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PROSPECTS IN SWEDEN.

The Stockholm correspondent of the *Timber Trades Journal* says:—Work has now commenced in the woods in some places, while the process of forming gangs in others is in progress. Heavy masses of snow have fallen before the ground and morasses were properly frozen, artificial means will have to be used in many cases before "driving" can be resorted to. There is at present every disposition to restrict the "get" of logs to a moderate quantity; and this will probably be the advice given to members at the forthcoming meeting of the society of saw mill owners and timber exporters, to be held here on December 16th. It is hard to say whether this advice will be followed or not; but, if not, there is every probability of further price falls, as it is quite evident that production is getting ahead of consumption.

The returns of exports from Sweden for the ten months ending 31st of October of this and last year's totals are as follows for our trade:—

	1882.	1881.
	Stds.	*Stds.*
Sawn and planed wood.....	675,780	542,170
	Cub. ft.	*Cub. ft.*
Square and partially square wood	15,893,212	12,643,486

showing an increase equal to about 25 per cent. in the sawn and planed wood, and of over 20 per cent. in the hewn wood. The significance of the above figures, in conjunction with a reduction in the deliveries from London docks of over 13,000 standards during a similar period, ought to do more than anything else towards keeping the log "get" down during the present winter.

A RUSSIAN ENTERPRISE.

A correspondent sends us the following interesting account of a large saw mill estate in Russia, to the management of which he has recently been appointed:—

Gorval is a large old estate, which formerly belonged to a Polish family, but was sold last year to a Russian General. The place is very large, between 40 to 50,000 deschettins, or, to give you a better idea of its extent, I may tell you that if I wished to take a ride round its limits, I would have to prepare for a ride of about 120 English miles. It is situated about 1,000 versts, or about 650 English miles, south of St. Petersburg, where the two rivers, Berezina and Dneiper, meet.

The woods on this estate are very extensive and valuable, consisting mostly of red fir, but also oak, elm, ash, &c. The fir which is growing here is of a first-rate quality, growing most beautifully, 80 to 100 feet high, straight as candles, and of a size rare in the more northern parts of Europe. The climate is mild; a rather short, but frequently very cold winter, and the summer very warm. Grass upon on the estate. The ground is free from undulations, and hardly a stone to be found on it, which will enable us easily to get out of the woods our 150,000 blocks which we are going to cut this winter, the evenness of the ground allowing us to cart the blocks on wheels as well as on sledges.

We are building this winter a saw-mill with six frames, and next spring a planing and moulding mill, and also joinery works. A speciality will be oak parquetry, which is very much used here in Russia, and has a market almost to any extent.

All the newest machinery in use for wood-cutting and woodworking are already partly ordered, and will be taken advantage of for this enterprise. The saw-mill, as well as the factory, will be lighted up with the electric light. The motive power, both for the mill and for the joinery works, are going to be three English steam engines of 40, 40, and 50 horse-powers respectively, and five boilers of together 150 horse-power. Next summer a tramway of 10 to 15 English miles is going to be built into the woods, in order to make it easier to get the blocks out. More than 2,500,000 blocks are calculated to be growing on the estate.

What makes this business of special interest is that, as far as I know, there are neither saw-mills nor joinery worth mentioning in this part of Russia. The next year's production is calculated to be 7,500 standards, a part of which will be sold in Russia; the most of it will have to be exported, via Libau.

Most things are very different here to what they are further north, and so is also the way of getting the timber out of the woods. In the North it is generally left in the hands of the foreman to find horses for carting the wood down to the rivers, and much depends upon them whether the blocks come out and what price.

In this part of Russia, which formerly was Polish, the peasants were up to the year of 1862, as it was called here, Kriepostnoje, or a sort of slave. Living in small communities or villages, they had nothing they could call their own. Everything belonged to the community, and the community itself belonged to the owner of the estate on the ground of which the community was situated. Since 1862 a new era for these poor peasants began. Each became possessed of a very small piece of land, which he could cultivate, and call it his own, and at the same time he became the proprietor of the poor hovel in which he was living. This certainly made a great difference to each individual. The community, however, remained very much the same as it had been for hundreds of years. In these little villages they live still that patriarchal sort of life they had always been used to. The eldest man is the head of the family and the elected eldest is the head of the community. Before his tribunal every case is brought, be it of dispute or be it of general importance to the community, and settled in an assembly where every one has a right to a seat, without any trouble of being elected.

If I have any work to be done which requires the help of many men, I do not want to make up an agreement with each party separately. I make up a contract with the whole community, in which each individual pledges himself to do a certain amount of work; and when such contracts have been signed by the whole community, I can, without risk, advance any amount wanting to the parties in question.

This is what we have been doing here. A mass of contracts have been made out with all these little villages in the neighborhood, the one village pledging itself to give a certain amount of hands to dig, another so many hands to do carpenter's work, another for masonry work, another for transport of bricks, another for the building of flood vessels, and a great many for felling of the trees in the woods and for transport of the logs to the river.

The winter came early this year, we have had frost and snow for some time and the works in the woods have already begun. We wait only for more snow to come to see such work going on, as certainly this place never dreamt of before.—*Timber Trades Journal.*

RAILWAY SLEEPERS IN FRANCE

A recent number of the *Revue des Eaux et Forets* contains the following abstract of a long delayed report on the above subject by M. Jacquin, Ingenieur en Chef des Ponts et Chaussees:—

In 1877 the six great French railway companies equired 2,563,000 sleepers annually for the maintenance of their permanent way. Compared with the mileage, this amounted to 93 sleepers per kilometre (0·6 English mile) per annum, or to over 7,000 sleepers daily.

Assuming a single tree to supply on an average 10 sleepers (which is below the average of beeches, but above that of oaks), the maintenance of the French railway system necessitates the destruction of 700 large trees for every day in the year. When the projected extensions have been carried out the expenditure will amount to 1,000 large trees daily. To this enormous figure must be added the quantity required for repairs of rolling stock, which cannot be put down at less than 140,000 cubic metres (about 5,000,000 cubic feet, in the year. Besides this, the construction of 20,000 kilometres of new lines, as proposed, within the next ten or fifteen years, will cause a further demand for 20,000,000 new sleepers.

With a view to the reduction of this enormous demand, the French railway companies have long been endeavouring, like others, to increase the durability of their sleepers by impregnating them with antiseptic substances, the two heretofore most used being cupric sulphate and creosote.

On the South (*Midi*) and West (*Ouest*) of France lines sleepers and telegraph poles impregnated with both these substances have long been in use and are still in a perfect state of preservation. A creosoted beechen sleeper was taken up on the West of France line after nineteen years' service. This is a remarkable example; but similar instances may be met with on other lines; the real mean average life of such impregnated sleepers does not, however, appear to have been as yet satisfactorily determined.

After long experience, the Eastern of France line (*de l'Est*) gives the preference to gas-tar over all other antiseptics, and creosotes even oaken sleepers, the sapwood as well as the less indurated portions of the heart absorbing the tar freely. The sleepers are not put in creosoting chambers, but are cut and dressed so that all the bearing surfaces are thoroughly impregnated. Under a pressure of 6 to 7 atmospheres, oaken sleepers absorb 7 to 8 kilogs. of creosote, beechen sleepers 30 to 35 kilogs. There is reason to hope that the larger quantities thus absorbed increase the power of resisting the elements of destruction in a corresponding degree.

Mr. Blyth has proposed a process of treating log or sawn wood with hydro-carburetted gas close chambers, that is to say, exposing it to the action of ordinary high-pressure steam, containing liquid hydrocarbons in a state of spheroidal diffusion. The inventor claims for the process that it effects perfect saturation of every part of the wood, whether green or dry, sawn or unsawn, with the protective substance. These promises, somewhat over-sanguine perhaps, have not yet had the full confirmation of experience.

The solution of the railway sleeper problem has been sought in another way. Stone, concrete, and cemented brickwork sleepers have come up again. But it must be remembered that these offer neither the conditions of elasticity nor the facilities for attachment which are indispensable, so that there is no prospect of their general adoption. These metal sleepers have been tried, and, could a good model be found, our great metallurgical firms would, no doubt, find a new element of industry in supplying the imperious demands of the iron horse. But, unfortunately, the experiments made thus far, on different lines, have not given satisfactory results. A metal sleeper, to be successful, must combine all the qualifications of resistance to a transverse strain, a good seat on the ballast, and stability in the mode of attachment of the superincumbent rails, and withal the outlay must remain the same. This is the point generally overlooked by inventors. It is not enough to have a perfect line on the opening day, it must be kept in working order, and to do this, so far as French experience goes, a larger outlay appears to be necessary with metal sleepers than with wooden ones. The results at present are therefore unfavourable to the use of metal sleepers.