

in a position to better promote and encourage the agricultural industries of the country. The committee being anxious to become possessed of the advice and experience of men engaged in the culture of the soil, as well as those devoted to the study of sciences having a practical bearing on agriculture, begs to solicit your co-operation, and to request that you will express your views on those of the following questions with which your feel prepared to deal. Enclosed is a printed envelope for reply, which the committee would be pleased to receive at as early a date as possible.

Yours, &c.,

G. A. GIGAVLT,  
Chairman of Committee.

Among the questions propounded are the following:—

Would the importation of fruit tree scions and plants from Russia and other countries under climatic conditions similar to those of Canada, be of service to our fruit growers?

Would the establishment of an experimental farm or garden where varieties of foreign grain, fruits, trees, and fertilizers might be tested, and whence such seeds, plants, &c., might be distributed throughout the Dominion, be advisable?

Is there in your neighborhood sufficient standing timber to supply shade, fuel, and other domestic wants?

Have any steps been taken to maintain this supply, or to replant where it has failed?

Do you know of any attempts to introduce tree planting for timber purposes, what varieties and area were planted, what were the conditions of the soil, what have been the results, and to what do you ascribe the success or failure of those attempts?

#### LOOSE PULLEYS OR IDLERS.

The common practice of running a loose pulley on the shaft, as a wagon wheel runs on its axle, is one full of annoyances and is anything but a permanency in use. A loose pulley, or an idler pulley, should have its separate shaft with its separate journals. The shaft upon which the fast pulley is fixed is of too small a diameter to act as the axle for a pulley which revolves rapidly, and the hub of the pulley is too short to stand the leverage strain of the broad rim, particularly when this strain is intensified by that of a long, heavy belt. The better practice, wherever it is feasible, is to mount the idler pulley on a short independent shaft with its own independent journals. One of those journals may turn in a projecting portion of the hub of the fast pulley, so that the rims of the two pulleys may come together, or the idler may be supported by two boxes outside the loose pulley.

With this arrangement there is no pulley turning on a shaft and "wobbling" from side to side by the unequal and changing pulley of the belt, making a wear that will ensure a rattling.

Another device is practiced by a first-class mechanic, which is to substitute the turned hub of the fixed pulley as an axle for the loose pulley. The result of this method is to give a large bearing for the loose pulley hub. To accomplish this result the fast pulley is cast with the rim entirely on one side of the arms and the hub extending beyond the other side of the arms sufficient to receive the hub of the loose pulley its entire length, while the rim and hub of the loose pulley project from the same side of the arms of the loose pulley. This arrangement gives a very large bearing for the loose pulley hub—the outside of the fixed fast pulley hub—and also saves the width of one pulley in the projecting end of the shaft, as it need come no further through the box than to receive the hub of the tight pulley.

In all cases it is a good plan to have the loose pulley slightly smaller in diameter than the fast pulley, to relieve the tension of the belt; and when the fast pulley is slightly larger, it will receive the belt and start the work more readily.—*Scientific American*.

#### Growing Basket Willow.

There are many little by productions, or what are generally so considered in relation to larger interests, that often bring to those engaged therein very substantial proceeds. A corres-

pondent of the *Prairie Farmer* closes the growing of basket willow as at present furnishing an example of this kind. The prices have been such as to afford good profit and the cultivation is very simple.

The cuttings, about nine inches long, are stuck down in the soft earth in slanting position leaving about two inches above ground. There is no danger of their falling to grow. After this, the cultivation is no more than for corn. They will grow on any land. They are grown on land so wet that it could not be plowed or cultivated, but dry ground is better. At present there is not enough grown in this country for consumption, and \$500,000 worth is imported each year. Peeled willow is now about \$100 per ton.—*Scientific American*.

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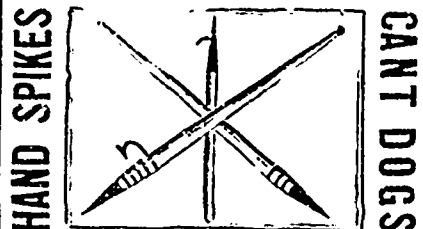
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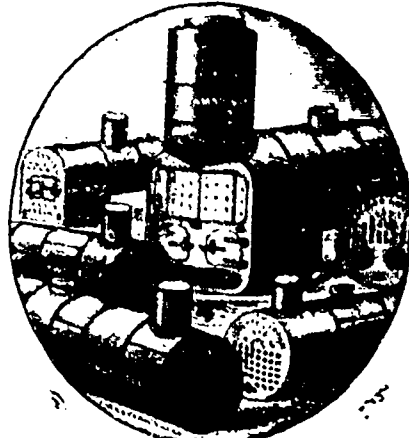
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