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NEW YORK, SATURDAY, OCTOBER 23, 1897.

Contents.

(Illustrated articles are marked with an asterisk.)

cetylene gas explosion	Kelvin, Lord*
Airship crosses to France	Klondike, wealth of the
rchaological news	Lizards, color changes in
Bicycle, the chainless*	Mutoscope, Casler's*
Blast furnaces, great*	National Tube Works, the*
Boilers, thirty-six gas-fired* 265	Notes and queries
Books new	Ore loading for furnaces*
amera, the Adlake hand* 264	Patagonian expedition, the
ar coupler law, the	Princeton
old, effects of, on life	Patent Office examinations of
Egypt. latest discovery in 266	applications.
Dectrical exhibition. N. Y 267	Patents granted, weekly record
Impress Queen, side wheel	of
steamer [#] 261	Power station, a great
Ingine, a large blowing* 265	Prison association exhibition
Ingineers, the licensing of 258	Propelling device, auxiliary,
air of the American Institute 263	Fryer's*
"lue cleaner, rotary, Jones'* 260	Railroad, the, in Alaska
Tuorine, the liquefaction of 262	Shaft support, Stanley & Dar-
urnace casting metal* 265	lington's*
as main stopper, Goodman's* 262	Steamer Cymriclaunched
overnor and speed indicator,	Steamer Empress Queen*
non-centrifugal*	Stove, Cowper hot blast
Iose nozzle. Askins'*	Trolley ride, a long
nventions recently patented 269	Tubing, steel, manufacture of*
ron, pig, removing from sand* 265	Yellow fever remedy, a
	·

262

267

260 262

TABLE OF CONTENTS OF

Scientific American Supplement

No. 1138.

For the Week Ending October 23, 1897.

Price 10 cents. For sale by all newsdealers.

P	AGE
I. ARCHEOLOGYRecent Archeological Discoveries in the Nile Valley	18196
 CHARITABLE INSTITUTIONS.—The Braille School for the Blind at Saint Mande.—A description of the methods of terbing children lessons and a trade.—5 illustrations	15184
III. CHEMISTRY.—Monazite.—By H. B. C. NITZE	18196
IV. ECONOMICSJapan and the United States Tariff	18193
V. ETHNOLOGYPrimitive TransportationA most interesting lecture by Prof. OTIS T. MASON, giving an elaborate study of the methods of transportation among primitive and savage peoples	10100

VI. GEOGRAPHY.-Photography and Geography.-By A. E. MUR-

THE LICENSING OF ENGINEERS.

Our attention has recently been called to a New York State law which seems to have been inspired less with a desire of serving the public and protecting its interests than for some less honest and less disinterested motive. We refer to a law enacted on May 22, 1897, establishing rules of qualifications for those having the care of boilers, steam generators or steam engines. Precaution should be taken to protect the public; against accidents from negligence, ignorance or mis- of wear and household use. management ; but the law in question can hardly com mend itself to the unbiased mind, owing to the very ing apparatus is in use. To require a licensed engineer the exhibit. to take charge of apparatus of this kind is entirely unmanager of the building.

The particular features of this measure which show the animus which inspired the introduction of this bill are to be found in the qualifications governing the applicant for examination. In the first place, the applicant must be a citizen of the United States and over twentyone years of age. The application must show that the applicant has been employed as a fireman, oiler or general assistant under a licensed engineer in some building in the city of New York for a period of not less than five years. It is evident from this provision that a thorough knowledge of steam engine practice is not what was sought after by the promoters of this bill. A thorough efficiency and a perfect familiarity with all the secrets and mysteries of steam engine practice are not sufficient to entitle the applicant to admission within the charmed circle, but he must "have been under the immediate supervision of a licensed engineer for a period of not less than five years," and, most wonderful of all, he must have been employed in the capacity of "fireman, oiler or general assistant in some building located within the city of New York." We are unable to grasp why this extraordinary limitation should be considered as an essential equipment for an engineer, but it is evident that the society who introthat this was surely a clever means for advancing their own interests. The engineer who, perhaps, has been driving a locomotive for thirty or forty years would not be allowed to take charge of any steam heating apparatus in any building in New York, without first taking up his residence there and undergoing an apprenticeship of several years.

This bill, like many others of its class, was passed by the Legislature without proper investigation into its merits or demerits. The bill was introduced to benefit a particular class; it manifestly had no other aim or object. The protection of the public against mischief is entirely of secondary importance. Like much legislation that we have to endure, this tends to make many suffer for the benefit of the few. The enforcement of this unjust and foolish law will throw out of employment many who have, for years, had charge of buildings and who were competent to manage the same as engineer for a period of five years in some building in New York.

It is to be hoped that this foolish law will be repealed. If it is not repealed, it is probable its validity will be tested, and it is more than possible that the act will be deemed unconstitutional.

The interested motives of the promoters of this bill may be noted from the fact that it was to take effect immediately, the intent evidently being to throw hundreds out of employment before they would be

PRISON ASSOCIATION OF NEW YORK EXHIBITION. in the engine rooms of the Campania and Lucania, of The recent exhibition of the Prison Association of the Cunard line, each of which is credited with a max-New York was held with the idea of giving the public imum trial horse power of 33,000. In this connection it a more intelligent idea of the inner workings of our is interesting to note that the huge industrial estab-State prisons than it can glean from the daily press. lishments to be found in the textile and iron industries. The objects of the association are practical and humanwith their miles of shafting, their vast power-driven itarian, and this was evident from the character of the machinery and their employes numbered by the thouexhibits, in which was very little of a merely sensasand, do not call for one-half the motive power that is to be found snugly stowed away in the engine room tional character. By far the greater part of it consisted of specimens of the handiwork of convicts in the prisons of a St. Paul, a Lucania, or a Kaiser Wilhelm der of New York State. A notable exhibit was that of a Grosse. The new power house is being built by the Metropolcomplete set of furniture for the warden's office, made by the prisoners at Sing Sing. It was made in oak, itan Street Railway Company of New York and it forms richly carved and polished, and the work would have part of the scheme for introducing electric traction on done credit to any first-class factory. In the same room the whole of the 218 miles of street railways owned or was an inlaid box made of nine thousand three hundred controlled by this company. At present there are and fifty-six separate pieces of wood and a banjo made three different systems at work : the cable, the underof six thousand and fifty-one pieces, both being the work ground trolley and the horse car. The mechanical of inmates of Auburn prison. The work done by stupower is supplied from four power houses: a cable dents in one of the art classes was represented by some power house on Houston Street and Broadway, angrille work which showed excellent taste and skill. other at Fiftieth Street, a third on East Twenty-sixth

The clothing worn by the convicts is made on looms in the prison, and the various State institutions for the blind, the deaf and other unfortunates are also entirely supplied from this source. Here were shown specimens of the various suits, both for men and women, together with prison-made blankets, toweling, etc. The various prison schools and workshops at Sing Sing were represented by drawings, cabinet and joiner work, plaster cornice work, boots, shoes and a host of other articles

The one truly sensational object in the exhibition was the chair used in electrocution at Sing Sing, in narrow nature of certain of its features. The law is which thirteen people have already suffered death. Exdesigned, not so much to enforce the employment of cept for the heavy straps at the arms and legs, there engineers for running elevators, boilers and engines in was nothing to suggest its tragic purpose. The celeour large buildings, but it is designed to enforce the brated Bertillon system for the identification of crimiemployment of a licensed engineer in small buildings, nals was shown and explained, and a typical case of dwelling houses or apartment houses where steam heat-photographs from the rogues' gallery formed part of

In a room devoted to the Elmira Reformatory a surnecessary and oppressive. It is usual in such cases to prisingly large number of the arts was represented by have a fireman who is always in attendance and who is ; specimens of steel engraving, zinc etching, bookbindunder the direct supervision of the janitor or the other ing, printing, photography, etc., done by the boys in the various classes. Near by was a large board of drawings, mechanical and architectural, which had been made by prisoners who had received only six months' instruction.

> In looking over the varied collection of articles, all the results of instruction in useful arts and sciences, one found it difficult to believe that it had come from within the inclosure of State prison walls. The exhibition testified to the great advance which has been made over the old methods in the treatment of convicts, and it is easy to see that, as far as the occupations of prison life are concerned, everything is done to improve the more debased and ignorant among the convicts and give them some reasonable hope of honest livelihood when their terms have expired.

The inmates of the State Penitentiary for the Eastern District of Pennsylvania were represented by a large model of that famous institution, made by themselves. This prison is conducted on the much discussed plan of solitary confinement adopted generations ago by that State. The prison is laid out so that the idea of solitary individual confinement shall be literally carried out. Formerly, from the time the convict entered the massive gate of the prison to the day on which he left it he never spoke to or looked upon the face of any duced and fostered this interesting measure believed |man| but his keeper. To secure this result the prison is built on a radial plan. The outer wall of the inclosure is 30 feet high and 640 feet square. In the center of the square is a tower 40 feet in diameter and two stories high, and from this radiate, like the spokes of a wheel, eleven long, low, one-storied structures. Each wing is built with two outer walls and a central dividing wall and covered with a low pitched roof, and it is divided by partition walls into a long double line of cells. Each cellopens out onto a little yard which is surrounded by high walls and is of about the same area as the cell. Light is obtained by a grated window in the roof. Formerly the convict ate, slept and worked in his cell and took exercise in his little vard, absolutely alone. 'The prisoner is received in the central tower, his pedigree is taken, and he is then taken to one of the cells, which he never leaves except for exercise. The idea of solitary confinement is not carried out so literally as it formerly was; but the convict does all his work in his well as if they "had been an assistant under a licensed cell and is never thrown in contact with the other convicts in workshops and classrooms.

> Very different from this is the modern steel prison. with its modern provisions for light, heat and ventilation. The methods of this construction were shown by illustrations of the new wing of three hundred cells which is being built at one of the State penitentiaries.

A SEVENTY THOUSAND HORSE POWER CENTRAL STATION.

Work is progressing upon a building in New York able to qualify themselves for passing the required City which will contain the largest aggregation of moexaminations, or even filing their applications theretive power ever gathered together in a single plant. for Hitherto that distinction has belonged to the great ocean steamships, the largest power at present being

and the lantern2 illustrations	, 18193
VII. LOCOMOTIVE ENGINEERING.—A New French Locomotive	e.
—A locomotive designed to move at a high speed by decreasing	g
the end friction.—1 illustration	. 18187
VIII. MECHANICAL ENGINEERING.—The "Ruston" Oil Engine	e.
—1 illustration.	. 18187
IX. MECHANICS:Perpetual MotionVII. — The completion of this important series of articles in which the classic form of per- petual motion apparatus are considered	of . 18188
X. MEDICINE.—The Skin as a Diagnostic Factor in Disease Origin of Fat in the Body. The Danger in Veiled Stimulants The Etiology of Yellow Fever.—By E. KLEIN, in Nature	. 18198 . 18197 . 18197 . 18197 . 18197
XI. METALLURGY.—The Development of the American Bloomin	g
Mill.—By RALPH CROOKER, Jr.—A full article, giving the com	1-
plete history of the blooming mill	. 18184
XII MISCELLANEOUS.—The Louiton Float for Swimmers.—2 i lustrations Engineering Notes. Electrical Notes. Miscellaneous Notes.	l- 18186 18189 18189 18189 18189
XIII. MUNICIPAL ENGINEERING.—The True Purpose of a Larg	e
Public Park	. 18195
XIV. NATURAL HISTORY.—The Colobus Vellerosus.—Descriptio	n
of the Silk Monkey.—I illustration.	1819
The Glow Worm and the X Rays.—3 illustrations	18194
The "Index Animalium"	18194
XV. TRANSPORTATIONPrimitive Transportation18 illustra	8 10100