

practice now described as peculiarly American, and it is a question whether they can be entirely exonerated from blame in this connection even yet. Mr. Boyle calls attention to several complaints made of furniture imported from across the Atlantic. "Even in the ordinary English furniture," he says, "the carving, though it be machine work, is cut out of the solid wood, and is not scroll work 'stuck on' to the furniture, as is often the case with American furniture sent to England." Another important matter referred to by Mr. Boyle is that "The English people speak of American furniture as being varnished and of their own as polished. The polish on American furniture is much glossier than the polish on English furniture, but it scratches very easily and the scratches show white, owing, it is said, to certain gummy component materials which give hardness and the glossy surface. The American polish is put on, so it is claimed here, with a brush, or, as is technically known, 'floated on,' while the English polish is rubbed in. The American polish is like a coating of glaze on the surface of the wood, while the English polish is partly absorbed in the grain of the wood." There is also room for improvement in packing the goods so that they will appear in the shop without mark or stain to indicate the long distance they have been shipped.

HIDE PRICES SINCE CONFEDERATION.

Few commodities, if any, have undergone more severe fluctuations in value during the past thirty years than hides. There are several forces at work which tend to make the hide market uncertain. In the first place, hides are a by-product and the supply of beef hides is regulated, not by the demand for hides, but by the demand for meat. When tanners are anxious to increase their out-put and want raw material, it often happens by reason of conditions in the meat market, there is only a limited quantity of hides to be had. The contrary state of affairs is just as likely to exist within a few months' time, viz.: an excessive take-off of hides and a moderate demand on the part of tanners. The hide market has always "been subject to influence," and between the operations of Chicago speculators and the insane jealousy of Toronto and Montreal merchants, it has often been that green hides were quoted—and sold—in Canada at a considerable advance over their normal worth in the tanners' vats.

These conditions may contribute somewhat to an explanation of the violent fluctuations in the price of hides in Canadian markets since confederation. From an average price of 9.6 cents per pound paid butchers in 1880 to 3.1 cents per pound in 1894 there is a difference that cannot be explained by the changing of the conditions of the shoe and leather trades. The decade beginning in 1884 was a disastrous one in the hide trade. Merchants were constantly selling on a declining market, which is never a profitable business. The almost unbroken record of falling prices was checked in 1895 and since that time values have improved. The upward course was at first slow, but in the latter half of 1896 a movement set in which brought hide prices to their present basis, which if continued during the year will be, in point of high prices, exceeded by only three years, 1872, 1880 and 1881, since confederation.

The firm situation in Canadian hide circles at present, is largely the result of the United States tariff, which has had the result of raising prices in that country, and from the western States Canadian tanners have hitherto drawn large supplies. Imports from the United States into the Dominion have declined more than fifty per cent., and purchases made in the United Kingdom have neither in

price nor quality satisfactorily replaced the American hides.

We give a table of the prices paid Toronto butchers for cow hides since 1868:

Year	Cents per lb.	Year	Cents per lb.	Year	Cents per lb.
1868....	5.66	1878....	6.8	1888....	5.5
1869....	6.17	1879....	7.2	1889....	4.7
1870....	7.4	1880....	9.6	1890....	5.6
1871....	8.0	1881....	8.8	1891....	4.9
1872....	8.9	1882....	7.8	1892....	4.5
1873....	7.6	1883....	8.4	1893....	4.2
1874....	7.5	1884....	8.2	1894....	3.1
1875....	6.2	1885....	8.2	1895....	5.5
1876....	6.	1886....	8.4	1896....	5.68
1877....	7.6	1887....	7.0	1897....	7.8
				1898....	8.6

MODERN BRIDGE BUILDING.

Recurring to the subject of our last week's paragraph respecting the Cornwall bridge disaster, the matter is one which should not be allowed to pass without further comment. The gradual undermining of the pier of this bridge by the current was, in the opinion of New York engineers, the cause of the disappearance of the pier and the fall of the spans it supported. Considering the rapidity of the current of the St. Lawrence at this spot, five to eight miles per hour at different times, it is said, and considering the weight the pier was intended to bear, the question arises: were precautions enough taken to ensure its safety?

In such structures the important thing is to obtain a secure foundation for the supporting piers. To get down to rock or into firm clay and to build upon a horizontal bed of rock or clay is the aim of a careful engineer. The dangerous scouring away of earth by a current of water is always to be guarded against. Capt. Eads, while building the St. Louis bridge, discovered that in the freshet of 1870 the scour of the Mississippi current reached a depth of 51 feet alongside the side of the east pier; he therefore carried his piers and abutments *on the rock* to a depth of 110 feet from the surface of the water. And in the building of the Victoria Bridge, twenty years before, not only were extreme pains taken to get secure foundations for the stone piers, but in their structure iron rails and rods were used to bind them together in order to their greater strength and resisting power. Here are instances of great expenditure of time and money to get a perfectly safe sub-structure, but the piers thus built have endured.

There is room for grave doubt whether in the case of the Cornwall bridge sufficient pains were taken to guard against scour of current. A fear of expense appears to have deterred the builders from doing their whole duty in the premises. Whatever may have been the design of the pier the workmanship of it appears to have been faulty. We see by cuts in various papers that the cofferdam was imperfectly placed, and we are informed that it was not tight when the concrete was deposited in it. If the latter be true it will account for the instability of the structure, for the cement and sand would be washed out of the mass forming the concrete. Again, if the cofferdam was placed on a bed of sand and boulders overlying clay, the current would soon scour out any friable material lying between the cofferdam and the solid rock. The method pursued in several particulars lends force to the contention of "Constructor" in his letter printed on page 440, that there is creeping into modern American railway construction a mode of procedure that sacrifices safety to a false and dangerous saving of money, namely, the substitution of an inspector, cheaply obtained, for a thoroughly competent engineer. And, as a result of this,