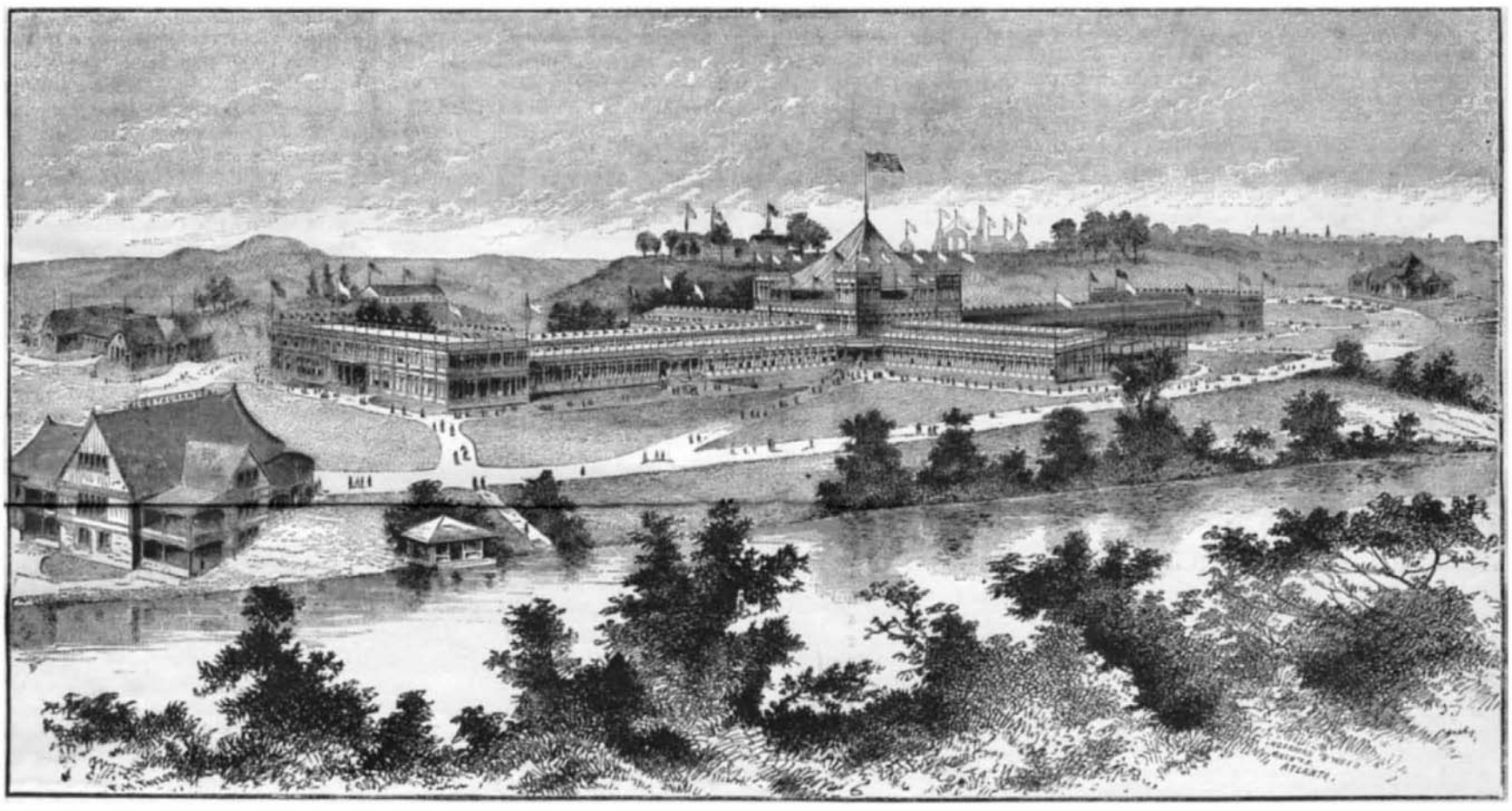
the voyage from the Hudson's Bay Settlements. The fish were caught at the rate of about three tons daily, and placed in the cold air chamber immediately as they arrived alongside the ship. On opening the hold in London the salmon were found in as good condition as when taken out of the water. The flesh is declared quite firm and of excellent color.

THE GREAT EXHIBITION AT ATLANTA GA.

The Atlanta Exhibition opened, as already noted, with hopeful prospects, both as to popular success and national utility. These prospects have improved with each day's developments, and the indications now are that the commercial and industrial results of the fair will as far transcend the anticipations of the projectors of it as the show itself has exceeded in magnitude and variety their original intentions.

The first plan, as proposed by the Hon. Edward Atkinson, of Boston, was to hold a modest cotton fair somewhere in the South, preference being expressed for Atlanta. The energetic proprietors of the *Textile Record* took up the project in earnest, and succeeded in enlisting the good will and active co-operation of the leading citizens of Atlanta. The Exhibition Company was organized about a year ago, and under the energetic direction of Mr. H. I. Kimball, of Atlanta, subscriptions to the amount of $200,000 were promptly secured, of which New York City contributed a fifth part. The construction of the buildings deemed necessary for the exhibition was begun last spring.



THE GREAT EXHIBITION AT ATLANTA GA.

The site selected for the fair was Oglethorpe Park, a space of fifty acres just outside the city. The principal building was designed for a model cotton mill; and the general plan of the exhibition buildings was thought to be, if anything, over-ambitious. But the demands for space came in so rapidly that successive annexes were erected, ultimately quadrupling the exhibition space at first contemplated; and yet the demand has exceeded the twenty acres of exhibition space provided.

The original "Main" Building is a handsome structure almost entirely of glass. It is 720 x 400 feet, well lighted and ventilated. It is supplied with abundant steam power and with eight lines of shafting, arranged for the operation of every description of machinery. Its magnificent aisles afford opportunity for a grand and artistic display.

The Art and Industrial Pavilion (310 x 55 feet), open to the roof, 50 feet high, with capacious galleries, is provided for the display of fine arts and manufactured goods to the very best advantage.

The Department of Minerals and Woods (300 x 100 feet) is an elegant building, provided for the especial display of the collective exhibits of the natural products of mines, fields, and forests, which constitute one of the finest displays of the kind ever presented.

The Judges' Hall (88 x 112 feet) includes, besides the commodious offices, committee rooms, etc., a capacious hall, seating 2,000, for the accommodation of the various assemblies attending the lectures, business meetings, etc., held during the exhibition.

The Department of Public Comfort contains, besides the offices of the department, convenient offices for the telegraph, telephone, and exhibition messengers, stands for fruit, cigars, newspapers, etc.; also barber shop, check room for parcels, ladies' parlors and retiring rooms, gentlemen's parlors and retiring rooms, etc.

The Exhibition Restaurant (100 x 53 feet, two stories) contains saloon, dining room, serving room, and ladies' parlor and retiring room, gentlemen's retiring room, store rooms, kitchen, etc.

A number of annexes for special purposes have been erected in addition to the large buildings for the general purposes of the exhibition.

Inside the grounds and in the fields just outside representative Southern crops have been planted, including a dozen varieties of cotton, sugar cane, sorghum, rice, hemp, potatoes, peanuts, etc., etc. These growing crops show the visitor not only the characteristics of Southern agriculture, but also its needs and the conditions which will have to be satisfied by inventors of time-saving, labor-saving, and crop-saving implements, machinery, and processes for use in the South. The exhibition of cotton machinery is very large, and embraces substantially everything in use by planters and manufacturers. The first committee of the National Cotton Manufacturers' Association pronounce this part of the exhibition the best and most abundant ever before brought together in this country or elsewhere. The evidence of the natural resources of the South in agriculture, in commerce, in minerals, and in timber presented in the annexed buildings, could not be equaled, they say, by any other equal area of the earth's surface; and in the use to which these resources will shortly be applied, they find the promise of great commercial advantage to the North as well as to the South. They concur unanimously in the judgment that greater promise of improvement in many directions, but especially in the handling of cotton, has emanated from this exhibition than from any ever held before. The committee represented more than $100,000,000 of capital, over 1,000,000 spindles, and nearly 25,000 looms.

ENGINEERING INVENTIONS.

Mr. John W. Hayes, of Fort Wayne, Ind., has patented an improved steam engine valve. This invention relates to that class of engine valves that are known as "rotary valves;" and it consists of a cylindrical hollow valve open at top and bottom and closed at both ends, and having concave sides provided with annular and longitudinal packing strips or bands, and devices for giving it an oscillating and slightly endwise motion for the purpose of making the wear upon the valve and its seat and interior of the valve chest more even. The concave sides of the valve form exhaust cavities, and the valve seat is supported on studs, whereby an exhaust passage is established beneath said seat. The valve, being open both above and below for the admission of steam, is approximately balanced, and its general construction is such as to insure great durability.

Mr. William A. Stoddard, of Dallas, Oregon, has patented an improved stump extractor, which possesses many conveniences and is capable of great power. In this machine the main frame, which rests upon the ground when the machine is at work, has combined with it front wheels supported on a swinging axle that is journaled in hand levers pivoted to the frame, and a rear swiveling wheel carried by a hinged frame which is attached by connecting rods to the hand levers. By this combination the main frame with its working parts may be raised from the ground and the machine be readily moved over the surface thereof. The main power lever, which carries the lifting or stump-extracting chain at one end, is operated by a rope and windlass arranged to depress the other end or longer arm of said lever, a draw-rope, to which the horse or other power is applied, passing round a wheel on the windlass to actuate the latter. This longer arm of the power lever is elevated by a separate rope and windlass and adjustable crane, after the load has been raised and detached.

Mr. Samuel Whinery, of Wheeler's Station, Ala., has patented an improved balanced slide valve. This invention consists of a slide valve composed of twin valves, and a frame fitted with flexible diaphragms in interposed relation with the valves and connecting the latter with the frame, in combination with a steam chamber having steam and exhaust ports in its opposite sides. The diaphragms, which project at the ends of the valves, form a chamber between them which is in communication with the exhaust ports of the valves. This construction provides for a pressure on the diaphragms, collapsing the chamber between them, and nearly balances the pressure of the valves outward, also one exhaust pipe serves for both sides of the steam chest.

Mr. Robert L. Stevens, of Albany, Oregon, has patented a novel means for elevating and depressing propellers. The invention has for its object the raising and lowering of steamboat propellers to adapt them to different draughts of water, according to the load on the vessel. It is applicable both to side wheel and stern propellers, and consists in supporting the propeller and its driving engine in such manner that they can be raised or lowered by screw shafts actuated by mechanism driven by said engine, or by a separate engine. By simultaneously raising or lowering the driving engine or engines and paddle wheels or other propeller the proper working of the engines is not interfered with, and the propeller may be positioned for most effective action, or be raised when navigating shallow water.

Mr. William Sneddon, of Burrton, Kan., has patented an improvement in engine governors. This invention is applicable to all governors employing fly-balls, and its object is to secure more perfect uniformity in the speed of the engine. The invention consists in an upwardly-inclining or curved lever applied to exert a lifting action on the valve stem of the governor, and formed with a groove in which a ball or weight is arranged to run loosely, said weight moving nearer to the lever fulcrum as the speed decreases, and *vice versa*. By this means a tension, increasing and decreasing as required, is kept on the valve stem, restraining any sudden movement of the latter, and the action of the governor is greatly improved.

A New Species of Horse.

The *Annals and Magazine of Natural History* for July contains a translation of a Russian paper, in which M. Poliakof brings forward a mass of evidence in proof of the existence of a hitherto unknown species of horse, not far from Zaisan, in Central Asia. The animal appears to resemble a small domestic horse, of a dun color; its head is large in proportion to the size of the animal; and the root of its tail is destitute of long hairs for some distance. M. Poliakof names his supposed new species *Equus Przewalskii*, in honor of the traveler who brought the skin to Russia. He regards it as a true horse, and remarks that "if it were possible to prove that culture influenced the growth of the tail, and that this became more hairy, and the mane longer, under altered conditions of life," it might be affirmed that "it was indeed the animal whose ancestors were reclaimed by man in the stone period, the so-called domestic horse of our day."