed the brain of this great inventor in his younger days. Something of the yearning for knowledge of this, as yet, undeveloped mind may be gathered from the fact that, at the age of seven, he attempted to read through the entire free library at Detroit, and his disgust may be imagined at being discovered and restrained when he had completed but fifteen feet of closely serried volumes.

His earliest experiments were in telegraphy. A line of stovepipe wire was run from his father's house to that of a comrade. Glass bottles were used as insulators. The magnets were wound with wire, swathed in old rags, and a piece of spring brass formed the key. How to obtain the current was a puzzler, and the attempted solution is a study. With a rather hazy idea in regard to distinction between static and dynamic electricity, Edison captured two cats of violent tempers, and by means of pieces of stovepipe wire attached to their legs, connected them in series with his telegraph line. Then he applied friction violently to their backs and breathlessly awaited results. Sad to relate, the feline mind refused to lend itself to the pursuit of science, and these zealous efforts ended in failure. Such humble efforts as these heralded the coming of the greatest genius of this or any other age.

Edison has now passed his 55th year, and still his ever active brain is working away. The inventions in telegraphy, the phonograph, the incandescent light and innumerable other inventions can never be forgotten, and we may expect greater than these before he lays down his life's work. His latest effort is the erection at Stuartsville, New Jersey, of the largest cement plant in the world. Physically and mentally he seems incapable of fatigue. Rest and inaction to his teeming energies and prolific brain are synonomous with stagnation.

A. G. L.

HALLOWE'EN.

And everybody said, quoth he,
That 'twas a famous victory.

The highwayman was singing at his task,
The happy porch-thief plied his merry trade;
But the copper on his beat
Shut his eyes with tact discreet,
As he waited for the Hallowe'en parade;
(Unsophistocated Freshies in the Hallowe'en parade.)

Six stalwart cops upon a corner stood,
While rank on rank the singing students passed.
Ah, they knew their duty well,
So they let the brawny yell,
And seized two timid striplings at the last;
(The stalwarts seized the striplings at the last.)

The dinner-hour was over, and the Meds.
And Faculty pursued their homeward route,
When, from out the pitchy dark,
Spurred the Cossacks for a lark,
With whips and blows and language dissolute;
(A Billingsgatesque kind of a salute.)

They ordered them to go along by blank!
And Justice, blind, accorded them great praise;
When a student, much abused,
The same expression used,
'Twas five and costs or choice of thirty days;
(The Force "found" him, so Sunny Jimmy says.)

'Twas their delight to pick the weakling out,
To swoop on weary stragglers and assault
The innocent templar
Waiting for a car.
Can honest men such bravery exalt?
(The knowing ones require a pinch of salt.)

SARDONIUS.