

The Canadian Engineer

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The Canadian Engineer.

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THE CONTRACTOR AND THE MERCHANT IN THE
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TO INTENDING ADVERTISERS.

The following extract from a circular recently is-
sued by the publishers may be of interest to intending
advertisers :

In asking consideration for THE CANADIAN ENGI-
NEER as an advertising medium, the most forcible argu-
ment we can use is a plain citation of its record. Since
it was established in May, 1893, as a 28-page paper, it
has been enlarged four times (being now 52 pages), and
the fifth enlargement in contemplation will make it
more than twice its original size. The first number
contained 45 advertisements, covering 8½ pages, includ-
ing transient announcements, while at the date of this
circular we have 153 advertisements covering 19½ pages,
without counting new orders in hand for the next en-
suing numbers. The steady increase in our circulation
has been one of the most remarkable, and to us and our
advertisers, the most gratifying features of the record.
The appended declaration from the company who have
the contract for our printing shows the progress of the
paper during the last nine months. To sum up, THE
CANADIAN ENGINEER stands to-day UNRIVALLED among
Canadian trade papers for the wide distribution and the
character of its circulation. Its subscription list is en-
tirely a bona-fide paid one (the only free copies being
to advertisers and contributors), and it is the only paper
which reaches both the men who own the industrial and
engineering establishments of Canada, and the men who
operate them.

To whom it may Concern :

TORONTO, Jan. 28, 1896.

This is to certify that the statement given below is a true ac-
count of the copies of THE CANADIAN ENGINEER we have printed

WATERWAYS OF CANADA.

BY THOMAS MONRO, PRESIDENT CANADIAN SOCIETY OF CIVIL
ENGINEERS; AN ADDRESS DELIVERED AT THE ANNUAL
MEETING, 15TH JANUARY, 1896.

(Concluded.)

With these necessarily imperfect prefatory remarks,
it is now proposed to make a few practical observations
upon the leading principles which it is believed should
govern the location of canals designed for the passage
of large vessels, and in the position of those in progress
or completed between Lake Erie and Montreal. Refer-
ence will chiefly be made, for illustration, to the works
of the Soulanges Canal, because an attempt has been
made to construct them in accordance with modern
practice, the writer having been left a free choice in
the design and arrangement of the structures, etc., etc.
He was really limited only by the general dimensions of
locks, etc., fixed by the Commission of 1870 for the St.
Lawrence route.

1. The disadvantages attendant upon an abrupt
change of direction, in a line of navigation of the di-
mensions of the St. Lawrence canals, are so great as to
warrant a large outlay in order to preserve as straight a
line as possible. Vessels weighing with their cargo about
3,500 tons, when under steam, even at canal speed of say
four miles an hour, have to be guided with the utmost
care to prevent accident. It is obviously easier to steer
where the line is straight, and where objects can be
seen some distance ahead, thus avoiding in many cases
running on the banks, and preventing collisions which
would otherwise be difficult to escape. The advantages
of a straight line are very manifest at night, when a
well lighted canal can be almost as easily navigated, at
moderate speed, as during the day. A gradual change
of direction, effected by curves of large radius, is, how-
ever, by no means objectionable.

2. But not only ought sharp curves to be avoided
—the dimensions of the prism should be uniformly
preserved throughout as far as possible. At bridges
the old practice was to place a pier in the middle of the
canal, with a narrow opening on each side of it. This
is a cardinal mistake, and can be easily avoided by the
adoption of a light steel superstructure, one arm to
swing over the whole bottom width of the canal (100
feet), leaving this free for navigation and the uninter-
rupted flow of the water. The pivot can be built on
whichever side of the canal may be deemed desirable,