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## ROTARY SNOW PLOWS

By H. H. Vaughan, M. Can. Soc. C. E.
TO BE READ BEFORE THE MONThly mEetinc. DECEMBER 19Th. 1912'
The development of the rotary snow plow has been chiefly due to Can adians and Canadian railways. This might be invidiously explained by the amount of snow which is supposed to fall in Canada, although as a matter of fact the difficulties experienced in dealing with snow are just as great on most of the roads crossing the Rocky and the Cascade Mountains in the United States as they are on those in Canada.

In both countries the rotary snow plow has been extensively used during the past twenty years, and it has proved so far to be the only effective appliance for dealing with deep drifts and snow slides that were beyond the capacity of the wedge or ordinary snow plow. The latter is still used extensively, and for drifts of moderate depth through which a reasonable speed can be maintained, it can be operated much more quickly than the rotary. When cuts are too deep, snow cannot be thrown out of them with a wedge plow, and in the case of slides the drift may contain rocks or trees, which would make the use of it exceedingly dangerous. The rotary plow can then be used to save the labour of shovelling out by hand, which would be the only resource, on account of its ability to encounter snow of any depth and throw it to a considerable distance on either side of the track.

The rotary snow plow was originally invented by J. W. Elliott, a dentist of Toronto, who in 1869 took out a patent on a "compound revolving snow shovel." This invention, shown in Figure 1, employed a wheel having a number of flat arms supported on a shaft rotating in line with the track. The wheel was enclosed in a casing shaped at the forward end to collect the snow, and flaring backwards to a cylindrical portion surrounding the

