

"Graphite Suggestions," a pamphlet describing the many and varied uses of graphite, such as pencils, crucibles, facings, furnace linings, brazing, lubricating, belt-dressing, etc., also "Graphite Lubricants," descriptive of the same.

The Buffalo Forge Co., Buffalo and New York; "Mechanical Draft," describing induced and forced applications of mechanical draft, to street railway, electric light, and steamship plants and industrial works.

Marsh Bros. & Co., Sheffield, Eng., catalogue of "Roxo" twist drills.

The Packard Electric Co., St. Catharines, Ont.; a bulletin setting forth the advantages of "Packard" lamps.

The R. Woodman Manufacturing and Supply Co., Boston, Mass.; a catalogue of "Woodman's" patent railroad ticket punches, dating stamps, numbering machines, uniform badges, checks, buttons, etc.

The American Tool Works Co., Cincinnati, Ohio; a catalogue of "American" engine lathes, shapers, planes, drill presses, and turning mills.

The Canadian General Electric Co., Toronto, a catalogue of the Chicago Fuse Wire and Manufacturing Co.'s fuse wire and strip; telephone fuses, fuse links and blocks, etc.

The Diamond Saw and Stamping Works, Buffalo, N.Y., a catalogue of hack saw blades and frames.

Charles E. Moore & Co., San Francisco, and 1303 Have-meyer Building, New York, "Steam Power Plants of the Pacific Coast," a descriptive pamphlet of the many electric light, power, gas and other engineering plants installed by this firm on the Pacific Coast.

The Cleveland Crane and Car Co., Wickliffe, Ohio, bulletins "G," "H," and "J," descriptive of hand and electric jib, post and car; hand power travelling; and electric travelling cranes respectively.

The Nernst Lamp Co., Pittsburg, Pa., "The Nernst Lamp," setting forth its advantages for electric illumination.

The Buffalo Steam Pump Co., describing their "Under-writer Fire," and "Duplex Feed" pumps.

The Kennedy Vale Mfg. Co., New York, a catalogue descriptive of ammonia, angle, chain wheel, check, gas, grate, globe, indicator and other valves; hydrants, etc.

The Canadian General Electric Co., Toronto, "Possibilities of the Incandescent Lamp," a pamphlet embodying points of interest to station engineers and managers.

The Woodward Governor Company, Rockford, Ill.; "Woodward Water Wheel Governors," descriptive of the various makes of water wheels manufactured by this company.

The Smart-Turner Machine Co., Limited, Hamilton, Ont.; bulletin No. 3, describing the pumps made by this company.

John Birch & Co., Limited, London, England; a very comprehensive catalogue of 686 pages, of machinery, machine tools and engineering material. Among articles illustrated and described are: Direct coupled engines and generators, motors and dynamos; steam boilers, air pumps, surface condensers and circulating pumps; lathes of all types; drilling, planing, milling, boring, punching and shearing machines; plate-bending rolls; beam and angle iron bending and cutting machines; cold, hot, and electric sawing machines; nut forging machines; steam hammers; hydraulic pumps and presses; flour mill machinery; brick-making machines; dis-integrators; pumps of all types; turbines and waterwheels; cranes of all types; winding and hauling engines; elevators; weighbridges; electric fans and blowers; forges; grease ex-tractors and feed water filters; lifting jacks; fire engines; hopper barges and dredges; tip wagons; iron sheds; roller paint mills; storage batteries; electric lamps, wire and cables; steam pile drivers; artesian well boring apparatus; valves and injectors.

The most powerful electric pump in America has just been started at the McTavish St. Pumping Station, Montreal. It is driven by power from Shawinigan Falls, Que.

## A NEW GOLD DREDGE.

A new style of gold dredge, says the Mining Review, is being built in Seattle by the Washington Iron Works and the Puget Sound Machinery Depot for the use of the Bachman Gold Dredging Co., of Pasadena, Cal., on streams in the Mount Baker District, State of Washington. It is claimed for the proposed dredger that its construction and operation is to be on lines entirely new in subaqueous gold mining. The following particulars may be of interest to those engaged in this branch of Canadian mining industry. The mechanism of this dredge is unique, a combination of the well-known chain bucket system and a powerful direct-action plunger pump. The pump is especially designed for pumping granular matter, and is the invention of James Bewsher, of Seattle. The chain buckets will be operated to bring the boulders and coarser gravel to the surface, where they are disposed of, while the fine sand, gravel and gold are all taken in through the suction pipes and delivered to the sluice boxes on board the dredge. It is claimed for this pump that it will lift and carry gold in any form in suspension as easily as it pumps fine sand, and that it will save all of the bed-rock gold, practically all of which is now lost under the old method of bucket dredging. The most interesting feature in this new departure in mechanics is the fact that the granular matter is passed through the chambers of the pump without injury to the plungers or other wearing parts. As a dredging pump for all purposes great efficiency is claimed for it over the centrifugal pattern now in general use.

## ANSWERS TO CORRESPONDENTS.

W. H. P.—Gold Rock, Ont.—Certificates of qualification for the work of a stationary engineer are granted in Ontario by the examining board of the Ontario Association of Stationary Engineers. Examination papers and other information can be obtained from Walter G. Blackgrove, Registrar, Ontario Association of Stationary Engineers, P.O. Box 531, Toronto.

J. E. B., Toronto.—A good ready made metal cement is made by the Smooth-On Mfg. Co., Jersey City, N.J. When properly mixed with water it "metalizes" and slightly expands during the process, giving very good results.

A correspondent at Regina asks us to define the technical meaning of the word "gumbo," as applied to a certain class of soil; the difference between gumbo and clay; and if it has any distinguishing features, or if it is a term applied to material which it is hard to excavate.

The word gumbo was, we believe, first applied to a kind of soup thickened with the mucilaginous pods of the okra, and used by the negroes of the Southern States. From that it came to be applied to the clay of the western prairies, which is described when wet as the stickiest mud on earth. Burnt gumbo is sometimes used for surfacing roads, and such a road is never muddy, that property being lost in the burning. It is said to make a smooth, hard and comparatively dustless highway on which no vegetation can grow.

E. M., Quebec.—Match machinery is usually not patented, but is got out by match manufacturing concerns, or invented especially for them, and kept secret as far as possible, so that you will not be likely to get much information outside of these firms, unless you strike an inventor who is getting up some new type of machine. We have given you privately the address of a man in Canada, and three firms in the States who make this class of machinery.

T. M., Johannesburg, Transvaal.—We are sending by letter the address of a Canadian company which we believe will be able to compete with the United States Steel Trust in the goods you require.

J. K. S.—A very good account of the progress of cement manufacturing in Canada, with information on the cement trade appeared in the report of the Bureau of Mines of Ontario for last year. Address Bureau of Mines, Parliament Buildings, Toronto.