owing to the configuration of the ground, the slide becomes somewhat spent before reaching the line. Type "D" is somewhat simpler, being adapted to those points where the line skirts a precipice, and where it is probable that the avalanche invariably attains a high velocity, so that it clears the track quickly, instead of dropping directly on to it. Type "G" is useful where small pure snow movements are likely to be experienced, or where, owing to the open character of the location, the snow is likely to drift heavily. The "H," "I," and "L" types are more elaborate, and are modifications of one another. There is a double roof, with intervening rafts and bracing. These are used at points where the slides are apt to bring down masses of rock and timber. The final type, "M," is a simple means of throwing the snow clear of the line. On the mountain side the heavy rock crib is built up to support massive balks which are laid so as to point upward over the track. The lower ends of these timbers are buried, and the ground shaped to form a hollow. The descending snow rushes into the depression and up the inclined plane to fly into the air and to fall clear of the track, the clearance varying with the velocity of the avalanche. This is the system which has been adopted extensively, only in masonry, upon the Lotschberg Railway.

The snow-shed is a costly protection. The more elaborate and heavy types run up to as much as £40,000 per mile to build. In one or two instances this figure has been exceeded, especially in places where the timber has had to be hauled from a distance. While the engineer by snow-shedding protects the line from one danger he invites another. This is fire. A spark from a locomotive may set the structure ablaze, and, once the flames secure a strong hold, destruction of the work is certain, since the shed acts as a huge flue. But the forest fire is dreaded more than the spark from the passing engine. Among the Selkirks this terror of the forest wreaks widespread havoc every year. In order to reduce the losses from this cause the sheds are built in short sections, with long gaps between, so that the possibility of the flames "jumping" is reduced. Incidentally it is the forest fires which accentuate the severity of the avalanche. The trees come toppling down as their roots are burned away, or are scorched into lifelessness, so that they succumb readily to such an attack as snow movements or even of the wind. The sides of the mountains thus become littered with gaunt trunks, maybe one hundred feet in length, and when these are picked up by the slide and hurled downward, they strike an obstruction with the force of a battering ram.

Fire Dangers.

In order to guard against the ravages of the fire-fiend water pipes are carried through the sheds, and at close intervals hydrants and lines of hose are provided ready for instant use. The sheds are patrolled day and night, so that an outbreak may be caught in the incipient stage. Telephone facilities enable the watchman to get into touch with assistance, so that fire-fighting forces can be hurried up if the conflagration gets beyond the man on the spot. During the summer season, when the forest fires are raging, the patrolling forces are doubled and trebled if necessary. The necessity of these elaborate precautions will be appreciated when it is remembered that a burning shed not only represents a heavy monetary loss, but what is far more important upon such a line as the Canadian Pacific with its heavy transcontinental business, provokes a serious delay to traffic.

Precautions Against Fire.

The distances, or "fire breaks," between the snow-sheds vary from 100 to 200 feet according to conditions. The possibilities of a snow-slide rattling down and smashing up the line in these open spaces is eliminated