at fault, but the result may be found in the shafting, or other intermediate transferers of the power. Generally, in such a case, the belts are examined and their condition assumed for the imperfect transmission of the power from the prime mover.

The condition of belts is a very important point in all manufacturing, but more particularly in mills where a steadiness of motion is a desideratum, and attention to them will save many dollars in the course of a year; but there are other as important elements which are not always taken into consideration, and the principal one is the condition of the shafting. A line of shafting running perfectly true, without jumping or jerking, turning smoothly and noiselessly is a delight to the mechanical eye; and the first thing always examined by a thorough millwright when he enters a mill, is the shafting.

Perhaps there is nothing will strike a person who has been out of the milling business for some time so much as the change in the system of bolting. This is caused by the numerous separations, and it is in this the whole secret of gradual reduction lies.—*Ex.*

A Nitro-Glycerine Factory.

Near the village of Tweed, Canada, and at the water's edge of Stoco Lake, is a fair-sized, unpretentious, isolated wooden building, the appearance of which would cause a stranger to inquire why such a good building, was erected in such an isolated locality, and why it was so closely guarded, as a solitary watchman, day and night the year around, checks the steps and inquires the business of the curious as they stray near. As the eye passing upward reads "Nitro-glycerine factory—very dangerous," in big letters above the door, the use for which the building is intended and the necessity for watchful care over it is apparent. At the door were seen lying iron casks sheeted inside with lead, and in these casks are imported the pure glycerine and mixed acids used in the factory.

A cask of mixed acid is hoisted by machinery to the upper story and dumped into a mixing tub, in which the mixing blades are moved by a crank turned by a man who is stationed in a tight box and has in front of him a thermometer. As the glycerine runs into the acid a vapor is engendered, in which life is scarcely supportable, hence the man turning the crank is stationed in a close box. The acid and glycerine in their admixture rapidly heat, and the compound has to be toned down by cold water or ice, hence the greatest watchfulness is necessary at this point; as the heat is allowed to run up to 80 degrees, and as nitro-glycerine explodes at 90 degrees, there remains but 10 degrees of heat between the known and eternity, or, as the manager remarked, if the heat was allowed to run up to 90 degrees they would not have time to pucker their mouth to say good by.

It is needless to say that, while the work is going on, strangers are never allowed to enter the building, as it is necessary that every man should have his individual attention at such time upon his work. "Strict rules govern our men," remarked the manager, "as the least venture at experimenting would leave no one to tell how the accident happened." The nitro-glycerine thus manufactured has an explosive force ten times greater than that of blasting powder, and is used on very heavy work, but we sell very little in that shape, remarked the manager, as it is run down a tunnel to the room below, where it is manufactured into dynamite, dualin, or vigorite, all of which have nitro-glycerine as their basis, but are known by different names to designate the degree of power. As rapidly as possible, the nitro glycerine is mixed with charcoal, wood pulp, or other mixtures, and reduced into a commodity more readily handled; for although dynamite is understood to be extremely dangerous to handle, it is rammed into the cartridges with a stick, with as little apparent fear of the result as would be the case were the substance so much dirt.

The cartridges are made to hold from a pound to two pounds each, and are carefully packed each day and taken to an isolated magazine owned by the company. The output of the factory is about 1,000 pounds daily now, but the owners expect shortly to increase the capacity to meet the requirements of a rapidly increasing demand, as this is the only factory of the kind in Ontario, and the development of the mines has rapidly increased the demand, as blasting with powder has been almost entirely superseded by the use of dynamite, which is not only more efficacious but also safer to handle. The manager remarked: "I have to pay my men large salaries, although the work is comparatively light, as a very slight accident would put them out of the way of drawing their salaries. I have worked at the business for the past seven years, and own a mill at Algoma as well as this one here, but in this business life is the result of vigilance."—*Manufacturers' Gazette.*

Trade in British Columbia.

The value of exports from the port of Victoria, B C., in the year ending June 30th, 1883, was $2,982,993, an increase of $211,123 over the preceding year. The principal items of export were the produce of the fisheries $1,321,522, of the mines $1,309,646, and animals and their produce $286,960. The only agricultural product was hops. In individual items the export value ranked thus: Salmon, canned, $1,151,081, coal $674,208, gold $631,648, marine furs $123,804. In the calendar year 1882, the value of the fisheries reached $1,842,675, an increase of $388,353 over the preceding year. The value of the vessels, nets, and other implements employed is computed at $229,670, while the valuation of the salmon canneries and other fishing stations along the coast reaches $402,000. Employment was given during the fishery season to 5,215 fishermen and other persons. Twenty canneries were in operation last year, of which thirteen are situated on the Fraser river, the other seven being at various points along the northern coast as far as the boundary of Alaska. The establishment of other canneries is in contemplation, and a steady enlargement of this important industry is looked for. The herring fishery has not been extensively prosecuted up to this time, but the outlook for the future is more promising, the Inspector of Fisheries reporting an increase of business at Burrard Inlet, an eager demand for British Columbia herring having arisen in Australia. The oyster business, we are told by the Inspector, has made little apparent advance, but two new applications for leases of beds for oyster culture have recently been granted. The value of imports at Victoria in the last fiscal year was $3,388,041, of which $2,821,744 were dutiable and $429,211 free goods. In addition there were imported from Eastern Canada goods to the value of $522,147.

Preferred Creditors.

Investigation of the more important of the recent failures in this city and Boston shows that a very large proportion of the aggregate assets had been secured in advance to preferred creditors, leaving very little property for the creditors who were not preferred. There is no law to prevent this species of swindling, but there ought to be. The National Bankrupt Law which was repealed a few years ago, prohibited preferences, but it was so complicated and expensive that it used up almost everything, leaving little or nothing for creditors. Our State insolvency law has a preference clause, the elimination of which by the Legislature has been urged by the Chamber of Commerce. But a better way to overcome the evil would be to enact the amended Lowell draft of a National Bankrupt Law. That would place all creditors on an equal footing. As the case now stands, merchants and manufacturers are at a loss to know to whom to grant credit.

A purchaser may show assets largely in excess of liabilities, but such a showing is worth nothing if the bulk of the property may be passed into the hands of friends or relatives in the advance of failure. In view of the recent fraudulent practice of preferring creditors it is no wonder that confidence, so necessary in business, should be seriously impaired, that creditors should have become suspicious, and that all classes should suffer the consequences. Honest business men should move in self defense for a National Bankrupt law.—*Shipping List.*

The Coming Railway Ticket.

A new kind of railway ticket is coming to the front. It is best explained by taking the Grand Trunk as an example. That road goes to work and it prints a book of tickets containing 1,000, or 500, or 100, or 50 tickets, twenty on a page, and each ticket good for one mile. These little tickets are smaller than postage stamps, 20 on a sheet and perforated. You can buy two, twenty or a thousand of them and pay for them a fixed rate; and the company on its part is bound to accept one of them for every mile you travel. You will not require to tell the ticket seller where you want to go; you will say give me a hundred miles, or twenty miles, or a thousand miles, and get on board and give the conductor enough of the little squares to carry you to your destination. There will be then no such thing as lay-over tickets, or trouble in getting tickets changed, or loss through tickets not used—these little tickets will be as good as money and always current. The road on its part will be duly protected from scalpers and the like. The new system has received the endorsement of the better class of passenger agents, of travellers, and has been adopted on several western roads already.