462 ON THE CONNECTION OF GEOLOGY

In the Upper Hartz, the most common inclination of the declivities of the mountains is twenty-five degrees; nor does it usually exceed thirty-three, at which inclination the *becch* and *spruce* grow. The greatest declivities at which ground can be advantageously cultivated have an inclination of thirty degrees.

The roots of vegetables, especially of grasses, shrubs, and trees, are of much importance in supporting the earth upon the declivities of rocks. Care must therefore be taken that the declivities of mountains which are covered with turf or wood, be not altogether deprived of these coverings, as sometimes happens in consequence of loosening the turf for agricultural purposes, or of incautiously extirpating the wood. In Norway, near Roraas, there occur mountains, destitute of all vegetation, that had formerly been covered with woods, but where now, from the deficiency of soil, no seeds could take root. The same is the case in many parts of the Alps, where, from the irregular long-continued removal of the timber, the sides of mountains which were formerly covered with thick woods, now show nothing but naked rocks. For this reason, in mountainous countries with very steep declivities, the breeding of cattle and planting of woods are often more advantageous than agriculture. In France the greatest inclination of the public roads is limited by law to an angle of four degrees and forty-six minutes : a similar restriction with regard to agriculture might not be without benefit in certain mountainous countries.

The inclinations of the surface of the solid crust of the earth vary much, according to the different qualities of the rocks; some having a tendency to form abrupt precipices, others, again, to produce gentle declivities.