

in Prussia, Saxony, &c., where the number of aspirants for the Government service is out of all proportion to the annual number of vacancies. The irregularity of promotion, want of system, and lowness of the salaries in the Austrian service, furnishes a ready explanation for the difference.

Districts visited.

I visited the forest reviers, Purkersdorf and Gablitz, with the Ober-forstmeister. The reviers form a portion of the forest known as the *Wiener Wald*, which extends over an area of 60,000 English acres, and is of great value, being in the immediate vicinity of Vienna, which draws almost its whole supply of common building timber and firewood from it. It affords also a means of recreation, health, and enjoyment to the population of the capital, such as is possessed by the inhabitants of no other city in Europe, and the pleasure-loving Viennese are not slow in making use of its advantages, and pour out on Sundays and holidays from the hot and dusty town in large numbers.

The reviers visited consisted mainly of beech, which has been allowed to renew itself from time immemorial without any attempt at systematic management or rotation of crops. True, the whole forest has been measured, valued, and mapped, but it is not divided into blocks, or worked regularly in periods, and I believe this is the case throughout its whole extent. The result is shown in a comparatively low and even decreasing yield per acre, and patchy or irregular appearance of the woods; and nothing but the naturally extreme richness and fertility of the soil, the fertilizing qualities of the beech leaves, and comparatively limited demand and consequent felling until of late years, could have obviated a much worse state of things presenting themselves ere now.

As I have often found the case in India, a cursory glance at the forests from the outskirts or borders would lead one to suppose that it is fairly stocked with timber; but a more careful inspection proves that such is not the case, and that only in the valleys and more remote portions, where the soil is particularly good and the axe has not been so frequent in its inroads, is there a fair and regular crop. The gradual division and assortment of the area into blocks and periods, planting up of bare and insufficiently covered tracts, where natural reproduction is impossible, from the absence of standard trees, and the introduction of a considerable percentage of conifers (e.g., *Pinus austriaca*, *Abies pectinata*, and *nobilis*), both on account of the exhaustion of the soil by successive crops of hardwood trees, and the quicker growth and greater money yield of the *coniferae*, appear to be the principal points to be attended to, and which Herr Tschuppitch has in view.

Tapping of
pines for
turpentine.

I visited also the forest revier of Brühl, in the Mödling division, which has an area of 4,000 English acres, chiefly *Pinus austriaca* on one side of the valley and beech on the other; the latter a good deal intermixed with ash and hardwood trees of inferior value, such as maple, plane, birch, &c. The black Austrian pine has a period of rotation (*umtrieb zeit*) of 100 to 120 years, growing slowly and with a tendency to branch. It has hitherto been the custom to tap the trees, about fifteen to twenty years before they were to be felled, for the resin or turpentine which exudes, and from which the turpentine oil of commerce is procured. Such trees were leased out to contractors at an average of about 3d. per tree per annum, and one contractor has now 24,000 trees in the Mödling division on this system. The trees are tapped in spring, and cease giving sap in autumn. The method pursued in tapping and collecting the sap or resin is simple, but it would be of no practical benefit to describe it here; besides, it could probably be improved on, and experiments are even now about to be made on the French system, by which the sap is not so long exposed to the sun or atmosphere before being collected. There is at present a controversy going on as to the whole subject, *i.e.*, whether it pays or not to tap the trees, the old school maintaining that it does, the rates per tree being considerable, and the tree continuing to increase in growth. This last point is disputed by the opponents of the system, which will probably soon be put a stop to, as has been already done in the Black Forest in all but exceptional cases, the more so as the resin or turpentine cannot, strange to say, be brought into the market so cheaply as that imported from America. During the civil war in that country large stocks were tied up in the several harbours of the Southern States, and the price on the Continent rose very greatly, only to fall suddenly on the close of the war, and ruin numbers of sanguine operators who had entered into large contracts, and taken large tracts of Austrian pine forests on lease.

The natural reproduction in this revier is very irregular. It is interesting to note that the sides of the hills with a western exposure are covered with pine, whilst on the opposite side hardwood, chiefly beech, predominates. Prince Lichtenstein is taking great pains and expending large sums of money in endeavouring to cover some low hills in the neighbourhood, which form part of his property, with pine trees. The soil, which consists chiefly of dolomite, is very unfavourable, and the prevailing high winds offer another obstacle, which renders the progress slow, and any adequate return from a financial point of view out of the question.

Most of the timber from the Mödling division is sold as firewood, divided into five classes according to description, each class being again divided into five sorts according to size, &c., the price varying from as much as 22 guldens for first class, first sort, to 2½ guldens, last class, last sort, per klafter.

FORESTS OF THE PRINCE OF FURSTENBERG IN THE GRAND DUCHY OF BADEN (BLACK FOREST).

Area.
Yield.

THE area of the Prince of Furstenberg's forests, under the charge of Oberforstrath Roth, is 80,617 Baden morgens, equal to about 72,555 English acres; and the annual yield is estimated at 56,000 massenklafter, stated to be equal to about 5,443,200 cubic feet, being an average of 75 cubic feet per acre of forest; but I am inclined to think there must be some difference betwixt the Baden foot and ours. (*Vide statement at page 25.*)

Receipts and
disbursements.

This being a private estate, the annual receipts and disbursements and surplus cannot of course be given, but the Oberforstrath informed me that the forests were on the whole economically worked, and the liberal sums expended on road-making, improvement of the rivers for floating, housing, forest officers, &c., were well repaid by the facility of transport, and contentment and zeal of the employés. The forests are, in fact, worked for the best profit compatible with their retention as capital, and it is