

**A NOVEL INDIAN DREDGER.**

Under the direction of Sir A. M. Rendel, K. C. I. E., consulting engineer for the Indian Government, there has recently been built and shipped by Messrs William Simons and Co., of Renfrew, a dredger of a special kind, designed by Mr. O. C. Lees, of the Bengal Public Works department. It is a suction-pump triple-screw steam dredger, to be used for opening up new waterways and improving the depths of shallow canals or waterways, and for depositing the dredged material upon or beyond the banks of the waterways at great distances. The vessel is 250 ft. in length by 45 ft. beam by 18 ft. depth. The hull takes an unusual form forward, having three separate bows abreast of each other, thus forming two open wells, and each bow contains a suction frame through which the material is drawn on board for discharge on shore. Each suction frame has two suction orifices or nozzles, in front of which are two patent rotary cutters for cutting and disintegrating clayey material which otherwise would be unsuitable for suction-pump dredging. Each suction frame is also provided with a system of water jets delivered under great pressure, designed to agitate compact sand which might not be resistant enough to warrant the employment of the rotary cutters. The cutters are driven by bevel and spur gearing from an independent four-cylinder tandem compound engine, and are of cast steel, of special form made under Robinson's patent. Each suction frame is controlled by independent hoist gear driven by a two-cylinder engine. The two centrifugal sand suction pumps, each driven by an independent set of vertical triple-expansion engines of 900 I. H. P., are specially constructed with wide space to permit of the passage of large pieces of debris, and have a nominal dredging capacity of 4,000 tons of sand per hour from a depth of 20 ft. The cutters and suction nozzles operate upon a width of 20 ft. The pumps deliver the material dredge direct through a floating pipe line 42 in. in diameter, which may be 600 ft. in length. On a terminal or shore-end pontoon are appliances which raise the pipe-line to a height of 20

ft. about water level, and the material is finally discharged over the canal bank to a distance of 100 ft. from the centre of the pontoon. The special feature of the pontoon is an outboard balance-weight, carried on heavy davits, and so arranged as to maintain the truss of the pontoon, irrespective of whether the embanking pipe is full or empty. Another feature of the dredger, which is to be named "Foyers," is that she is fitted with three four-bladed propellers of large surface, each driven from a separate set of vertical compound surface-condensing engines of sufficient power to propel the three-bowed hull at a speed of eight knots. Steam at 200 lb. working pressure is provided by four Babcock and Wilcox water-tube boilers, fitted with reducing valves as required for auxiliary engines. There are a large number of separate engines and auxiliaries for pumping and other purposes on board. One main condenser is provided to take steam from the installation, the condenser itself being fitted with a complete outfit of steam-driven air and circulating pumps.

**BUILDING DURING AUGUST.**

In Toronto during the month of August 470 building permits were issued the approximate value of which is \$1,271,620. This makes a total of 2,409 permits issued from the beginning of the year and the same are valued at \$8,660,525. For the first eight months of 1905, 1,873 permits were issued the value of which was estimated at \$7,068,779.

In Winnipeg the value of buildings contracted for totalled \$1,125,000 for the month of August and \$9,250,000 for the first eight months of the year. A slight decrease is noted when compared with the figures of 1905, which were \$1,289,650 for the month of August and \$9,300,000 from January 1st to August 31st.

In Regina 60 building permits were issued during August the value of which is placed at \$326,000, making a total of \$1,363,003 up to August 31st.

Building permits in Edmonton for the month of August were valued at \$212,165 making a total

of \$1,225,590 for the eight months of the year.

**PERSONAL.**

Mr. Charles Brandeis, Consulting Engineer of Montreal, has been retained by the Town of St. Laurent, Que., for the improvement of their water works system.

Mr. R. R. Keelay, city engineer, Edmonton, Alta., has received notification that he has been elected a member of the National Geographical Society of the United States.

Mr. Harry Charlesworth, formerly of Woodstock, Ont., now an employee of the contracting firm of Miller & Harvey, Toronto, has been appointed secretary pro tem of the building committee of the new Toronto General Hospital.

Mr. John S. Fielding, C. E., was in Hespeler on Wednesday, the 12th inst., and made a final inspection of the new concrete dam there for the R. Forbes Woolen Mills Company, preparatory to turning the water in on the new structure. The last piece of coffer-dam was removed and the reservoir allowed to fill up. The result was eminently satisfactory to the proprietors, who are pleased to know that they will now be able to save a great deal of water that formerly was lost by leakage through the old wooden and stone dam. The new dam is absolutely tight, has a large margin of strength and has been built at a very moderate cost. The height varies from 11 to 16 feet, and the total length is 220 feet.

J. J. Fisher, contractor, Brantford, Ont., has made an assignment.

Dohoney & Donovan, contractors, Reed's Station, Que., have registered their business.

Louis Kemp, plumber, Vancouver, B. C., will be succeeded in business by Moscrop Bros.

Henri Bertrand and Joseph V. Bertrand, carpenters, Montreal, have registered under the name of Bertrand Freres.

Eugene F. Paris and Mastai Gagne, painters, Montreal, have registered under the firm name of Paris & Gagne.

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