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Contents.

(Illustrated articles are marked with an asterisk.)

Academy of Sciences, National. 313 Air torpedo, compressed. 314 American industries*. 303 Anti-vaccination*. 314 Architectural designs. 314 Atropine and pilocarpine. 312 Attraction. 312 Aurora borealis. 316 Brain of an anthropologist. 309 Camphor, electrical. 311 Carpeting the Mississippi. 308 Cologne cathedral, completion of. 308 Crusher, sectional cushioned*. 306 Do it well. 312 Drawing apparatus, perspective*. 307 Elevated railway nuisance. 313 Electrical generator, Edison's. 305 Fire engine improvements. 307 Flour, new process. 308 Glassware, Roman*. 311 Glue, liquid (1). 315 Grain, high and low. 309 Hair, treatment of the. 312 Ice cave of Tenerife. 308 Ice yachts, speed of. 309 Industries, American*. 313 Ink for copying pads (5). 314 Inventions, mechanical. 307 Inventions, miscellaneous. 306 Inventions, recent, a few. 310 Keeping the boys on the farm. 312 Linen, to starch (?). 315 Live stock, abuse of. 309 Locomotives, great, of Erie R. R. 311 Locomotive, the. 310 Paper from grass. 311 Pens and pencils, manu. of*. 303 Physical science, philosophy of. 314 Pliocene man in California. 314 Polyphemus, the. 306 Printing telegraph, octoplex. 306 Professional men, advice to. 314 Puzzle for future geologists. 308 Rainfall and forests. 312 Skins, to soften (?). 307 Sleeping-car berth, improved*. 307 Stereotype composition, new. 314 Stock car, reward for. 304 Torpedo catcher, the. 310 Velocities, high wind. 312 Water supply of Philadelphia. 304 Wax, to toughen (?). 315 Western Union telegraph. 312 Window glass trade. 313 Work and wages in Lowell. 313

TABLE OF CONTENTS OF THE SCIENTIFIC AMERICAN SUPPLEMENT No. 202, For the Week ending November 15, 1879.

Price 10 cents. For sale by all newsdealers

I. ENGINEERING AND MECHANICS.—The New Cunard Steamer Gallia. A detailed description of the hull and machinery of the last and most important addition to the Cunard fleet. 1 large illustration of the Gallia afloat. 6 figures. The Severn Bridge. A full account of the dimensions, structure, and construction. Machinery in Flour Mills—Cost and Depreciation. By A. J. WATERS. II. ELECTRICITY, SOUND, ETC.—The Lontin Electric Light. The character and economy of the Lontin system. Practical tests. Theory of the Telephone. III. TECHNOLOGY AND CHEMISTRY.—The Polariscope as Applied to Sugar Manufacturing and Brewing. By J. STEINER. (Continued from No. 201.) 6 figures. Formulae for Perfumery. By ALEX. B. LEVI, Ph.D. Azolic Coloring Matters. Artificial substitutes for turmeric berries, fustic, orchil, etc. IV. MEDICINE, HYGIENE, ETC.—Anesthesia under Pressure. Superior effects of a mixture of oxygen and nitrous oxides in an airtight chamber under slight pressure. Cholera in Japan. History of the current epidemic. By Dr. D. B. SIMMONS, of Yokohama. The Toxic Effects of Tea. V. METALLURGY.—The Consolidation of Fluid Steel. By ALFRED DAVIS. A valuable paper read before the British Iron and Steel Institute. Lead Fume.—With a Description of a New Process of Fume Condensing. By A. FRENCH. The Neutralizing of Phosphorus in Steel-like Metals. By RICH RD BROWN. VI. BIOLOGY, EXPLORATIONS, ETC.—The Beginnings and Development of Life. Part I. By Prof. EDMUND PERIER. The Lich Observatory. Progress and prospects. Nordenskjöld's Winter Experience and Observations. Professor Nordenskjöld's story of Arctic life and study on board the Vega and along the shores of Siberia. The Action of Nature's Forces. Professor Geikie's Lectures at the Lowell Institute, Boston. Development of the House Fly. By H. M. ROBSON. 4 figs. VII. INDUSTRIAL ART.—Suggestive Ornaments for Decorative Painting. Thirteen figures of ornaments designed by O. Girard, Architect in Vienna, with directions for coloring. VIII. BIOGRAPHY.—M. Viollet-Le-Duc. Sketch of the career of the celebrated French architect. One large portrait. IX. MISCELLANEOUS.—Literature and Composition. By ELIZA A. BOWEN. Science and the United States Navy. The contributions of the Navy to the advancement of Science. Facts and Figures. Some curious illustrations of molecular and other magnitudes and motion. Things that are Mismatched. Habitual Criminals. Professor Lombroso's studies of the physical characteristics of the criminal classes.

FIVE THOUSAND DOLLARS REWARD FOR THE INVENTION OF A STOCK CAR.

At its recent meeting at Chicago, noticed at length in another column, the American Humane Association offered a prize of \$5,000 for an improved stock car capable of carrying live animals long distances without needless suffering. The great object seems to be to obtain a car in which cattle, sheep, or hogs can be fed and watered while on the road, with room for the animals to lie down without risk of being trampled upon by others.

It appears from the investigations made by the agents of the association that the practice of frequent stoppages to allow transported stock to lie over for rest and refreshment, enjoined in many States by law, is largely disregarded, and when observed only adds to the sufferings of the animals. The stockyards are rarely furnished with suitable appliances for feeding or watering stock; too often the animals are crowded into filthy and muddy pens in which they cannot lie down either with comfort or safety; and the terror of the tortured animals when reloading is attempted leads them to resistance, wild rushes and frantic efforts to escape, in which they seriously injure each other and are brutally punished by the yard men. To obviate all this suffering, not to speak of the losses entailed by the killing and maiming of animals in the pens and on the road, the association calls for an improved car.

The resolution in which the prize is offered was introduced by the secretary of the association, Mr. Abraham Firth, of Boston, Mass., and reads as follows:

"Whereas, An urgent need exists of an improved cattle car in which animals can lie down and rest, and in which they can be watered and fed while on their journey to the markets, and be saved the suffering attendant upon loading and unloading from the cars, and at a serious loss of time to all having a pecuniary interest in the business; and

"Whereas, Objections are urged by the railroad companies against existing cars made to attain the ends named; and

"Whereas, We strongly believe that invention may be stimulated in this direction; be it

"Voted, That this association, recognizing its great importance, would urge all persons interested in its work to pledge themselves to pay a definite sum towards a prize for this object.

"Voted, That in the judgment of this meeting the prize ought not to be less than \$5,000, and that six months' time should be given to all competitors to prepare specifications and models, and meet whatever requirements the judges of the prize shall name in their offer.

"Voted, That the Executive Committee of this association be requested to solicit pledges in this behalf from all persons interested in this specific aim, and be authorized to appoint the judges and to determine all the conditions, excepting only two: First, that the invention shall be the unembarrassed property of this association; and secondly, that the car so approved be offered without charge to all railway companies who will use it in all their live stock business."

A little consideration of the practical bearing of the closing stipulations will probably lead the association to rescind them. The object of the association being purely one of humanity, their interest lies in securing the speediest possible introduction of the reform they seek; and experience proves that an improvement which some one owns and is pecuniarily interested in securing its wide and immediate use, is far more likely to be speedily and generally adopted than one which is common property. In any case, whether the inventor chooses to surrender his patent or not, the subject is worthy of attention. A car which will satisfy the requirements of the association will meet the wants of a vast and rapidly growing traffic; and the superior condition in which it will deliver cattle after long journeys, to say nothing of the direct saving in the percentage of loss of life and in doing away with the loss of time incident to stoppages, will compel its adoption by cattle shippers whether they care for the humanity of the thing or not. It is needless to say that the patent on a car of such a character would be an exceedingly valuable property.

We have no figures at hand to show the exact amount of the live stock traffic of our great railways, but it is obviously enormous. The cattle, hogs, and sheep required to supply the markets of our great cities are to be numbered only by millions annually. Even the traffic involved in our export trade in animals is extremely large. At our great pork-packing centers in the West there were slaughtered last year about seven and a half million hogs, the larger portion of which had made more or less extended journeys by rail. The packing-houses of the seaboard States must have added many hundred thousand to these figures. Nearly two hundred thousand sheep were exported alive last year, and probably half as many horned cattle; this in addition to more than fifty million pounds of slaughtered beef, brought alive from the far West. And, it will be remembered, this carrying traffic in live stock is but in its infancy.

As an indication of what has been done toward meeting the demand which the Humane Association has brought so prominently before the public, the following description of a patented car examined by a committee of the association will prove of interest. The absence of facilities for feeding and watering the animals in transit, necessitating the frequent repetition of the objectionable and injurious process of unloading and reloading, would seem to be a fatal defect in its otherwise clever construction:

The size of the car is 8x30 in the clear. It contains a series-

of movable bars, so arranged that they may be moved up and down at pleasure through slatted standards. After the car is loaded and the doors closed, the bars are let down from the outside between the animals, partitioning them off separately or in pairs, as may be desired. The bars are raised from between the animals to the roof before unloading, when they are driven out in the ordinary way, and the car is left in condition for returning freight.

The car will accommodate sixteen steers, giving each animal a separate stall. Hogs may be partitioned off in like manner, with from fifteen to eighteen in each pen, thus preventing them from piling upon each other and smothering. There is a tank underneath the car, with a capacity of ten barrels of water. This is connected with a pump on the roof of the car, by means of which the water is forced through a perforated tube, which extends through the entire length of the car, completely filling it with a fine spray, which, when continued for a few minutes, amounts to a shower bath. This is designed to allay thirst and internal heat by being inhaled, and to allay heat-fever and disease by keeping the pores of the skin open.

It is claimed by the inventor to be more consistent with the laws of health to keep the body thus refreshed than to allow it to take large draughts of water through the stomach while in transit, which often results in stiffening and foundering the animal.

It is claimed further that feed and water troughs may be attached to the car if found to be desirable at the conclusion of the experiments which are now being made. But the inventor is of the opinion that to deprive the animal from being taken from the cars and afforded a reasonable time for rest, at least as often as it is necessary to partake of food and water, is inhuman, and a violation of well settled physiological principles: an opinion which would have more weight were it possible to unload and reload the cars without hurting the animals more than a steady and unbroken journey would.

ANTI-VACCINATION FOLLY.

The coming of an English gentleman, with a craze against vaccination as a preventive of smallpox, has been made the occasion of an attempt to stir up opposition to the practices of our American physicians and boards of health in this connection. By parading a portentous array of figures to show that vaccination does not prevent smallpox and does entail a vast amount of disease through blood contamination, not a little feeling is aroused, especially among the ignorant; the anti-vaccination spirit prevailing in English and other European circles, embracing no inconsiderable body of the more intelligent classes, being urged as a reasonable ground for similar opposition here.

Those who have echoed the anti-vaccination cry, however, do not appear to be familiar with the circumstance that, owing to radically different methods of obtaining and using the vaccine virus here and in Europe, no argument based on European results can have any application here. The adverse statistics derived from European experience, or from American experience previous to the adoption by our physicians of correct methods and uncontaminated virus, may all be strictly true, and doubtless are substantially true; yet our confidence in proper vaccination need not be shaken in the least. Accordingly our European friends, instead of trying to propagate their notions here, would do much better to study the methods employed in this country and try them at home. Vaccine virus, not contaminated and stripped of its virtue by over-humanization—that is, by repeated transmission from man to man—is both free from risks and of certain efficacy. No better proof of this fact is required than the practical stamping out of smallpox in this great city. In view of the fact that by the general adoption of correct vaccination, smallpox, but lately one of the worst of human scourges, has been so thoroughly brought under subjection in this great city, that with 1,100,000 inhabitants there were last year but fourteen cases of the disease, it is manifestly as unwise as it is absurd for our newspapers to lend themselves to the propagation of anti-vaccination nonsense.

THE FUTURE WATER SUPPLY OF PHILADELPHIA.

Philadelphia is now supplied with water chiefly from the Schuylkill River, a part coming from the Delaware. The water is pumped to the levels required by steam pumps with high lifts. There are seven pumping stations: the Fairmount on the Schuylkill, the Schuylkill, the Spring Garden, the Delaware, the Belmont, the Roxborough, and the Frankford, with an aggregate capacity of about fifteen thousand million gallons a year.

The rapid growth of the city has resulted in the serious contamination of most of the sources of the city's water supply, making a resort to streams draining regions less thickly populated an urgent necessity. The latest project, that of Mr. James F. Smith, C.E., contemplates a gravity supply by aqueduct, to be drawn from the upper portion of the Perkiomen Creek and its tributaries. A short distance above the Green Lane station of the Perkiomen Railway, in Montgomery County, there is, Mr. Smith says in the Journal of the Franklin Institute, an admirable site for a dam, at a point where the stream cuts through a ridge of hard rock, making a gap of about 300 feet across, with precipitous sides. At this place the dam may be 90 to 100 feet high, backing the water several miles into a valley, with favorable slopes bounded by hills and ridges. From this point the proposed aqueduct runs southeasterly in a straight line about 27 1/2