

made at Toronto, Ohio, commenced to crack at a pressure of 14.92 lbs., and another pipe of same size and make broke through under a pressure of 17.22 lbs. per square inch. Mr. M. M. Buckley, Mayor of Niagara Falls, Ont., informs us that he has had considerable experience with Hamilton pipe: that it has given "entire satisfaction," and that it compares favorably with any imported pipe, being equal in usefulness and durability, and much cheaper." The Mayor of Owen Sound, Ont., says:—"We have used sewer-pipe of both Hamilton and St. John's make, and they have given entire satisfaction." Mr. William Craddock, Street Surveyor, Chatham, Ont., says:—"During the year 1887 we used 8000 feet of Hamilton pipe, and I unhesitatingly say I consider it superior to any American tile I have seen, both in appearance and strength."

Mr. Robert Carroll, who is one of the largest dealers in sewer-pipe and similar goods in Toronto, and who has a large experience in the business, says:—"My experience as regards the relative merits of Scotch pipe and that manufactured by the Standard Drain-Pipe Company of St. John's, Que., is that the Canadian article is much to be preferred to the imported article. Comparing the relative thickness of the two, it will be observed that in the construction of the Standard pipe the thickness is governed by the size. Thus a 12-inch pipe is 1 inch thick, a 9-inch pipe is $\frac{3}{4}$ -inch thick, and a 15-inch pipe $1\frac{1}{4}$ inches thick, always having extra heavy sockets and double thick shoulders. The sockets are always wide enough to easily receive the fitting pipe, leaving abundant space for the cement. They are well-burned, vitrified and glazed, and well-finished; while such Scotch pipe as is now being used in Toronto is of inferior quality, under the scale as regards thickness, of coarse texture, very porous, poorly glazed on the outside, and devoid of glaze on the inside where most needed to resist the action of sewer acids, and deceptive in having the inside smeared with a useless coloring in weak imitation of glaze."

All this testimony is clearly in favor of Canadian pipe—certainly not against it; and the discussion of the matter has elicited the fact from a large number of experts in different parts of the country, that Canadian pipe is the equal of any ever brought into the country.

Letters bearing on this matter from Mr. Trotter, of the Standard Drain-Pipe Company, and Mr. Carroll, of Toronto, in another page, explain themselves.

TWENTY-TWO YEARS UNDER PROTECTION.

THE railroad system of the United States, as developed under the operations of the protective tariff of that country, is an interesting study in which Canada is interested. Mr. Henry V. Poor, editor of *Poor's Manual of Railroads of the United States*, who is accepted authority on railroad matters, has recently published a pamphlet entitled, "Twenty-two Years of Protection," which is a very exhaustive review of the financial history of the United States, in which is demonstrated the fact that the remarkable industrial progress there during the last twenty-two years has been chiefly the result of the protective policy which has prevailed during that period. The introduction is a historical sketch of the efforts of the British North American colonies to create manufacturing industries to supply their wants and render themselves indus-

trially independent of the mother country, and of the persistent efforts of the English Government to destroy such industries by prohibitory laws. The great cause that led to their rupture with England was the determination of the Colonists to establish an industrial as well as a political independence, the former being the essential condition to the enjoyment of any considerable degree of prosperity.

Part I. covers a period of forty years, extending from the formation of the national Government. The first act of the new Government, to carry out the great object of its formation, was for "the encouragement and protection of manufacturers." This act, as a precedent, was carefully followed for forty years, the sum of all legislation of the kind during such period being to give full and complete effect to it. Throughout this period the North and South acted in entire harmony. General Jackson, when in the Senate of the United States, was a high-tariff man, voting for the act of 1824, and ran as such for the Presidency. He was also a warm advocate of internal improvements.

Part II., extending from the end of the first period to the close of the war of the rebellion, covers that in which the work of the fathers was overthrown, the assault upon it being followed by one upon the national government itself. The first assault was directed against the tariff, on the ground that the South, which blindfolded labor, could derive no advantage therefrom. It was against the Tariff Act of 1832 that South Carolina directed her first ordinance of secession, to take effect unless the United States speedily modified the tariff laws by large reductions in the rates of duties. Had not the nation then retired before a State armed to the teeth, the second assault upon it—this time prompted wholly by slavery—would never have been ventured upon. The right of secession was virtually established by the Compromise Act of 1833. Free trade, or secession, as the alternative, became the dogma of the South. The party embodying one, or both, was the Democratic party, which was first heard of, and first organized in 1832. From its origin this party was incessant in its declaration of the right of any State, upon its own motion, to secede from the Union. The period of its domination was consequently the most disastrous in the history of the country. Every person entering upon any enterprise or industry had to take the chance of an assault upon the Government for the purpose of its overthrow, that assault being made a second time upon the election of Mr. Lincoln in 1860.

Part III. covers the period from the final overthrow of the rebellion to the present time. The most important result of the war was the vindication of the paramount power of the national Government—an attribute always denied to it by the Democracy. The first act of the new nation, as it may be called, was to restore the work of the fathers, among which was the establishment of a rigid system of protection. Under the new Government the people could embark upon any enterprise or industry, certain at least that they were living under a permanent form of government, and under the rule of laws not subject to sudden or violent change; that their flank and rear were well guarded, so that if one failed of success in any undertaking it was his own fault. The result is the most wonderful progress made in the world's history. In a period of twenty-two years the amount of the internal commerce of the country in-