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Scientific American.

ELECTRIC LIGHTING INFORMATION.

The National Electric Light Association are establishing a permanent headquarters in New York City; a practical electrician having already been appointed laudable project it is designed to carry out. Only these who have had to do with electricity and its applications can be fully aware how hard it is to keep up with the times in other departments save your own, and indeed even in that one must needs do a deal of reading and not a little travel. At the last convention one of the best known electrical engineers in the country innocently claimed as his own invention a contrivance that, in some parts, has been in use for nearly three years: there had been so much to read, so many new things to study and ponder over in applied electrics, he had not yet "got round" to what was really an anticipation of his own mechanism. It is now but a few weeks since the electric light men met and discussed some few of the most important matters, and vet he would be a bold man who should to-day attempt to describe the best known means of construction and of operation, of stopping leaks, of locating interferences amid counter-interferences, and the like.

Indeed, so much has been done in each particular department of electrical projection, that it is not possible in the three days sitting of a convention-no!nor in 30 days, or a whole year-to go over all the more or less valuable experiments that have been made and recorded; for, fortunately enough, all the big companies have careful records made of what is done in the way of experimentation in their machine shops and laboratories. Experiments innumerable have been made which, though proving of no value to those making them, are valuable to science and invaluable. perhaps, to those operating in other directions. Nor is there any let-up. Experience, experiment, and discovery are increasing rather than diminishing as time goes on, and it is becoming more and more difficult to keep informed of all that is being or has been done, and, consequently, men undertake great tasks in laboratory and workshop only to learn what was long since known, but hidden away among the musty records of a great workshop.

The permanent headquarters now being established by the National Electric Lighting Association will contain copies of all the records that can be borrowed to index all these, so that whatever is wanted may be most desolate that can be imagined. It has been literwhat has been done in the way of looking for enduring filaments for incandescence lamps, or what experiments have been made with certain kinds of insulating material. He has only to send to or call at the headquarters, and every facility will be given him for finding what he wants to know.

a laboratory experiment with a distinct purpose, and found the ruins to be of gigantic stone buildings made discover that though you had not progressed your own work, you had gained some apparently important tions. One of them was four acres in extent. All indimany other ways to lighten the labors and inform tached to the surveying expedition advances the theory the minds of working electricians.

POSITION OF THE PLANETS IN OCTOBER. VENUS

is evening star. She is plainly visible in the southwest soon after sunset, setting on the 1st about an hour after the sun, and on the 31st a little more than a hour and a quarter. She must be looked for about 8° south of Davy. But we nearly always give the date as 1809. It the sunset point. She is in conjunction with Beta Scorpii on the 26th, being nearly 2° south of the star. Venus sets on the 1st at 6 h. 26 m. P. M. On the 31st | center circle. she sets at 6 h. 11 m. P. M. Her diameter on the 1st is 11", and she is in the constellation Virgo.

MERCURY

the 24th, being 5° north of the star. He is near Venus at the close of the month, being 1° 30' northeast. Both planets set then about 6 o'clock, an hour and a quarter after sunset. Jupiter sets on the 1st at 8 h. 1 m P. M. at a handsome salary to give his entire attention to the On the 31st he sets at 6 h. 23 m. P. M. His diameter on the 1st is 32".2, and he is in the constellation Scorpio.

MARS

is evening star. He pursues his eastward or retrograde course, diminishing in size and ruddy light, and increasing the distance between Jupiter and himself. Mars sets on the 1st at 8 h. 30 m. P. M. On the 31st he sets at 8 h. 3 m. P. M. His diameter on the 1st is 6".8, and he is in the constellation Scorpio.

URANUS

is evening star until the 10th. and after that time morning star. He is in conjunction with the sun on the 10th at 8 h. A. M. Uranus sets on the 1st at 5 h. 55 m. P. M. On the 31st he rises at 4 h. 47 m. A. M. His diameter on the 1st is 3".4, and he is in the constellation Virgo.

SATURN

is morning star. He may be easily found, in the northeast, in the small hours of the morning, and may be known by his serene light and his position, about 11° northwest of Regulus. Saturn rises on the 1st at 1 h. 28 m. A. M. On the 31st he rises at 11 h. 42 m. P. M. His diameter on the 1st is 16", and he is in the constellation Leo.

NEPTUNE

is morning star. He rises on the 1st at 8 h. 1 m. P. M. On the 31st he rises at 6 h. 1 m. P. M. His diameter on the 1st is 2.6, and he is in the constellation Taurus.

Venus, Jupiter, and Mars are evening stars at the close of the month. Mercury, Uranus, Saturn, and Neptune are morning stars.

A Ruined City in Texas.

The surveys at present being made for the Kansas City, El Paso and Mexican Railroad, at a point north latitude 33 degrees and west longitude 106 degrees, have passed along the lava flow which by the local population is called the Molpais. It consists of a sea of molten black glass, agitated at the moment of cooling in ragged waves of fantastic shapes. These lava waves or ridges are from ten to twelve feet high, with for the purpose. Information will be asked for in combing crests. This lava flow is about forty miles every department, with description of experiments, long from northeast to southwest, and from one to ten whatever was their result, and an attempt will be made miles wide. For miles on all sides the country is the readily found. Let us say a subscriber wants to know ally burnt up. It consists of fine white ashes to any depth which, so far, has been dug down. To the north of the lava flow, and lying in a country equally desolate and arid, the surveyors have come upon the ruins of Gran Guivera, known already to the early Spanish explorers, but which have been visited by white men less often even than the mysterious ruins of Palenque, Again, experimental results that are not any use to in Central America. Only a few people at Socorro a man furnishing light might be of great service to and White Oaks have been at Gran Guivera, because one selling power, and vice versa. Did you ever make it is at present forty miles from water. The surveyors in the most substantial manner and of grand proporinformation in another direction? One of the duties cations around the ruins point to the existence here at of the new establishment will be to make known one time of a dense population. No legend of any such "finds" to those likely to be benefited-a kind exists as to how this great city was destroyed or general exchange being valuable all around-and in when it was abandoned. One of the engineers atthat Gran Guivera was in existence and abundantly supplied with water at the time the terrific volcanic

The Electric Arc Light.

eruption took place.

Talking and writing about the discovery of the electric arc light, we rightly ascribe it to Sir Humphry seems, however, that if Davy did not actually hit the bull's eye in 1800 and 1802, he got at least within the

Nicholson's Journal for October, 1800, contains a letter signed by Davy, which states that he has discovered that "well hurned charcoal possesses the same

its applications to practical life	is evening star. He reaches his greatest eastern elon-	properties as metallic bodies in producing the shock
VI. MINING AND METALLURGY.—The Brittleness Induced in Iron by Pickling By Prof. A. LEDEBUR.—Abstract of a memoir	gation on the 8th at 11 h. A. M., being 25° 14' east of the	and spark when made a medium of communication be-
of weakness hitherto little known	sun. He may then be seen with the naked eye in the	tween the ends of the galvanic pile of Signor Volta."
The Iron and Coal Mines of Alabama.—The Birmingham mines,	west, three-quarters of an hour after sunset, but will be	And in the Journal of the Royal Institution, vol. i.,
with analyses of Alabama coal and coke.—A resume of the wealth of this portion of the "new South."—1 illustration	difficult to find on account of his southern declination,	of 1802, Davy describes some experiments upon the
VII. NAVAL TACTICSBritish Naval ManeuversThe blockade of Bantry BayNote and illustrations of the practice evolutions	as, at that time, he is 11° south of the sunset point. He	sparks yielded by the voltaic pile, and states : "When,
of Bantry Bay.—Note and illustrations of the practice evolutions executed there.—3 illustrations	retraces his steps toward the sun after elongation, and	instead of the metals, pieces of well burned charcoal
VIII. PHOTOGRAPHYNovel Magnesium Lamp and Reflector	meets Venus on the 9th at 6 h. P. M., passing 3°9'	were employed, the spark was still larger and of a
A contribution to photography, designed to obviate the defects usually incident to this source of photographic illumination3 il-	south. Observers, who can easily find Venus, may pick	vivid whiteness." One is inclined to think that this
Instrations	up Mercury with the aid of an opera glass, knowing his	spark was a true arc as now understood.— <i>Electrical</i>
faded albumen prints	distance and direction from the larger planet. One	Engineer.
IX. TECHNOLOGYBeet Sugar and its IndustryBy Prof. GUS-	other incident marks the course of the swiftly moving	
TAV GEHRING.—A most exhaustive review by the chemist of the Missouri agricultural station of this industry and its possibilities	planet, for he is in inferior conjunction with the sun on	
for America	the 31st at 7 h, P. M., and becomes morning star. Mer-	
long-standing problem.—The economy of fuel in small establish- ments.—3 illustrations	cury sets on the 1st at 6 h. 19 m. P. M. On the 31st he	Resin 14 parts. Burgundy pitch 4 parts.
Retort Setting for Small Gas Works - By J. ROBB How to set a bench of two retorts 3 illustrations	rises at 6 h. 27 m. A. M. His diameter on the 1st is 6",	Molasses
X. ZOOLOGYThe Poisonous Snakes of the Bombay Presidency	and he is in the constellation ∇ irgo.	Linseed oil 4 parts.
Abstract of a recent paper on this interesting zoological subject 1063 The Rattle of the RattlesnakeBy SAMUET. GARMANA most	JUPITER	Heavy calendered paper should be used, or in a few
	is evening star. He is in conjunction with Antares on	