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## Tree Planting for Railway Snow Fences.

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Tree planting is one of the methods of protecting railway cuts from being filled with snow. The snow fence commonly used is expensive and not entirely satisfactory. In a winter of heavy snowfall it often causes more snow to stop in the cut than if there was no protection. When the snow fall is light the snow fence is all right. Part of the Minneapolis, St.

the north and west sides, and three rows on the south and east sides; the outside row of willows, the second and third rows of cottonwoods and boxelder, and the inside row of green ash. Golden, laurel leaved, white and Niobe weeping willows were tried. Of these the laurel leaved proved the hardiest and it is the one that will be used principally in the future. It

of North Dakota and is very hardy. It is shrubby in growth and very much branched, and produces a fruit that is suitable for jelly making. The artemesia dies back each winter, but the stalks remain standing, and a good many of the leaves stay on, so that it furnishes good protection. It is very hardy and does well in very dry and exposed locations. The second row



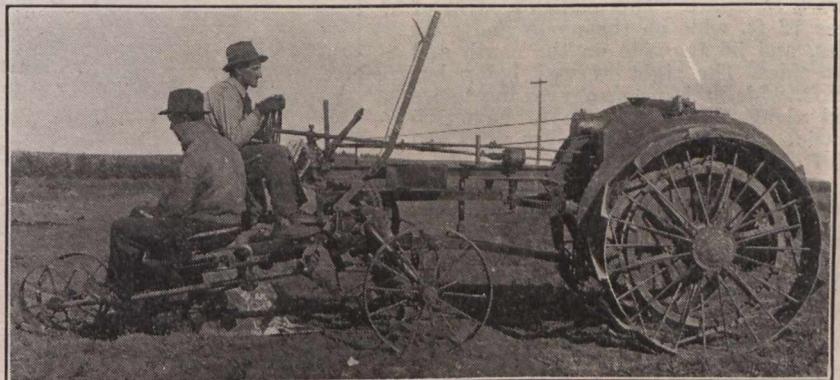
Tree planting on Minneapolis, St. Paul & Sault Ste. Marie Railway.

The left hand illustration shows the method of preparing the right of way for tree planting, by discing the sod. The right hand illustration shows the method of cultivating the trees. The common and the orchard disc are run alternately, the one throws the soil out, and the other throws it in. In this way the soil is kept level.

Paul and Sault Ste. Marie Ry. runs through North Dakota prairies where snow can drift for miles. Cuts in that section need good protection. A few years ago the officials decided to use trees in protecting the cuts, and the planting and care of them was assigned to T. A. Hov-erstad, the company's Agricultural Com-missioner, who has had a good deal of

is also less subject to insect attack. The Niobe weeping willow gives some promise of being valuable in this work, but further trials will be needed to establish its usefulness. The plan of planting, as worked out, now consists of planting eight rows of trees on the north and west sides and six on the south and east sides, the out-side row to be planted with a low grow-

will be planted with green ash or cotton-woods, that will be allowed to grow their full height. The third row will be plant-ed with green ash or boxelder, and the remaining rows will be planted with the laurel leaved willow. These willows will be cut back periodically, one row at a time. The aim is to plant some ever-greens in the second and third rows. For



Tree planting machines on Minneapolis, St. Paul & Sault Ste. Marie Railway.

The left hand illustration shows the planter used originally, drawn by horses. The right hand illustration shows the latest model tree planter, attached to a tractor.

experience in growing trees in southwest-ern and northwestern Minnesota. While tree planting to protect railway cuts is far different from a regular tree planta-tion yet the principles are the same.

The start on the M., St. P. & S. S. M. was made in 1914. Land was prepared and different tree combinations tried. The general plan was to plant four rows on

ing, spreading, branching tree, or shrub, such as the willow, buffalo berry, carra-gana, buckthorn or artemesia. The lau-rel leaved willow will be used the most and will be cut back occasionally. If cut back in the spring, the new shoots will reach a height of from 6 to 7 ft by the autumn, and so furnish protection for the winter. The buffalo berry is a native

North Dakota and Montana the varieties will likely be the ponderosa pine, Black Hills spruce and white spruce.

As the tree planting is to protect cuts, most of it will be on hill tops, hill sides, and ridges, on which the soil is often sandy and gravelly. This means that the trees have to be planted on high dry spots and in the poorer soils, the most