July 1, 1930. C. L. BROWN 1,768,974

SNOW FENCE

Filed Oct. 15, 1928

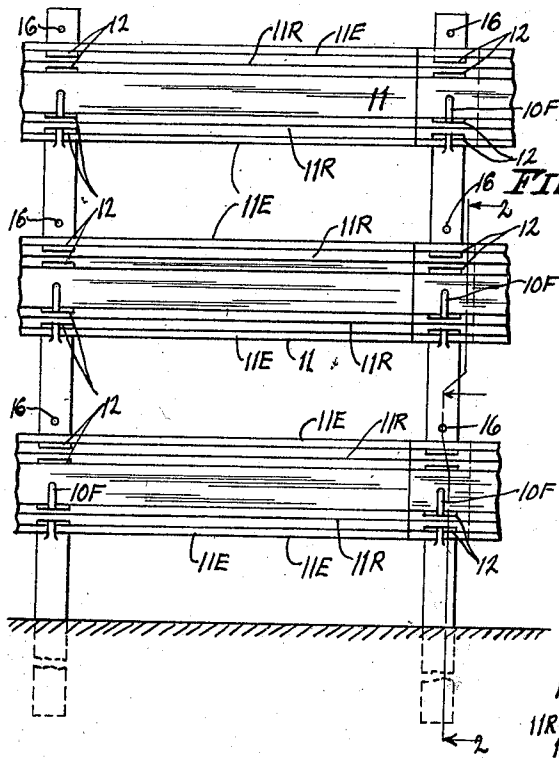


FIG. 1.

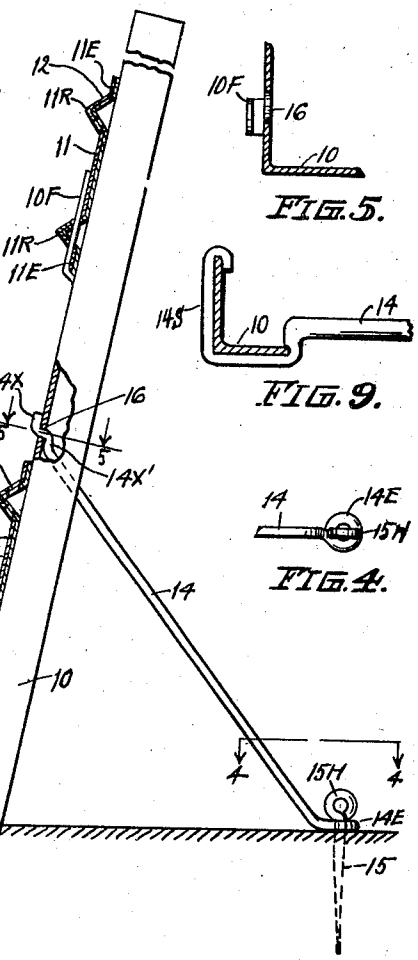


FIG. 2.

FIG. 5.

FIG. 9.

FIG. 4.

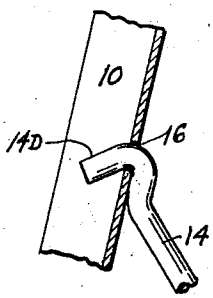


FIG. 6.

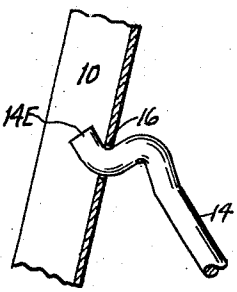


FIG. 7.

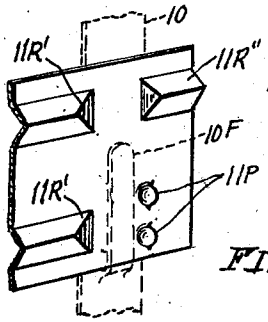


FIG. 8.

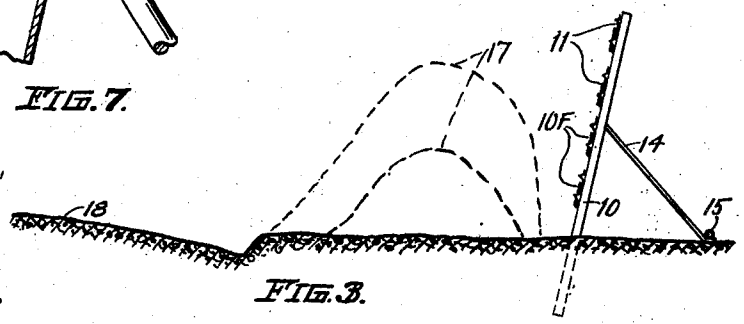


FIG. 3.

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UNITED STATES PATENT OFFICE

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SNOW FENCE

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This invention relates to an improved snow fence and the main object is to provide an all metal, highly efficient and easily assembled fence of said kind involving optionally or as conditions may require a certain simple and efficient bracing device.

A further object is to provide a snow fence of the character mentioned and in which horizontal metal slats or boards are used, the posts of said fence having new and novel means for retaining said boards, and the latter made with novel holding means engaged by said retaining means of the posts at their opposite ends. These metal boards are also made in a manner providing desired rigidity. Other objects and advantages are hereinafter fully set forth, reference being had to the accompanying drawing, in which,—

Fig. 1 is a face view or elevation of a section of my improved snow fence set up in operative position.

Fig. 2 is an enlarged partly sectional side elevation or edge view about as on line 2—2 in Fig. 1 showing the snow-fence in slightly inclined position and certain bracing means therefor.

Fig. 3 is a cross sectional or profile view of a road and adjacent ground with my snow fence in position parallel to the road.

Fig. 4 is a detail top view as on line 4—4 in Fig. 2 of the lower end of a brace member and its anchor pin.

Fig. 5 is an enlarged cross section of a post of my improved fence as on line 5—5 in Fig. 2.

Figs. 6 and 7 are fractional detail views of modified forms of the upper post engaging ends of the braces used with this snow fence.

Fig. 8 is an enlarged perspective view of an end of a modified slat and Fig. 9 is a sectional elevation of a modified post and brace 14.

In the drawing like numerals of reference indicate similar parts in the several views, and referring to said drawing and numerals 10 represents the posts or standards of my improved fence and comprising preferably a light angle iron bar with one flange wider than the other, the wider flange hereinafter designated as the face flange and being provided with the board holding means. It will be understood that these posts are driven into the ground with any suitable driving means, the posts set in such a manner that their wider or face flanges are in a common upright plane, either vertical or in any suitable inclined plane.

In the said face flange of each post I provide a number of preferably equally spaced integral fingers 10F punched out of the post metal forwardly and bent upwardly, each parallel therefore to the face of the flange with its upper end free and its lower end connected to the flange at the lower end of the slot thus made in the flange. The lower part of the post has of course no fingers as this end is driven into the ground until the lowest finger 10F is a predetermined distance above the ground surface. These fingers comprise the only fence board retaining means, said boards being slipped downwardly over the free ends of a finger and to resting position at the base thereof. For convenience the boards, designated 11, will hereinafter be called slats.

Each slat 11 comprises an elongated quadrangular piece of sheet metal, preferably a galvanized sheet of weather proof rust resisting metal. Parallel to and adjacent each long edge of the slat it is fluted or ridged as at 11R, preferably in V shape in cross section, thus providing flat edge flanges in a plane with the major part of the slat between the ridges. This provides ample stiffening means for each slat, the length of the latter being optional but preferably about eight feet.

Near each end of the slat I punch out four longitudinal slots 12, one pair at the base parts of each ridge and all four slots in alinement transversely of the slat, these slots being all in angular planes in the sloping sides of the ridges 11R (see Figs. 1 and 2). The posts must be located according to the distances between the said slots 12, each slat being slipped downwardly with its lower edge between fingers 10F and the adjacent face of the post so that its lower slots 12 are slidably engaged on horizontally registering fingers of

adjacent posts, until the lower edge 11E of the slat comes to rest at the bottom parts of said fingers while each said finger projects through and upwardly of a pair of the lower slots of the slat, the upper part of the finger bearing lightly against the main outer face of the slat above said pair of slots, see Fig. 2. The opposite longitudinal edge portions of each slat are identical and therefore either edge may be turned down to engage or be engaged by fingers 10F as just described. A continuous fence of unlimited length may be made by overlapping end parts of the slats until their slots are alined vertically and slipped down on the fingers of a post as described (see right side of Fig. 1).

Where joining and overlapped slat ends are mounted it is obvious that there are two thicknesses of sheet metal (as in Fig. 2) retained by the fingers 10F, but at the end of a fence there will be only one thickness which would mean that at said ends the fingers retain the single thickness comparatively loosely but this condition is readily overcome by simply hammering the fingers toward the face of the post until each said finger bears tightly against the slat or may be slightly impressed therein by the hammering action.

In Fig. 8 the ridges or ribs 11R are terminated short of the end of the slat as at 11R′ and a short rib as 11R may be formed as a continuation to the end as at 11R″, or near said end, projections such as 11P may be formed in the metal, leaving a plain transverse surface across the slat, which surface is slipped between the post 10 and finger 10F, the latter indicated in dotted lines. This construction prevents end slippage without providing slots 12.

For efficiency in manufacture, the fingers 10F are punched from the metal in each face flange of a post, being connected to the flange at its lower end as described, the finger being thus integral and spaced from and parallel to the said face as shown. Said fingers may be separate pieces suitably fixed on the flange (not shown) by welding or riveting but these variations would of course be simply mechanical expedients.

The fence may be set up as described, either in a vertical or angular plane, the best condition having been found to put it up at an angle about 23 degrees from the vertical, about as in Figs. 2 and 3. In many cases the character of soil and subsoil is such that there is ample rigidity of the posts but where conditions require it I provide brace rods 14, preferably of round bar iron, each arranged to detachably engage the post in spaced relation to the ground and extend thence downwardly and angularly from the post to the ground level, the lower end of each brace comprising preferably a loop or eye 14E resting flat on the ground and in the eye of which is insertible downwardly an anchor-pin 15 tapered to be driven into the ground, said pin having a head 15H preferably with an aperture for the purpose of facilitating removal of the pin from the ground. The upper end of these braces may be formed in various ways, for example, to engage in an aperture 16 provided in the face flange or other flange of a post and between fingers 10F.

In the form of brace shown in Fig. 2 its upper end is of elongated Z-shape, the extremity of which 14X is inserted in an aperture 16 and bears against the face flange, below which its adjacent bent part is within said aperture and below the aperture part 14X′ bears against the opposite side of the flange and thence the main integral arm extends diagonally to its lower terminus. In the modified forms shown in Figs. 6 and 7 the upper brace end, as in Fig. 6, is an outwardly opening V-shaped member hooked into aperture 16, the extreme end 14D projecting downwardly. In Fig. 7 the engaging end comprises an upwardly opening V-shaped member hooked into aperture 16 with the extreme end 14E projecting upwardly from the flange. The construction providing an aperture engaging hook on the upper end of each brace is variable for satisfactory holding and removability only when the lower brace end is free, no particular construction being favored except the form shown in Fig. 2. It is sufficient if any form of removable hook is used embodying a bent end positively but removably engaging the aperture 16, and preferably if it has shoulder portions bearing against one or opposite faces of the flange to prevent rattling. As a further brace modification Fig. 9 illustrates the upper end of a brace 14 bent in a horizontal plane to conform to the shape of the post, as at 14S, to grasp the post as shown, thus eliminating the aperture 16.

In Fig. 3 the dotted lines 17 indicate a drift of snow as it forms in front of this type of fence. If the fence is mounted as shown, in parallel, spaced relation to a road 18, the fence will not clog with snow, the slats causing windblown snow to deflect in a whirlpool effect and the snow is actually stopped and piled up in spaced relation to the fence, about as shown.

My invention has now been fully disclosed and its simplicity of construction and erection will be readily understood.

I claim:

1. A snow fence comprising posts spaced at predetermined distances, a number of vertically spaced fingers on each post directed upwardly and parallel to the post, a number of horizontally disposed longitudinally ribbed sheet metal slats each provided with apertures adjacent its opposite ends and adapted to be slidably and frictionally held in upright plane of the posts by downward movement with both ends of a slat simultane-

ously engaging corresponding fingers of adjacent posts.

2. The structure specified in claim 1, in which said sheet metal slats comprise each an elongated quadrangular piece of sheet metal formed with longitudinal reenforcing ribs, one adjacent each long edge, said apertures provided in pairs spaced transversely of the slat, one pair in each rib and arranged to be slidably engaged by a finger of the post and said finger arranged to bear against the face of the slat above and below a pair of said apertures.

3. A snow fence comprising a number of upright elongated metal posts of angle-shape in cross section, said posts fixed in the ground with corresponding face flanges in a common plane of the fence, a number of vertically spaced upwardly directed fingers formed integral with each post above its normal ground line, the main part of each finger normally parallel to said face flange, sheet metal fence slats with apertures at opposite ends and adjacent each edge arranged to be slidably mounted selectively on a post finger, and brace means for each post comprising apertures in said face angle of a post, and a brace member adapted to removably engage in said apertures and extending in an inclined plane thence to the ground, and means for securing the latter end of the brace to the ground.

4. The structure specified in claim 3, in which each said brace for a post comprises a metal bar with its upper end formed with hook means adapted to be inserted in a post aperture when the main bar part is in inoperative position, said hook means formed to engage the post in said aperture non-removably when the main part of the bar is in operative position, the lower end of each bar formed with an eye part arranged to bear on the ground, and a stake member insertible in the ground through said eye.

5. The structure specified in claim 3, in which each said brace for a post comprises a metal bar with its upper end formed with a hook adapted to be inserted in a post aperture when the bar is out of operative position, said hook means formed to engage and brace the post at said aperture when the bar is inclined downwardly from the post, the lower end of the bar adapted to lie on the ground and having an aperture, and a stake member insertible through said aperture into the ground, said stake comprising a pointed rod formed with a head having a transverse aperture as described.

6. A snow fence comprising angle-metal posts adapted to be driven in the ground in predetermined spacing and alinement with the face surface of each post in a common plane with corresponding faces of the other posts, vetrically spaced metal fingers integral with said face surfaces and directed upwardly in parallel relation to said face of a post and above the normal ground line, sheet metal fence slats with recessed end parts arranged to be dropped downwardly and slidably engage said fingers of adjacent posts to retain the slats in parallel relation to each other and to the ground.

7. An all metal snow fence comprising posts adapted to be driven in the ground in an inclined or vertical plane, upwardly directed integral fingers on said posts, horizontally alined fence slats arranged to frictionally engage said fingers and be retained between them and adjacent faces of the posts, said slats arranged in vertically spaced relation to deflect driven snow away from the fence in a whirl-pool like effect and cause it to accumulate in spaced relation to the fence.

8. A snow fence comprising a row of equally spaced metal posts with corresponding vertically spaced upwardly directed fingers, sectional sheet metal fence slats connecting and removably attached to adjacent posts on said fingers, said slats reenforced longitudinally and said reenforcing consisting in forming each slat with parallel longitudinal fluting of the metal, said fluting being identical at each long edge of a slat, and either of said edge parts of a slat adapted to slidably and removably engage a finger of a post at each end part of such slat.

9. A snow fence comprising metal posts fixed in the ground at predetermined distances apart, upwardly directed integral fingers on said posts, sheet metal fence slats removably engaging said post fingers at their end parts, the ends of alined slats overlapped at each post and said overlapped ends provided with transversely arranged indentures arranged to be alined and engaged on a post finger for the latter to retain the overlapped parts between it and the post, each said slat reenforced longitudinally and intermediate said post engaging parts.

10. A snow fence comprising a series of equally spaced posts driven in the ground, horizontally disposed sheet metal fence slats spaced apart vertically, said slats overlapped at each post and means on each post removably engaged by said overlapped parts of alined slat members simultaneously.

In testimony whereof I affix my signature.

CHAUNCEY L. BROWN.