

## BELTING.

When a belt is running on a rounded pulley at a very high speed, centrifugal force tends to cause its edge to leave the pulley, owing to the strain upon the centre of the belt acting as a sort of natural lever. If, however, the belt be made pliable and very thin, and the pulley be nearly flat, the centrifugal force has a considerably smaller effect and the belt hugs its work. If more power be needed a second or a third belt should be added. It has been found that a second belt gives a gain of 100 per cent., and a third one a gain of about 170 per cent. By compounding the belts all the power of the engine is utilized, without any loss from slip. Another form of belt very useful for high speeds and great power is what is known as the arched-chain belt. It is made with a flexible centre, and is thinner here than at the edges. A better fit to the shape of the pulley is thus obtained. A chain belt has not so much tensile strength as a double or single leather belt when under a dead strain; but it runs with such a steady swing that for lifting power it will do more work than either.

## ONTARIO'S NORTHLAND.

Editor CANADIAN ENGINEER:

SIR,—We are so apt to fancy that we have seen all Ontario before we cross the parallel of  $46^{\circ}$ , that a few words concerning the region beyond may possibly be of interest to your readers.

The height of land dividing from Hudson's Bay is from 800 to 2,000 feet above sea level, and is a wide table land, filled with lakes and peat bogs, which serve as reservoirs to feed the mighty rivers that rise from them, flowing north to Hudson's Bay, or south to the Ottawa and great lakes. Both escarpments of the plateau afford splendid water-power, as well as a fine opportunity to reach its mineral wealth. This latter is improved by the fact that the lithological apex is considerably south of the watershed. The streams flowing south cut through the granite, and give splendid exposures of Huronian or Laurentian rocks along the whole escarpment. The corresponding edge on the north gives a similar one of Cambrian and Devonian—thus giving the prospector a grand opportunity, with comparatively little labor (save that of reaching it and returning).

The soil, when found, bears an abundant growth of white birch, poplar, and cypress (jack pine), suitable for making wood pulp; and its decay fills the lakes with the basis of a more carbonaceous peat than what is generated from sphagnum moss and grasses. Whether its superior heating power will make its manufacture profitable, has yet to be proven—I believe it will. Its position, on the highest part of the C.P.R. in Ontario, with the nickel of Sudbury at one end, and the silver of Port Arthur at the other end of the plateau, ought to make a ready market for it. It may be worked to advantage by water power to supply not only the C.P.R. engines while traversing the plateau, but supply the smelters, or, at least, the roast beds, with a reliable and inexhaustible fuel, after the pine is all swept off, as it soon will be. And why not treat the raw peat as pulp?

After extracting the coloring matters and mineral particles washed into it in the process of collection into the hollows of the rocks, it can be condensed by hydraulic pressure to any extent, and made into small vessels of many kinds. Then, by a judicious mixture of asbestos and plumbago with soapstone, mica, and other incombustible materials, a fireproof, unbreakable and possibly artistic delf might be evolved.

Algoma has farming land for a million settlers, also minerals, pulpwood, peat, building stone and coal to employ millions more. And we are standing at the portal of this treasure house, helpless to improve it for want of population and capital, while these are flowing into the country south of us, and we have to look to enterprising Americans for the development of these resources! Awake! ere too late, O Canada!

HOMO SENEX SYLVARUM.

## WHAT THE PRESS THINK OF IT.

THE CANADIAN ENGINEER is the name of the latest trade publication. It caters to mechanical engineering in all its branches. The first number is full of valuable technical information and contains a large amount of Canadian news of special interest to engineers, electricians and mechanical specialists.—*Toronto World*.

THE CANADIAN ENGINEER is a new publication issued from the offices at the corner of Court and Church streets in this city, and the Fraser buildings in Montreal. It is a monthly of attractive appearance, and gives evidence of care in the selection of the special articles and news items contained in the initial number. That there is a field in Canada for a well-conducted journal of this sort is shown by the large circulation of the American engineering journals throughout the Dominion. THE CANADIAN ENGINEER devotes much space to notes of engineering and mechanical development.—*Globe*.

THE CANADIAN ENGINEER is the name of a new monthly journal in the interests of the mechanical, marine and sanitary engineers, the manufacturer, the contractor and the merchant in the metal trades, with offices in Toronto and Montreal. Similar journals have succeeded elsewhere, and there is no reason why success should not attend such a venture here. The first number has been issued, and is a very creditable exhibit of the ability which lies behind it. It is very practical, and, besides a number of technical and illustrated articles, contains a large budget of news relating to the mechanical, mining and general manufacturing trades of Canada. We gladly welcome and wish it success.—*The Shareholder*.

The appearance of the paper is quite attractive, slightly copying the size and style of the *Engineering Record*, the reading matter being, however, made up in two wide columns of large type. The illustrations are elaborate, excellently produced, and have the merit of being devoted to practical matters of trade. There are in all twenty-eight pages beside the covers of thick paper. The publishers have gone into the venture expensively, and there is no reason why they should not win the appreciation of their advertisers and subscribers.—*Empire*.

THE CANADIAN ENGINEER, published at Toronto and Montreal, is the latest trade monthly to appear in Canada. Its initial number impresses one favorably.—*Hamilton Times*.

The initial number of THE CANADIAN ENGINEER has been handed to us by that enterprising journalist, E. B. Biggar, of Toronto and Montreal. The venture is floated by the Canadian Engineering Co., and the subscription is \$1 per year, published monthly. The "get-up" is creditable to the publishers and printers, and it is a puzzle how they can afford to give such a handsome periodical, printed on fine, heavy paper, at such a nominal price. The thirty-two pages which comprise the first issue are teeming with information, and will well repay perusal. The advertisers may congratulate themselves, as no doubt each number will be prized and bound in volumes at the end of the year; the advertisements will be found almost as attractive and useful as the literary selections, which are in every way creditable to the publishers. We hope it will meet with that patronage which it deserves, as it should be in the hands of every metal worker, producer, and distributor in Canada.—*Scottish Canadian*.

Of the many periodicals which Toronto boasts, and among the number of new trade journals which from time to time appear, we know of none that has made such a good showing for a first number as THE CANADIAN ENGINEER in its initial issue for the current month. The aim of THE CANADIAN ENGINEER is, according to its salutatory paragraph, "to be a means of advancing Canada in the path of mechanical and industrial progress." And its reason for its existence is to be summed up in the sound contention, that valuable as are the instructive engineering journals published in England and the United States, "they lack the element of Canadian news and of information bearing upon the special needs and circumstances of the country." That the new journal intends to give attention to Canadian affairs is apparent from the topics touched upon. There are leading articles on mica and its industrial uses; bog ores and the Radnor furnaces; comparative tables of the mineral products of Nova Scotia, and the metal imports of Canada; a list of Dominion Government contracts for the next twelve months; technical articles on oil-saving, on pulley-tightening, etc.; a letter upon "The Silver Mining of the Future," having special reference to Kootenay; a page or two each of mining matters, and railway and marine news. And the editor seems to have ranged the whole Dominion over for his long and condensed array of Industrial Notes. Then there are illustrated articles on various industries. A very fair indication of the respectability of the paper is to be found in the character and number of the advertisers.—*Monetary Times*.

Further extracts showing the goodwill of our contemporaries will appear in succeeding issues.