

No. 620,244.

Patented Feb. 28, 1899.

C. F. McGLASHAN.
SNOW SHED CONSTRUCTION.

(Application filed Oct. 17, 1898.)

(No Model.)

Fig. 1.

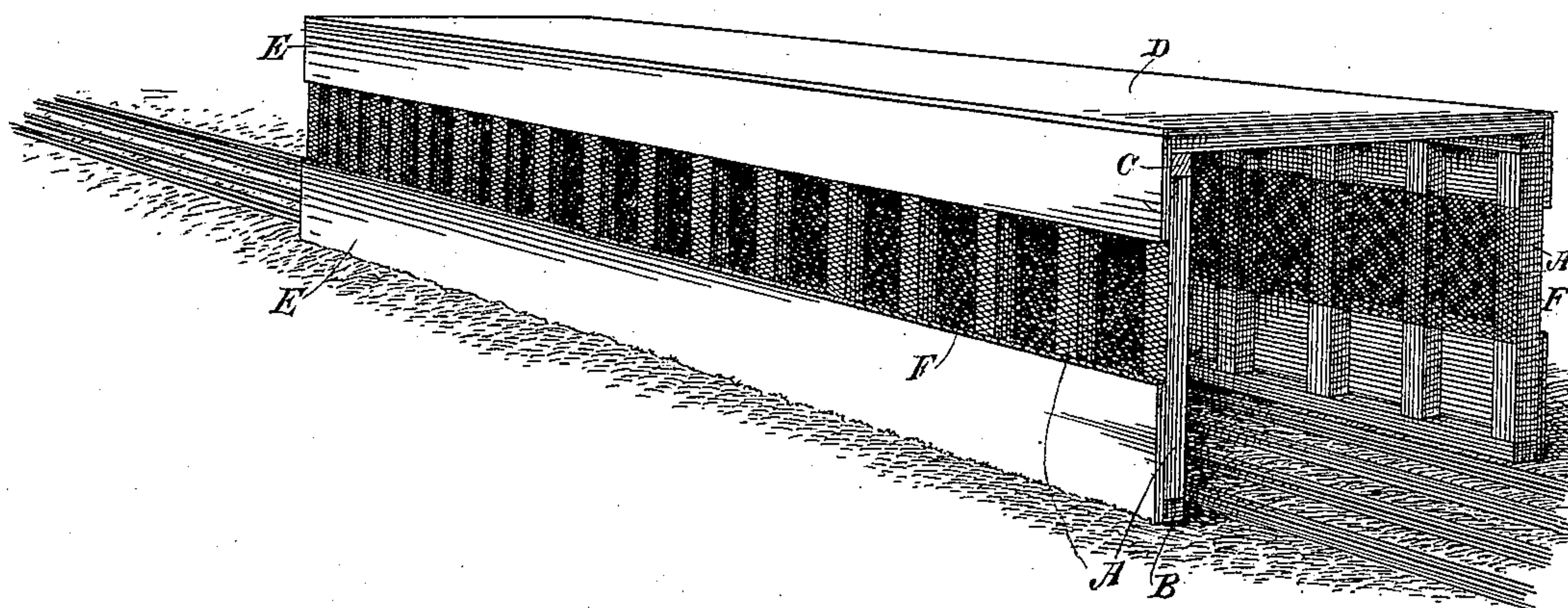


Fig. 2.

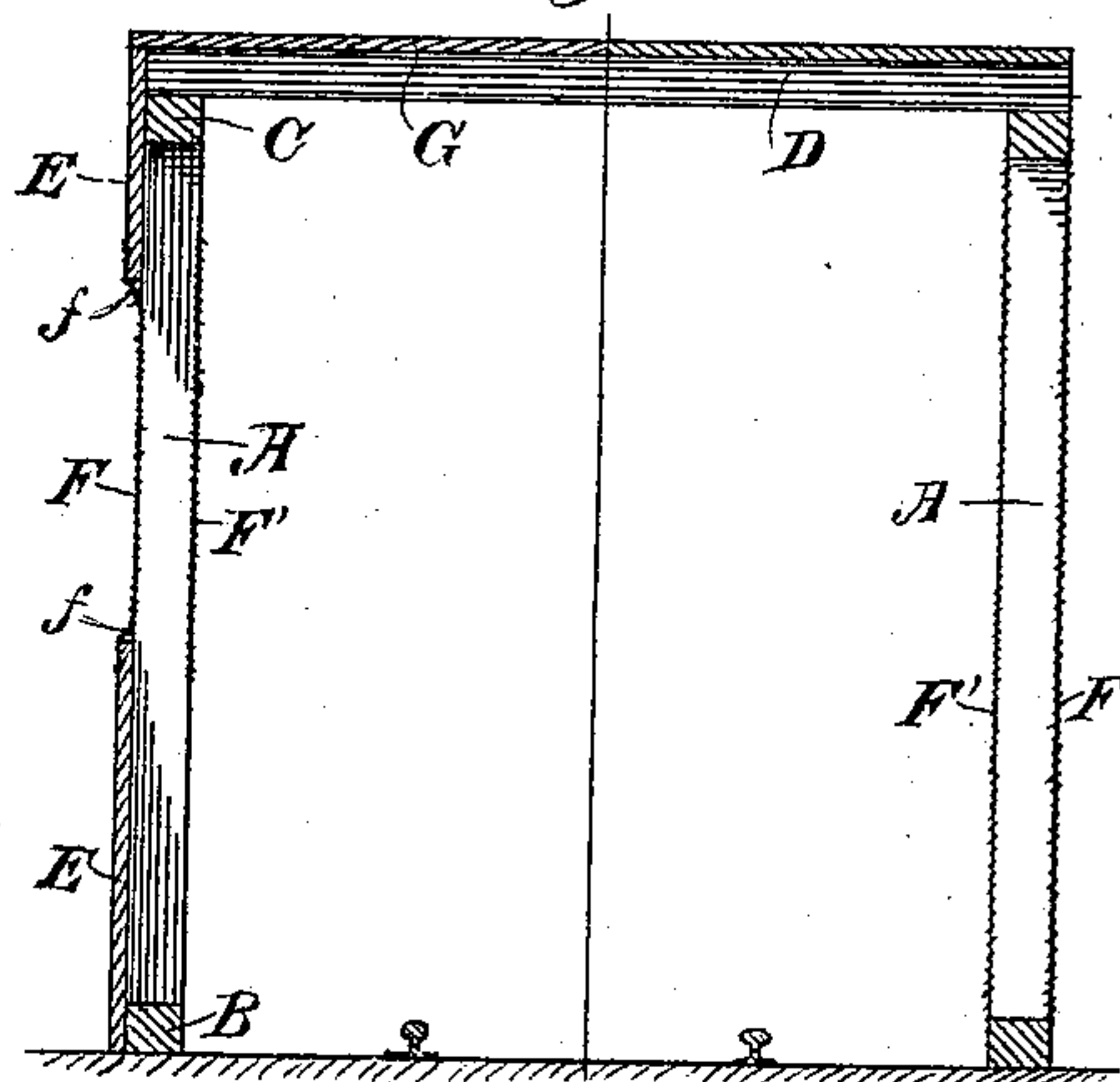


Fig. 3.

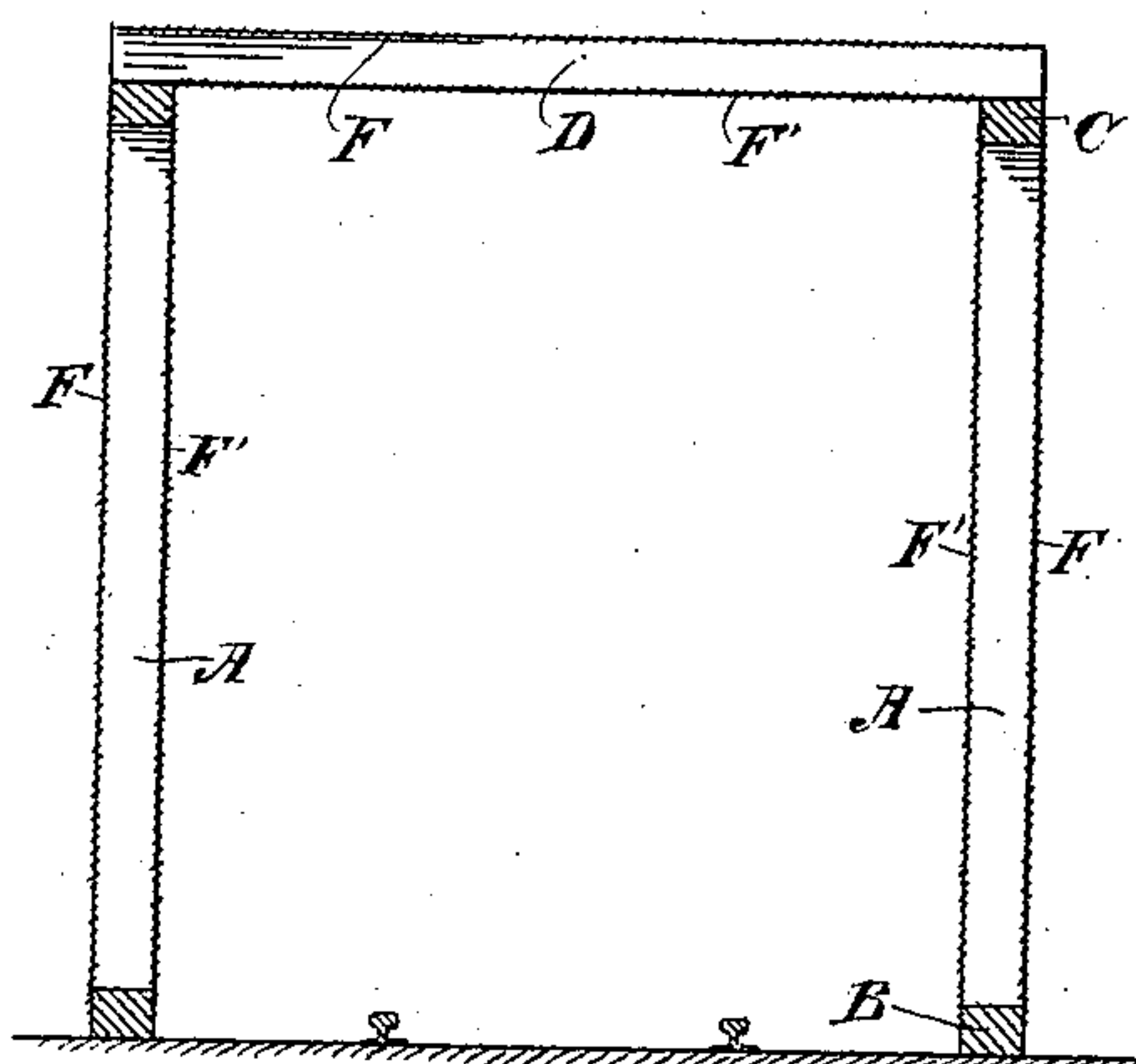
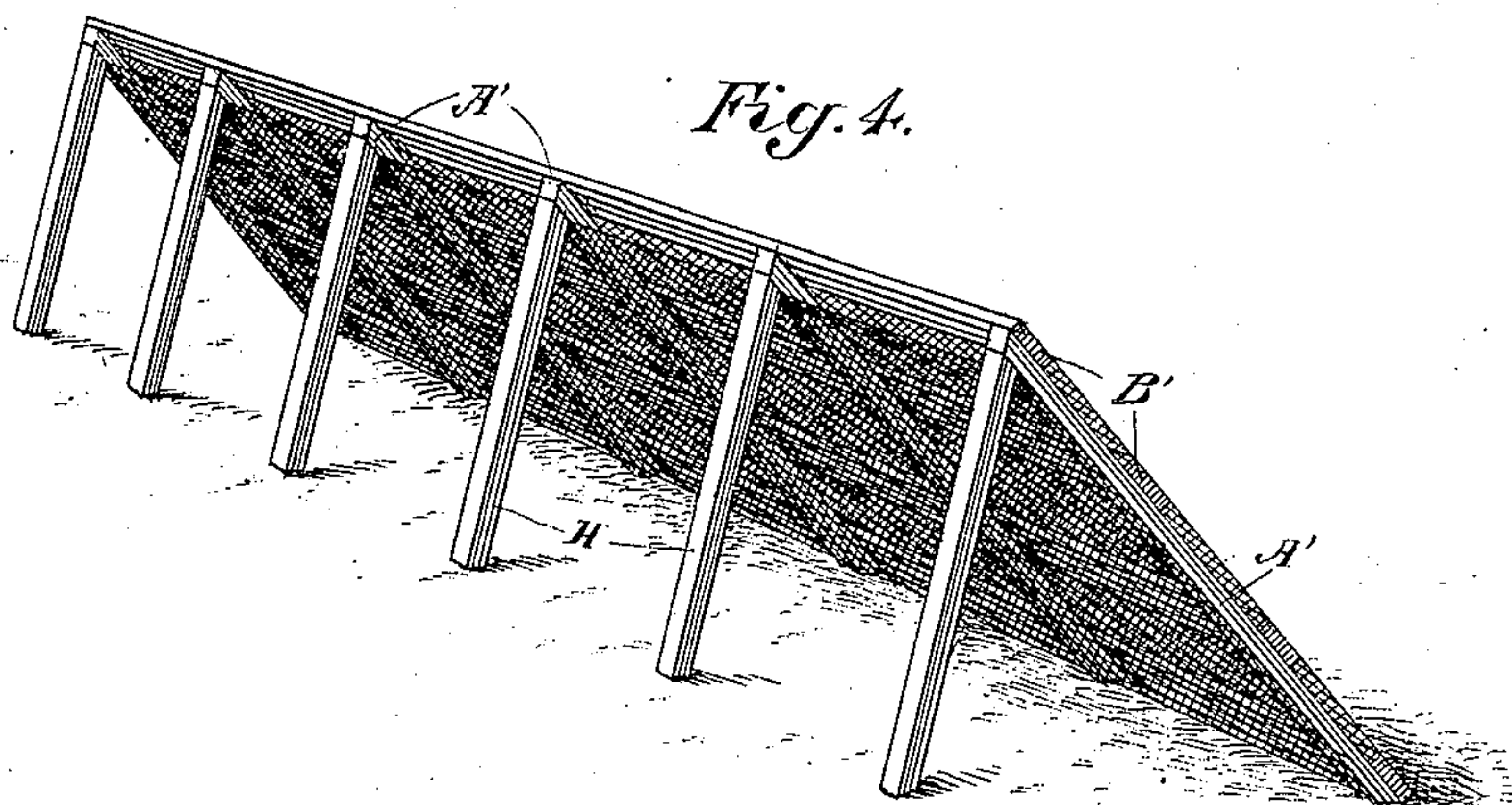


Fig. 4.



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UNITED STATES PATENT OFFICE.

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SNOW-SHED CONSTRUCTION.

SPECIFICATION forming part of Letters Patent No. 620,244, dated February 28, 1899.

Application filed October 17, 1898. Serial No. 693,745. (No model.)

To all whom it may concern:

Be it known that I, CHARLES F. McGLASHAN, a citizen of the United States, residing at Truckee, county of Nevada, State of California, have invented an Improvement in Snow-Shed Construction; and I hereby declare the following to be a full, clear, and exact description of the same.

My invention relates to improvements in the construction of that class of continuous structures known as "snow sheds or defenses."

It consists, essentially, in a novel construction of the shed with portions of greater or less dimensions made of wire netting or screens and in details of construction, which will be more fully explained by reference to the accompanying drawings, in which—

Figure 1 is a view of a snow-shed according to my construction. Fig. 2 is a vertical section, one half showing the side partially open and the other fully open. Fig. 3 is a similar view showing the whole structure open. Fig. 4 shows my construction on snow-fences.

In those portions of the country where railroads cross mountainous ranges or parts where the snowfall is excessive or where the drifting by the wind is such as to blockade the line of track it has been customary to build long lines of heavily-timbered inclosed sheds, through which the lines of track pass. These sheds on the Sierra Nevada mountains and especially on the line of the Central Pacific railroad extend nearly forty miles in an almost continuous structure, and in the present construction they are heavily roofed and planked upon the sides, so that very little light enters and the whole journey through the sheds is extremely gloomy, besides which the passengers are subjected to the discomfort of smoke, cinders, and a vitiated atmosphere, and in summer-time there are frequent and disastrous losses by fire. I have discovered that by the employment of wire screens having a mesh about the size which is known as "rabbit-proof" or smaller an open-work structure, with the sides either wholly or in part made of this netting and the top or roof of the same construction, will be sufficient to prevent the entrance of drifting snow, and where the snow is of a moist clinging nature, such

as falls upon the Sierra Nevada mountains, and with supporting-timbers of sufficient strength and not too far apart this construction will serve amply as a roof and, taken in conjunction with the timbers, will support a large body of snow without breaking. The object of the invention thus attained is to provide an open structure for summer use through which light can enter and air circulate and a view had through the sides and through the top or roof of which smoke and cinders will pass freely, while the danger of destruction by fire will be reduced to a minimum, and which in winter-time will effectively exclude the snow.

In carrying out my invention a framework of heavy vertical posts A is first set up, having the usual sills B at the bottom and the caps C at the top. Transversely across these caps and at short intervals are fixed heavy timbers D. If the sides are to be only partially open, I apply heavy plank sides E upon the upper and the lower portion, leaving the intermediate portion uncovered by the planks. This portion will usually stand at about the height of the car-windows. I then nail upon the lower edges of the upper plank and upon the upper edges of the lower plank wire screens F of suitable strength, having a comparatively small mesh. The upper and lower edges of these screens, respectively, are nailed to the outer surfaces of the planks E E along the edges which are adjacent to the open space. The wire is bent inward, as shown at f, and is secured to the vertical posts A at intervals, these posts usually standing about four feet, more or less, apart.

In many instances a single line of screen would be sufficient to break the drift of the snow to such an extent that little or no snow would pass through the screen; but in order to insure this protection I have shown a second line of screen F' secured upon the inner faces of the vertical posts, thus making an open channel between the double surfaces of network, which will thoroughly prevent the entrance of the heaviest snow through the wires and into the interior of the shed, and so long as these open spaces are not entirely buried by a great mass of snow light will enter freely and the vision will be comparatively unobstructed.

During the summer, when there is no snow, light and air can enter and circulate freely, while the vision through the open places is practically unobstructed.

5 In Fig. 2 I have shown the entire sides of the structure formed of the open network of wire extending from the sills to the caps, thus leaving a clear view of and from the interior.

10 The roof may be made, as shown in Fig. 2, of heavy timbers and covering-planks, as shown at G.

In Fig. 3 I have shown both a skeleton framework of timbers A, with sills B, caps C, 15 and heavy transverse timbers D at short intervals. This skeleton framework is covered entirely by the network of wire F F' on both sides and top, the double construction serving, as before stated, to prevent drifting 20 snow from entering the sides, and as the transverse timbers upon the top are not more than ten to twelve inches apart the intervening portion of the network is not compelled to bear the great weight of the snow. The 25 snow being very adherent will form a mass the weight of which is principally borne upon the timbers, and its tendency to pack as it falls will soon make a close covering over the network roof, which will prevent any further 30 entrance of the snow from that direction. Once covered in this manner there is practically a roof of snow which may vary from one to sixteen feet in depth and which will last after the first fall of snow until the 35 end of the snowy season. After the snow has melted away a light and airy structure will remain which offers no impediment to the escape of the smoke and cinders thrown out of the engine-stacks by reason of the 40 strong exhaust, and the tendency to fire which is usually so destructive to these structures is very greatly reduced. The expense of the netting will always be less than the great cost of the heavy plank which are usually 45 necessary for this purpose.

In many places where the railways cross open stretches of land or prairies or any places where there are cuts there is a tendency of the snow to drift and cover the entire track. 50 This usually occurs at intervals and for comparatively short distances, and it has been customary to build high heavy wooden fences or guards for these intervals to protect the track from such drifting. In my invention I 55 form the wind and snow break of a structure of inclined vertical posts, as at A', having horizontal bars B' at intervals between the top and the bottom, and bracing-timbers H, by which the structure is given a compara-

tively wide base, the timbers meeting at an 60 apex at the top. The timbers A' B' are then covered with a wire network or screen in double layers inside and out, as heretofore described, and the snow will in this case be 65 stopped and prevented from drifting beyond the fence. Such a structure is much less expensive to build originally than the heavy post-and-plank fences. The snow will not pass through the network of the screen as 70 freely as it will through long open slots which are left between the planks or between vertical posts when the latter are placed near together, and the wire and posts serve when 75 heavily stapled together to prevent any portion of the structure being broken down or carried away, and there is no loss such as occurs from the loosening and destruction of planks when the latter are used.

Having thus described my invention, what I claim as new, and desire to secure by Letters 80 Patent, is—

1. A structure for the protection of railways and the like from snow, consisting of upright posts and transverse or angular supports therefor and an exterior and interior parallel 85 covering of wire-netting secured to said posts.

2. A structure for the protection of railways and the like from snow consisting of a series of upright posts with sills and caps, transverse timbers fixed to the caps above the line 90 of the track and a plurality of sheets of wire-netting secured to the outside and inside of the posts and to the transverse rafters above substantially as described.

3. A structure for the protection of railways 95 and the like from snow consisting of a framework of upright timbers upon each side of the line of track, a roof structure extending between the caps of said timbers above the track, a close covering extending upward from 100 the bottom and downward from the top leaving a continuous open space or channel intermediate between the top and bottom, an exterior covering of wire-netting having its upper and lower edges fixed along the corre- 105 sponding edge of the planks forming the closed portion of the structure, said netting being curved inwardly and secured to the vertical posts, and a supplemental interior sheet of wire-netting secured to the inner sides of 110 the posts and coincident with the open space in the outer sheet of netting.

In witness whereof I have hereunto set my hand.

CHARLES F. McGLASHAN.

Witnesses:

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GEO. H. STRONG.