

of watchmaker's apprentices, and by personal contributions of money and tools, as well as energetic work in its behalf, the school flourished and led to the establishment of several in other parts of Europe; among which may be named those at Geneva, Chaux de Fonds, St. Imier, Biemme, Neufchatel, Flourier, Soleure and Glasshutte. The school at Geneva was founded in 1826. In 1842 it was taken possession of by the city, and has a yearly budget of 48,000 francs, from which 4,000 francs are deducted. Each pupil from the city pays five francs, and outsiders pay twenty francs per month as school money. Foreigners have to pay the same amount as the others with the additional fee of 100 francs entrance money. Pupils are received into these schools after their fourteenth year, and must remain four and one-half years. They first enter for one year for raw work, when they learn the manufacturing of the single chief component parts. They then pass nine months in the class for mounting the wheel works, and an equal period in the class for the winding up and for the repeaters; the next year is devoted to the study on escapement, and the last year for final revision. Beside the practical hand-work, the study of mathematics, machinery, drawing and physics constitute the chief branches of instruction, in which the pupils are aided by the professors in their best methods. There is also a special technical school at Chaux de Fonds in which from 150 to 200 pupils especially devoted to the art of decorating are provided, and this is a very important branch in the watch industry.

No other industry in the world has such a fixed system for regulating its work as the Swiss watch manufacturers. Sixty distinct masters are occupied with the manufacturing of the different parts of each single watch, and this is so divided that each workman manufactures throughout the year the same piece—for example, the hands or certain wheels—and by this means the workmen attain peculiar ability in their special work. Their former simple and primitive tools have been metamorphosed into the most complicated machinery, and their ability to perform work is enormous both as to quantity and quality. They generally work at home with the help of the members of their family, and then sell these finished component parts to the big manufacturers, under whose superintendence the watch is completed. Although these different parts are procured from different shops, they fit exactly together because they are made after one and the same number, measure, rule and system. Seventy thousand persons are now employed, but the production cannot be estimated exactly. A half million watch cases are made, and the whole production, including those sent abroad, amounts to at least a million pieces, representing 100,000,000 francs."

The question is if these schools have

done so much for European countries, what would they do for Canada? Is the idea practical, and if it is who will put it into shape?

### COMMUNICATION.

The Editor does not hold himself responsible in any way for the opinions expressed by correspondents.

Ottawa, June 17th, 1892.

The Trader Publishing Co., Toronto.

GENTLEMEN.—I notice in your June issue a paragraph devoted to the case of Ellis vs. Freudenberg. I trust that you will allow me space in your journal for a few words in reply, as no doubt something in self defence will be expected from me by your readers, especially by those who do not know Ellis & Co. as well as I, or the facts of the case. I positively deny taking all available funds with me on my leaving for Germany—on the contrary, I deliberately left sufficient funds at the disposal of my wife, who had all along assisted me in the management of my business, to meet the only accounts that would mature before my return, and the charge that I took with me some of my stock is also a false charge. I took no stock, and the judgment of the Court does not sustain such charges, and I here state publicly that at the time the attachment was issued I was not indebted one cent to Ellis & Co., or to any of my creditors, as is shown by the schedule of my liabilities now in Court, and had I been fortunate enough to have had my application made at an earlier stage, it must have resulted differently. I need make no comment upon the part of the paragraph that states I should have notified my creditors before leaving, &c., as it is simply consistent in the absurdity with the rest of the paragraph. I have suffered great damage at the hands of Messrs. Ellis & Co. and their two willing instruments in this city, but I hope by close attention to business a business will soon be built up that will be lasting monument to the shame and disgrace of him who one day entered and left my store as a friend and well-wisher and the next morning put in the Sheriff and gutted my store, leaving my wife and family in my absence helpless, without means of support.

Yours respectfully,

E. FREUDENBERG.

Mr. DUCHESNE, in a late session of the Academie des Sciences, Paris, proposes to substitute pivots made of iridized platinum, in place of common steel pivots of chronometers.

### Selected Matter.

#### WORKS OF ART REPAIRED.

ANCIENT AND MODERN DAMAGED BRIG-A-BRAG TURNED OUT AS GOOD AS NEW.

The sign over the doorway presented the occupant of the building to the world as a "Repairer of Art Treasures," and the samples of large damaged vases, broken bronzes, and dilapidated armour displayed in the ample windows gave promise of interesting matter within. And, in fact, the establishment appeared to be a vast and mysterious repository of damaged art, such as even Little Nell and her grandfather would have wondered over.

"You see," the proprietor said, "we get a great variety of goods for repair after the May movings. Many people are careless in handling works of art, and some of the finest of them are the most fragile. Here is a noble piece, or pieces rather, of Dresden ware, which will be repaired into a large and elegant *tazza* when we get its hundred or more fragments together. How people can possibly make so thorough a smash of a thing, I cannot understand. It is true they might throw it against a wall, or drop it out of a third-storey-window to the sidewalk. We get many things as bad as this, and some that are worse. This other group is also badly broken up. In statuettes like this, the neck is almost invariably snapped. Heads, hands, arms, and fingers oftenest need our services; legs are next in the order of accidents.

"Can we repair noses? Well, I will show you an example in point: tell me where this one is joined to the face. You cannot perceive it? You pay us then a high compliment. If you could detect a blemish we would not be good repairers. You may see a trace of our handling with this magnifying glass, but not otherwise. It is one thing to stick on a nose and quite another to repair it artistically. The two historical noses that stand fixing up the best and oftenest are Washington's and Wellington's. Owing to their prominence, you understand, they are easiest broken, but thanks to their size and substance they are the most satisfactory to repair. It is lucky for the Asiatic and Egyptian idols which are now so plenty here, they have mostly flat noses; it preserves their integrity, and saves us much work with the file.

"In large breakages we often have to