

wires, no refutation could be made. A few days ago Engineer James H. McCord, of the Bank of Commerce building, discovered that some of the outside strands were broken, and ordered a new cable. The American manufacturers thought this occasion would be a good one to put to a practical test that the argument whether their patent strand cut the inside wires or not, and invited forty of the prominent engineers of the city to examine the rope for themselves. At noon yesterday they gathered at the bank building, where the old cable was stored, and cut it all to pieces in a fruitless endeavour to find a flaw. Even at the point where, through constant wear the outside strands had parted, the inside strands were perfect. After the examination a luncheon was served at McTague's, where Mr. McCord told the company of his experience with the wire, saying that all other cables he had used lasted but three years, and concluded with the statement that he had replaced the old cable with one of the same kind. Mr. J. H. Joyce, engineer of the Telephone building, in a brief address, said that he had bought one of the cables under discussion, and that it has now been in service three years and one month, and that the longest service he had ever secured with those elevators with a round cable was two years.

ENGINES AT THE PAN-AMERICAN EXPOSITION.

The Lane & Bodley Co., of Cincinnati, Ohio, have addressed the following circular letter to exhibitors of engines at the Pan-American Exposition, calling attention to the inadequate accommodation afforded to exhibits of this character, and inviting a general protest:

Gentlemen,—The writer has just returned from the Pan-American Exposition at Buffalo, where we have an engine on exhibition. You are also exhibitors. We are addressing this letter to all who have engines installed in the cellar.

We believe that all engine exhibitors have been imposed upon. We believe that 99 per cent. or more of the visitors would spend a week on the grounds, and would leave without knowing there is an engine exhibit.

The engines are down in a hole, and there is nothing to indicate that the hole exists, nor that it contains an engine exhibit. This hole is roofed over as low down as possible, to clear the tops of the fly-wheels of the engines, and a few inadequate sky-lights are inserted. It is entirely boxed in, and when the weather gets warm, will be a sweat-box in which we do not believe it will be possible for men to stay.

We request that you immediately write to the Exposition authorities, and urge that the roof over the engine, which is a temporary affair, be raised to the level of the roof of the machinery building, and that the inner partitions of the machinery building be removed, so that visitors may look down upon the engines from the machinery building, and that suitable conspicuous access be provided to this subterranean exhibition space, and that conspicuous signs be placed in various parts of the machinery building, calling attention to the fact that there is an exhibition of steam engines, notwithstanding appearances to the contrary.

We believe a prompt protest and request for a satisfactory remedy will be effective now, but would not be later.

Yours truly,

THE LANE & BODLEY CO.

VICTOR TURBINES AND PUMPING MACHINERY.

We have received two exceedingly useful catalogues, Nos. 22 and 23 respectively, from the Stilwell-Bierce & Smith-Vaile Co., of Dayton, Ohio, the first being devoted to an elaborate description of Victor Turbine Water Wheels and the second to various types of pumps, pumping engines, motors, purifiers and receiving tanks, and washing and filter presses. Both catalogues are well printed, and handsomely illustrated and contain much information of a valuable character to engineers. No. 23, in particular, contains some excellent rules and tables for finding the power, speed and water consumption of cylinder gate turbines under heads ranging from 3 to 50 feet, and for small "Register Gate" turbines under heads of 3 to 100 feet. This firm recently consigned to the Remington Martin Co., of Washington, N. Y., no less than nine car loads of Victor turbines and appurtenances, there being five 39-inch, one 24-inch, two 21-inch and one 18-inch improved cylinder gate Victor turbines, with penstock draft tubes, etc. Each wheel is mounted singly upon a horizontal shaft and incased in a steel penstock with a heavily-ribbed cast-iron head, this head being rounded so as to give the best possible appliance of the water to the wheel. The total power developed by the wheels will be 4,375 horsepower under 42 feet wetting head of water. These wheels will be installed in a new pulp and paper mill at Norfolk, N. Y.

ROBINS BELT CONVEYOR PATENTS.

On October 15th, 1900, the suit of Robins Conveying Belt Company, of New York, against the Exeter Machine Works, was argued before Mr. Justice Wheeler, of the U. S. circuit court for the southern district of New York. The Robins Conveying Belt Company complained that the Exeter Machine Works had advertised, and in two instances had sold, belt conveyer apparatus which infringed letters pat-

ent Nos. 499, 472, dated June 13th, 1893, and 561,604, dated Nov. 17, 1896, both of which are the property of the Robins Conveying Belt Company. On November 15th, 1900, Mr. Justice Wheeler issued an interlocutory decree establishing the validity of the patents in question, and an injunction restraining the Exeter Machine Works from infringing or in any way advertising the apparatus covered by these patents. An accounting was ordered before Special Master John M. Shield. His report, dated March 6th, 1901, awarded damages to the Robins Conveying Belt Company which have since been paid.

MICHIGAN COLLEGE OF MINES.

The Michigan College of Mines has received from the present legislature of Michigan the largest appropriation in its history. It provides, among other things for two very greatly needed buildings. One of these is to accommodate the departments of Civil and Mining engineering. It will provide mining and hydraulic laboratories and a draughting room, together with lecture and class rooms. The amount allotted for its construction and equipment is \$42,500. The other building will be devoted to the work of the departments of chemistry and metallurgy. The laboratories will be fitted up in accordance with modern ideas of lighting, plumbing and ventilation. Among the laboratories, will be one for metallurgical operations. The amount of appropriation for this building is \$35,000. The appropriation further more provides for an addition to the present engineering building, which will take care of the needs of the course in blacksmithing. Provision is also made for extending the equipment of the electrical laboratory, and for enlarging the central heating plant to take care of the new buildings. The work of planning for the erection of these buildings is already begun, and is being prosecuted as rapidly as possible. It is hoped that one or more of the buildings will be ready by the fall of 1902.

THE ALLIS-CHALMERS COMPANY.

The Allis-Chalmers Company announce having acquired the entire business of the Edward P. Allis Co., Milwaukee, Wis.; Fraser & Chalmers, Chicago, Ill.; Gates Iron Works, Chicago, Ill., and the Dickson Mfg. Co., (exclusive of locomotives), Scranton, Pa. In a circular just issued the company states that the "Allis-Chalmers Co. will continue to build under the same management, the same lines of machinery as heretofore manufactured by the several companies and hopes to merit a continuance of the generous patronage accorded the several companies in the past," which we hope, considering the high reputation enjoyed by the respective establishments before amalgamation, will undoubtedly be realised. The general offices of the Allis-Chalmers Co., is Home Insurance Building, Chicago, Ill.

AIR COMPRESSORS.

We have received from the New York and Franklin Air Compressor Cos., 95 Liberty street, New York, a copy of their new catalogue illustrating and describing the latest types of New York-Franklin Air Compressors, designed for the operation of pneumatic tools and machinery in machine shops, boiler shops, shipyards, foundries, stoneyards, mines and tunnels, for sinking caissons and for every other service to which compressed air is applied. The catalogue contains much valuable information and data relating to the points to be considered in the selection of air-compressing machinery and its proper installation in the attainment of the highest economical results. It will be sent post paid to all interested inquirers.

ELEVATING AND CONVEYING MACHINERY.

The Jeffrey Manufacturing Co., of Columbus, Ohio, have issued an illustrated circular (No. 61) showing various types of elevating and conveying machinery for mills factories, mines, industrial and power plants manufactured at their works.

MINING STATISTICS AND RETURNS.

THE COAST—MT. SICKER DISTRICT.

THE shipments from the Lenora mine, Mt. Sicker, during the month of May aggregated 1,183 tons.

BOUNDARY DISTRICT.

The tonnage of ore shipped by the Boundary District mines during June, up to the 20th, inclusive, so far as has been ascertained from the mines is as under:

	Tons.
Old Ironsides and Knob Hill	12,373
Mother Lode	6,600
B. C.	2,975
Snowshoe	210
Total	22,158