

go on exploring the way in advance of actual practice?

The comparatively great power of the small Brantford engine, is due to the practical application of certain laws and conditions which have been too frequently overlooked or neglected. Every engine is built with special reference to the nature as well as to the amount of its work. Steam is used expansively, with the cut off and double valve. Every provision is made for securing perfectly dry, superheated, and, as Mr. Waterous calls it, "vital" steam, to enter the cylinder under such conditions as are most favourable to the conversion of all its force, which the laws governing it render possible, into work. The quantity of steam admitted is comparatively small. The stroke of the piston is short and rapid—conditions which they have long observed, and which are admitted to be indispensable to economy. The small quantity of steam required, enables the engineers to use boilers very much smaller than those we have been accustomed to, besides which they impart to them greater efficiency by their conformation and mode of heating.

We know there are many excellent machinists and engine builders in this country, and some of them may have improvements not sufficiently known, if so, we offer our columns freely for discussing their merits. The great object of this journal is to disseminate that kind of knowledge which is most conducive to the best interests of the country, taking care to keep our readers well posted in all improvements at home and abroad.

At this juncture, more than at any former period of our history, it behoves every man to contribute whatever of intellectual or material he may possess to the general good.

To contribute, however, does not always mean to give something for nothing; but let him bring his knowledge or his skill practically before the country; and if it be suitable, and required, the laws of supply and demand will take care of his interests.

#### NEWSPAPERS FOR READING ROOMS.

The Directors of the Toronto Mechanics' Institute are desirous of disposing of a number of the newspapers taken for their Reading Room, as they are exchanged for the current numbers. Thus, the New York World of Monday arrives in Toronto on Tuesday, and is removed on Wednesday to make room for Tuesday's paper—the Monday's number may be immediately sent away to any party subscribing for it. This we conceive to be an excellent plan, inasmuch as it will afford many parties an opportunity of purchasing expen-

sive papers at a greatly reduced price. Particularly will it assist Mechanics' Institutes in the country to do so. On reference to our advertising columns a list of the papers, with the prices at which they are offered, will be found.

#### MR. LUKE'S SPIRIT OF TURPENTINE.

In drawing attention to the various specimens of spirits of turpentine shown at the last Provincial Exhibition, in the city of Hamilton, we remarked in reference to that submitted by Mr. Luke, of Angus, that "we were assured that it answers the purpose of the painter very well for common work." Mr. Luke has handed us a certificate, of which the following is a copy, and which we cheerfully publish:

"Hamilton, October 3rd, 1864."

"I hereby certify that the sample of turpentine offered to me for trial by Mr. M. C. Luke is a good article. I have experimented with it in Messrs. H. G. Cooper and Co's (Carriage) Manufactory of this city, in a variety of ways, and it operates to my satisfaction in every respect.

(Signed) "CHRISTOPHER F. DONOVAN,  
"Carriage Painter."

The above was also endorsed by Mr. C. Cooper, Carriage Painter. If it has thus been proved suitable for carriage work, it will no doubt be equally so for any other good work.

With respect to the peculiar odour of this turpentine, Mr. Luke thinks it is owing to the kind of wood it is obtained from, and not to the mode of distillation, as previously suggested. The other samples are obtained from white pine, Mr. Luke's is from the red pine, some specimens of which—completely saturated with the gum—are now in our rooms.

We would suggest to parties using spirits of turpentine in considerable quantities, that they should give the *home made* article a trial. As a people we will never be really prosperous, until we learn to manufacture for ourselves, and to use such manufactures in preference to the imported article, wherever it will answer our purpose to do so.

Samples, and information in reference thereto, from any manufacturers other than those already referred to, will be gladly received, and publicity given to them.

#### TO SUBSCRIBERS.

We again beg to remind subscribers who are in arrear, and whose accounts were furnished in the December number of the Journal, that we need the amount due. Subscribers for 1865 are also respectfully requested to remit the amount of their subscriptions, in postage stamps or otherwise, as soon as convenient.