the Standard Insurance Company's building in Montreal.—The Brockville Navigation Company have awarded a contract to the Polson Iron Works Company to build a large passenger steamer, to cost \$10,000.

QUEBEC, QUE - Cote & Lamonde will build a beer vat, 83 × 32 feet, for the Anyot & Gauvin brewery. The masonry will be of stone, and the building will cost \$4,000. -The woodwork contract of the Frontenac annex has been awarded to J. H. Gignac.—Harry Staveley has prepared plans for a mill to be built at Etchemin for Mr. Edson Fitch, to be two stories and 63×33 feet. Contracts have been let as follows: Masonry, Joseph Conture; carpenter and joiner's work, Olivier Michand; estimated cost, \$12,400.

MONTREAL, QUE.—Robert Findlay, architect, has let contracts as follows for seven semi-detached residences, corner of Prince Arthur avenue and Chesterfield street. Masonry, W. Owan; bricklaying, P. Wand; other trades not let.—Gamelin & Huot, architects, have accepted the following tenders for two three story houses on Park avenue. St. Henri, for Jos. Lemoine. Masonry, Alp. Charest; carpenter and joiner's work, E. H. Marsan; plumbing and heating, Jos. Deslauriers; bricklaying, Jos. Lantet; plastering. S. Gosselin; painting and glazing not

SHERBROOKE, QUE.—Tenders for the construction of a new iron bridge over the St. François river to replace the Aylmer bridge were received as follows: Pittsburg Bridge Co., \$12,174, weight 268,000 pounds; Edge Moore Bridge Co., \$12,746, weight 310,000 pounds; King Bridge Co., \$14,400, weight 340,000 pounds; Vermont Construction Co., \$12,000; weight 290,000 pounds; Dominion Bridge Co., \$8,386, weight 284,000 pounds. The contract will likely be given to the Dominion Bridge Company.

BUSINESS NOTES.

George E. Welsh, painter, has commenced business at Kamloops, B. C.

R. Donaldson & Son, iron works, Monreal, have been succeeded by the Phoenix Bridge & Iton Works.

David King & Co., plumbers and sanitary engineers, Halifax, N. S., have changed the firm name to Crump &

The assets of the estate of Kline, Mayor & Keith, granite and marble works, Hamilton, Ont., are being offered for sale by the assignee, Mr. W. F. McGivetin. Tenders close January 17th.

PILE TRESTLE BUILDING.

A rapid method of building a pile trestle on the Iowa and Dakota division of the Chicago, Milwaukee & St. Paul Railroad was thus described by Mr. A. J. Hart at the late convention of employees of the bridge and building departments of that road:

The floor was laid in four lines of 32foot stringers, breaking joints at each of the pile bents, 16 feet apait. Thus two of the stringers projected over the last bent 16 feet, and we would run the driver over the cap on these stringers far enough to reach ahead 16 feet. We handled all of the material with the pile-driver. From two to four men were kept on the ground all the time to shift the staging and raft, when we had to use one. Our arrangements for staging were very convenient, consisting of four large staples or dogs 16 inches long, which were driven into the outside pile, and a 3 x 12-inch plank, which we would slide from one bent to the other

as required. By the time the last pile was driven in the bent the others had been sawed off to the proper grade, and while the driver was gone for the cap the pile was sawed ready for it, and the driver would drop the cap in place and go back for the stringers. We would then make a hitch a little past the centre of a stringer, letting it hang perpendicular in the leaders, and when in place one man would take hold of the lower end and carry it back to the next bent as it was being lowered to its place. When the stringers were in place the driver would go back for the ties, taking 10 or 12 at a time. In 11 days of 24 hours each, or 264 hours, with two pile-drivers, four foremen and 64 men, there were driven 196 pile bents, 92 bents blocked, 32 bents framed, and floor put on 298 spans, making 4,768 lineal feet of bridge constructed.

PAINTS AND THEIR VAGARIES.

Every paint user knows that for a painted surface to be successfully accomplished, great care and attention have to be exercised in the selection of one of the materials used. It is pretty generally acknowledged that when a man has failed at any other trade he can wield the brush as a painter. This wielding of the brush is a very simple matter of manual labor only-one which requires but little skill, and capable of being performed by any one of average ability. But it is not everybody who wields a brush that can or does understand the nature or vagaries of the paint he is using. The conditions of use are so diverse that it is only the skilled craftsman-the man who has been a painter by trade all his life - who can give a rational explanation of any defects in a painted surface. What causes blisters in paint? What causes the colors to sink in? What causes paint to remain soft underneath while the exterior surface is bone dry and fairly hard? What, in fact, causes any and all of the "deviltree" a painted surface exhibits six months after the paint has been laid on? The jobbing hand, the nondescript sort of fellow, who has tried every trade and failed at all, cannot tell his employer why the paint he has laid on exhibits the above mentioned, or any other defect. It is only the "old hand," the skilled workman, who can offer an explanation. But even with him the explanation offered is not always the correct one. It requires the aid of the chemist as well as the craftsman to interpret all the reactive changes that a coat of paint undergoes. It is the writer's purpose, therefore, to explain the nature, qualities, reactive changes that occur in the paint-pot and the coat of paint laid on the surface of any material. In the present paper the question of the sinking in of colors will be considered. Before doing so, however, it will be best to explain the actual composition of this complaint called "paint."

Essentially, a paint is composed of linseed oil, pigment, driers, and turps. The oil used is generally boiled oil-that is, the raw linseed oil has been subjected to

(Continued on page 4).

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THE PROTESTANT INSANE ASYLUM, Verdun, near Montreal.

THE GRAND HOTEL, St. Hyacinthe, Que.

THE NEW CUSTOMS-APPRAISERS STORES, NEW YORK, now building, which will consume 5,000 tons.

THE PARLIAMENT BUILDINGS, OTTAWA, portion of which was recently destroyed by fire and rebuilt.

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