

separation of the oil by this process is practically perfect, analysis showing that only one part remains to 140,000 parts of water.

The yearly saving at the Sydney power-house, when the apparatus is in full operation and attached to both the vertical and horizontal engines is estimated, at the present rate of consumption, at 60 million gallons of water and 4,500 tons of coal. Based on a moderate calculation, the value of the immediate saving is put at \$20,000 a year.

The Highway Bridge Over the Potomac.

The Secretary of War has approved the plans and specifications for the highway bridge across the Potomac, and has asked Congress to extend the time for the completion of the bridge to Feb. 12, 1906. The plans and specifications for the bridge were made by Col. Charles J. Allen, U. S. A., after consultation with Mr. D. H. Burnham, of Chicago, a member of the commission on the park development of the District. It was mainly at the suggestion of Mr. Burnham that the approved plans for the bridge give it a general elevation similar to that of the bridge being built by the Pennsylvania Railroad. As a result both bridges will have straight top chords, and in that way present an almost level sky line. The board of engineers has selected a site about 1,250 ft. above the Long Bridge, and on a line parallel with the railroad bridge now building. The specifications relate only to the bridge over the main river, consisting of two abutments, 12 piers and the spans connecting them; they do not include the shore approaches, which will be given consideration later. The highway bridge will have 11 fixed spans of 216 ft. each, from center to center of piers, and one swing span 290 ft. long. The bridge will have a roadway 40 ft. wide between curbs, with asphalt pavement and two sidewalks, each 8 ft. wide, with a granolithic pavement. On the roadway will be laid a double track for an electric railroad with overhead trolley.

Locomotives for Japan.

Dubs & Co., Neilson, Reid & Co., and Sharp, Stewart & Co., all of Glasgow, and Beyer, Peacock & Co., of Manchester, are bidding on 32 locomotives, weighing 49 tons, and of the Belpaire type, including two compound engines for the Japanese railroads. Three German firms were also asked to tender, but no American firms, it is understood, as on the last occasion, were included in the list. The Dubs people recently got an order for 30 locomotives for Japan at \$2,975 per engine, delivered. Delivery of the 32 new locomotives is required before the end of May.

New Taylor Interlocking at Chicago and St. Louis.

The Taylor Signal Company, of Buffalo, N. Y., has taken the contract to make and put up the interlocking signals at the new terminal station of the Chicago, Rock Island & Pacific and the Lake Shore & Michigan Southern, at Chicago. This machine, "all-electric," will have 168 working levers and 28 spare spaces. These levers will work all the switches of the terminal station and those of the main tracks for 2,000 ft. out. The same company has received a contract for putting in its electric machines at East St. Louis and Madison, Ill., and at North Market street, St. Louis, all on the lines of the Terminal Railroad Association of St. Louis. The East St. Louis plant will require 144 electric levers and the other two will have 96 each. At Newark, Ohio, on the Pennsylvania Lines West of Pittsburgh, the Taylor Company will put in a 68-lever all-electric machine.

Pintsch Gas Lighting.

The amount of business done by the Safety Car Heating & Lighting Company during the year 1902 was very large. During the year 2,051 cars were equipped with the Pintsch light in the United States, Canada and Mexico; 75 gas buoys were bought by the Light House Department of the United States and Canada, and 1,811 cars were equipped with the Safety Company's standard steam heating systems. The Pintsch lighting system has been adopted by over 200 railroads in the United States, Canada and Mexico, where it is applied to 20,017 cars. The Pintsch buoy system is applied to 240 buoys and beacons in the same countries. The steam heating systems of this company are adopted by 130 railroads in the United States and are applied to 11,050 cars. Up to Oct. 1, 1902, the Pintsch system has been applied to 110,000 cars, 5,000 locomotives and 1,500 buoys and beacons in the world. The simplicity of operation and economy in maintenance of the Pintsch system has been so satisfactory that it has practically been adopted as the standard lighting system by the majority of the railroad lines and the light house boards of the world.

New Car Wheel Works in McKees Rocks.

The first experimental run of the new Central Car Wheel Co.'s plant at McKees Rocks, Pa., was begun last week. The new plant is controlled by the Pennsylvania Malleable Iron Co., which also operates a malleable iron works at McKees Rocks. When in full operation, it is expected that the capacity of the new works will reach about 500 wheels a day.

Stanley Electric Mfg. Co.

The directors of the Stanley Electric Mfg. Co. on Jan. 10 authorized that the capital stock be increased from \$3,000,000 to \$10,000,000. The stockholders will meet on Feb. 11 to approve this action of the Board. Plans for this great increase of facilities have been under way for some time to place the company on a basis to compete favorably with other large electrical manufacturers. There is no truth in the reports that the Stanley Co. will be sold to the General Electric Co. The Stanley Co.

recently got an order from the New York Edison Co. aggregating over half a million dollars for dynamos and other electrical apparatus, some of which is to be the largest of its kind ever built. Funds will be provided by this increase of capital for certain important developments which the engineers of the company have been planning for some time. Among these developments is a new system of operation for heavy long-distance electric railroads.

Fort Pitt Spring & Manufacturing Company.

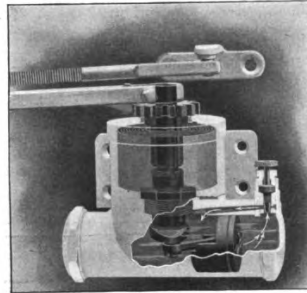
This company, which is to make a specialty of car and machine springs of all kinds, has begun work at its new plant at McKees Rocks, Pa., on the line of the Pittsburgh & Lake Erie, and Pittsburgh, Chartiers & Youghiogeny. The new plant is to have a capacity of about 15,000 tons per year. The main building, which was finished some time ago, is equipped with modern machinery to make all kinds of helical springs from the smallest or lightest to the largest or heaviest. It is the intention of the company to shortly add other equipment to make elliptical springs as well as pressed steel specialties of a large variety. Martin B. Foley is General Manager; F. W. Wallace is President.

More Moving Stairways.

The Manhattan Elevated Railroad has plans to install escalators (moving stairways) at its stations on the Sixth avenue division at 33d street and 42d street for both the uptown and the downtown platforms.

The Blount Door Check.

The Blount check is in successful use on the doors of many railroad coaches. It combines a powerful coil



spring (which furnishes the power to close the door) and a metallic piston moving in a metallic cylinder against a non-freezing liquid (which furnishes the checking or controlling power). A simple regulating valve shown at the right in the illustration is controlled by a key and can be adjusted so as to give any desired action. It is made in various sizes and can be adapted to doors of all kinds and shapes. It is also extensively used on exterior and interior doors of all kinds and on ferry boats where the conditions are extremely severe. It is made by the Yale & Towne Manufacturing Co., New York and Stamford.

Western Union and Pennsylvania.

In the United States Circuit Court at Newark, N. J., Jan. 14, Judge Kirkpatrick granted a permanent injunction prohibiting the Pennsylvania Railroad from destroying or removing the poles and wires of the Western Union Telegraph Company from the railroad right of way. The case will be carried to the United States Circuit Court of Appeals. The Western Union had asked the Court to direct the condemnation of a right of way for itself coincident with that of the railroad, but on this the court postponed its decision. At Pittsburgh Jan. 15, Judge Buffington, in the United States Circuit Court, decided two cases brought by the Western Union. One was a petition to condemn a right of way for the telegraph lines along the railroad; the other was an application for an injunction to prevent dispossession. The Court refused to grant the petition for condemnation proceedings, and dismissed the motion for a preliminary injunction.

Consolidated Lake Superior Company.

The details relating to the \$3,500,000 loan to be made to the Consolidated Lake Superior Co. by a syndicate of Philadelphia and New York banks, headed by Speyer & Co., have been settled and the loan will become available immediately. Vice-President Theo. C. Search has resigned as Treasurer. Since the resignation on Dec. 12 last of F. S. Lewis as President, the duties of a President have devolved upon Mr. Search, and he will continue to perform them until the vacancy is filled. J. Parke Hood, formerly Treasurer of the Choctaw, Oklahoma & Gulf R. R., has been elected Treasurer in place of Mr. Search. Thos. DeWitt Cuyler, Vice-President of the Commercial Trust Co., who was elected a director about three weeks ago, has also resigned. He is succeeded by Gordon Abbott, President of the Old Colony Trust Co., of Boston.

The Shellpot Shops of the Pennsylvania.

The Pennsylvania is building new shops at Shellpot, outside of Wilmington, Del., and has contracted for the various buildings, and they are now under way. Among the contractors are Messrs. Ryan & Kelley, for grading and masonry; Phoenix Iron Co. and the American Bridge Co., for iron work; Messrs. Armstrong & Printzenhoff,

Ryan & Kelley, J. W. Ferguson, A. S. Reed & Bro. Co., for the buildings proper; Warren-Ehret Co., for roofing; Messrs. F. A. Black & Sons Co., J. W. Webber, for painting; The Vulcanite Paving Co., Filbert Paving & Construction Co., J. O. Ellinger, for paving and concrete work; and Messrs. W. P. Oglesby, and Boon & Sample, for plumbing.

THE SCRAP HEAP.

Notes.

The track walkers of the Boston & Albany who watch the rock cuts in Berkshire County during the winter are now required to wind a registering clock at certain points every hour; and the records, made on paper, are examined weekly by the superintendent.

For the last week or two news about the Union Pacific strike has been strangely scarce; but on Monday of this week it was reported from Omaha that all of the steam fitters and carpenters in the shops at that city had struck because the company decided to adopt the piece-work method of payment.

The sleeping car tickets bearing internal revenue stamps returned by the Pullman Company to the Treasury Department at Washington, for the rebate due in consequence of the abolition of the tax, filled 36 cases and weighed 210 tons. A half dozen clerks are spending six months or so assorting the tickets.

Euclid Madden, the motorman of the street car which killed William Craig and injured President Roosevelt at Pittsfield last summer, has been tried and sentenced to six months' imprisonment and to pay \$500 fine. Madden pleaded guilty to the charge of manslaughter, as did also the conductor, who was also indicted. The conductor's case was not tried and he was released without bail.

The Delaware & Hudson has made a general increase in the wages of its employees, at rates varying from 5 to 10 per cent. The Boston Elevated Railroad (operating both elevated and surface street lines) has announced to its employees a material increase in wages, the rate varying according to the length of the individual's service in the employ of the company; and it is also announced that pensions are to be paid. Men learning to run cars will hereafter receive pay, and extra men will receive some pay while waiting.

It is announced that in consequence of the severity of the coal famine and the crowded condition of the lines, the Lehigh Valley has temporarily discontinued the Black Diamond express west of Wilkesbarre. The company also determined to take off the train which carries mail and newspapers that start from Philadelphia at 2:30 a.m., but the order was recalled on the receipt of a protest from business men and publishers in that city. It was shown that the first-class mail matter sent by this train aggregates about 8,000 pieces, and the newspapers 2,399 pounds.

For the present session of the Legislature of Montana the Northern Pacific Railroad issued to the members passes good for 60 days. The limiting of the passes to such a short period appears to have been offensive to many of the members and they refused to accept them, and now the President of the road, in a letter which has been published, gives the reason why the passes were not made for a whole year, as in the past. He says that "sometimes in previous years such passes have been loaned without consideration; or, for a cash equivalent, members have used such passes to the Capitol the first of the week and lent them to ticket brokers for sale for short trips, receiving the same back in season for their return trips to their homes at the end of the week. At the end of the session the passes have been sold outright by those who had no further use for them, and we have taken them up in the hands of improper parties on our trains."

Traffic Notes.

The State Railroad Commissioners of Louisiana have ordered that sleeping car companies shall not charge more than \$1 a seat between any two points in Louisiana.

The War Department has contracted to send 300 soldiers from the East to San Francisco, over the States and Railway and the Choctaw line of the Rock Island, by way of Memphis and El Paso.

After this month the Pennsylvania will discontinue rebilling at Pittsburgh eastbound freight coming from the Pennsylvania Lines West of Pittsburgh.

The Chicago & Alton has announced that demurrage will be charged on coal after 48 hours, instead of after five days, as heretofore. Newspaper accounts indicate that other roads at Chicago have adopted or will adopt the same rule.

Western papers state that the Great Northern Railway has employed George C. Crose, a former speaker of the Lower House of the North Dakota Legislature, to make a tour of small towns in the eastern States with a view to inducing farmers to emigrate to places on the line of that road. It is said that Mr. Crose will be engaged in this work about six weeks.

Train Robberies in 1902.

The Express Gazette prints a page of notes of the train robberies reported in the United States during the past year. The total number is 23. In 1901 the number was 16, and reading back from that year the totals are 23, 15, 28, 30, 28, 49, etc. The last number, the highest in the list, is the total for 1885. The total number of hold-ups in 18 years has been 328, in which 98 persons have been killed and 107 injured. The present record, which is to be more precise, should be described as a record of robberies and attempts at robbery, includes cases in Arkansas, Colorado (2), Idaho, Illinois (2), Indian Territory (2), Iowa (2), Kentucky, Louisiana, Maryland, Missouri (4), Montana, Nebraska, South Carolina (2) and Tennessee (2); a total of 13 States, two