

urine copious, dark, clear; thirst great; tongue white, pale. There was no blame attributable to any one. He fell at 7 A.M., and got to St. Gervais at 6 P.M., after a most perilous carriage on a portable sledge. No bone broken. Dr. Metcalfe has been unremitting in his attention, and informs me that he is doing well, and in a few weeks will probably be all right, and not marked or injured in any visible way. He is sensible and has been up already. This is a very interesting example of a severe 'brush-burn,' and the consequent shock of the system."

PINE-WOOL.

BY M. C. COOKE, F.R.S.

A new manufacture has recently sprung into existence on the continent of Europe which promises to be one of importance. It consists in the utilization of the acicular leaves or "needles" of coniferous trees, hitherto a waste substance. It was long ago known that pine leaves consisted of a bundle of tough fibrous material, agglutinated together, and bound into long rigid leaves by means of a resinous integument; but the practical development of this knowledge is but of recent date. Near Breslau, in Silesia, there are two establishments, both of which are worthy of notice. One of these is a factory where pine leaves are converted into a kind of cotton or wool; and the other, an establishment for invalids, in which the waters used in the manufacture of the pine wool are employed as curative agents. These establishments have both been erected, as we are informed, by M. Pannewitz, the discoverer of the process employed for obtaining the fibrous material for pine-leaves. This material he calls "woody-wool." It can be curled, felted or woven. We are not acquainted with the precise method employed by M. Pannewitz, but we have succeeded in obtaining a coarse brownish-yellow fibre by boiling pine-leaves in a solution of caustic alkali for a few hours; and after rinsing and boiling them again in alkaline liquor, and saturating them in a solution of chloride of lime, a whiter and finer substance, much resembling the pine-wool wadding now being imported from the Thuringer-wald. It is stated that by the mode of preparation employed by M. Pannewitz, the woolly substance acquires a quality more or less fine, or remains in its coarse state. In the former case it is employed as wadding, and in the latter as a stuffing for mattresses. The leaves may be stripped from the trees when quite young without injury, and a man may gather 200 lbs. per day.

The first application of this fibrous material consisted in its substitution for cotton with wool in the manufacture of blankets. Five hundred of these were sold to an hospital at Vienna, after a trial of several years they are now exclusively used. Amongst the enumerated advantages, it has been stated that no kind of insect will lodge in the beds, and that the odour has been found agreeable and beneficial. Since this period, the same kind of blankets has been adopted at the Penitentiary and some other institutions in Vienna, as well as in the barracks at Breslau. Its application for stuffing purposes has been no less successful; the cost being one third that of horsehair, and its resemblance so great, that it has been affirmed that when employed in furniture, the most experienced upholsterer could not tell the difference. When spun and woven, the thread resembles that of hemp, is very strong, and may be advantageously employed for many of the purposes for which hemp is used. From this "Forest-wool yarn" are now manufactured jackets, spencers, drawers, and stockings of every description; flannel and twill for shirts, coverlids, body and chest warmers, and knitting yarn. These manufactures are recommended for keeping the body warm without heating, and are very durable.

In the preparation of the wool, an ethereal oil is produced, which is at first green, but on exposure to sunlight becomes of an orange yellow tint, and when distilled colourless. It has been successfully employed as a curative agent. It burns in lamps like olive oil, and completely dissolves caoutchouc. The perfumers of Paris are stated to be employing it in considerable quantities. The liquid left by the decoction of pine-