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Contents.

(Illustrated articles are marked with an asterisk.)

Table listing various articles such as 'Acids from electric lights', 'American Institute fair', 'Barometer tube, to fill', etc., with corresponding page numbers.

TABLE OF CONTENTS OF

THE SCIENTIFIC AMERICAN SUPPLEMENT

No. 199.

For the Week ending October 25, 1879.

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Table listing sections I through VIII, including 'ENGINEERING AND MECHANICS', 'AGRICULTURE, ETC.', 'ELECTRICITY, MAGNETISM, ETC.', 'TECHNOLOGY', 'GEOGRAPHY', 'METEOROLOGY', 'NATURAL HISTORY', and 'MEDICINE AND HYGIENE, DENTISTRY, ETC.'.

THE AMERICAN INSTITUTE FAIR.

There is probably but one department in which this year's exhibit will especially impress the visitor accustomed to these annual displays, and that is the section devoted to china-ware. The potteries of New Jersey and New York are abundantly represented, and their exhibits will be a surprise to many.

In most other respects the fair is a counterpart of those which have gone before it, though quite unlike them in many respects. Agricultural machinery is not so abundantly represented as it has been, and there are fewer pumps, looms, printing presses, washing machines, and, not to speak disrespectfully of the foregoing, fewer catch-penny shows.

Rapid transit comes in for a good deal of attention. Col. Payne shows a large model of the apparatus to be employed in the traction of cars on the East River Bridge. The Winters Improvement Company have, in an obscure section of the machinery annex, a large display of tanks and apparatus for compressing and storing air for pneumatic motors.

The Tarbox automatic railway switch is worthy of critical examination. It is simple, strong, and direct in its action; and while placing the switch under the control of the engineer, it seems to obviate most of the current risks from misplaced switches by making the locomotive or car wheel mechanically set the switches ahead for the main track.

Among the notable engines in the exhibition, the Otto silent gas engine makes its first appearance at these fairs. Its smooth and quiet working attracts no little attention. It is exhibited by H. S. Manning & Co., 111 Liberty street. The engines supplying power in the annex are a Buckeye engine, with whose excellence our readers are all familiar; and a Whitehill engine, furnished by the Newburg Steam Engine Works.

Close by the boilers will be seen the interesting exhibit of the Pierce Well Excavator Company, including the Pierce portable hand rock drill, and the company's improved artesian well drilling and mineral prospecting machine.

As usual the display of wood-working machinery, especially of the lighter sorts, is abundant. J. H. Blaisdell, New York, has an attractive assortment, including band saws, shap ing machines, pony planers, spindle shapers, saw tables, and the like; also a novel sand papering machine with a traversing cylinder.

Among the other exhibits worthy of attention may be mentioned the Keith dynamo-electric machine and the Fuller electric lamp, shown by the Fuller Electric Light Co., 20 Nassau street; the leather belting of J. B. Hoyt & Co., also of this city; Knight's perfection rudder for small craft; the foot, hand, and power presses of the Peerless Punch and Shear Co., 52 Dey street; Main's patent milling attachment for lathes, shown by Wm. Main, of Piermont, N. Y.; the Rhyston mangle, for ironing clothes without heat, described and illustrated a short time since in this paper; the pulsating pen of Ward & Drummond; the new economizer agricultural engine of the Porter Manufacturing Company; and an important exhibit by the American Vege-

table Fiber Company, of Philadelphia. The last includes De Landtsheer's improved machine for breaking and dressing flax, hemp, and other fiber plants, and a growing specimen of the abutilon—the newly discovered fiber plant of the Middle States—with samples of the fiber in its raw and manufactured states; also a great variety of products of this new American jute, bleached, dyed, spun, and woven.

As usual there is an interminable display of sewing machines and attachments, and other contrivances for saving (or increasing) domestic labor. There is also a good show of furniture; and the National Stove and Foundry Company display some fine castings in connection with their heaters and ranges.

A ZOOLOGICAL GARDEN FOR NEW YORK.

There is in preparation, at the upper end of New York island, a semi-educational pleasure resort that promises to add materially to the city's resources in that direction. The project is in the hands of a number of wealthy citizens, who have purchased 33 acres of ground lying between 155th and 159th streets, St. Nicholas avenue and Harlem River, to be laid out as a pleasure park, including botanical and zoological gardens, a large music hall, and other structures.

The plans contemplate a grand arcade, 1,100 feet long, facing 8th avenue, and extending 450 feet on 155th street. The approaches to the arcade through the surrounding gardens will be by stairways, and from St. Nicholas avenue by paths descending to the upper section of the building. The arcade, to be devoted to shops (excluding barber shops, cigar stands, saloons, and the like), is to be of iron and glass throughout. It will be 40 feet high and 75 feet deep, and cost about \$275,000.

The zoological garden will be back of the arcade, the cages to extend from the 157th street entrance to the foot of the bluff on 155th street. The monkey pavilion will stand between 155th and 156th streets, and the bird pavilion between 157th and 158th streets. In an artificial lake within the park will be an island carrying a large octagonal concert and dancing hall, two stories high. Back of the lake will be the bear pits, cut out of solid rock, 75 feet deep and 50 feet wide, visible from the lake side and also from the bluff above.

The main building, to stand near the corner of St. Nicholas avenue and 155th street, will contain a large concert hall and lecture room, seating 40,000; a botanical conservatory, 100 feet by 500 feet, with towers at the ends for birds and flowers. There will be besides a capacious restaurant, billiard rooms, bowling alleys, and the like. The grand tower will be used as an observatory. At the upper end of the park ten acres are reserved for out-door sports. A considerable amount of work has already been done upon the grounds, and the collecting of zoological and botanical specimens has been begun.

THE ORIGIN OF MACHINE-MADE PENS.

Joseph Gillott, the first to employ machinery in the manufacture of steel pens, was originally a maker of buckles and other "steel toys," working alone in a garret in a Birmingham "slum." At this time he was engaged to a young woman in his own rank in life, whose two brothers were working, in about the same style as himself, on hand-made pens. Gillott thought he could better the processes employed, and worked secretly in his garret until he had made a press and other appliances, by which he could make twenty times as many pens in a day, and better pens, than was possible under the old methods.

Ivy Poisoning.

Recently Chief Justice Noah Davis, of New York City, was badly poisoned by the creeping vine known as poison ivy, which infests every fence corner and waste place in this part of the country. He was gathering bright autumn leaves, while in the country about sixty miles up the Hudson, and did not know that poison ivy leaves were not to be safely handled. In view of the general prevalence and abundance of this vine, it is astonishing that any native of the country should be ignorant of its appearance and poisonous properties.