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B. W. FLANDERS

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PLANT PROTECTOR

Filed Aug. 18, 1932

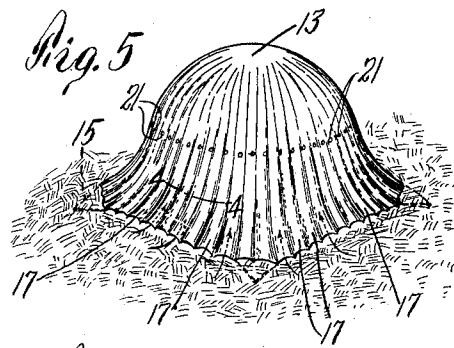
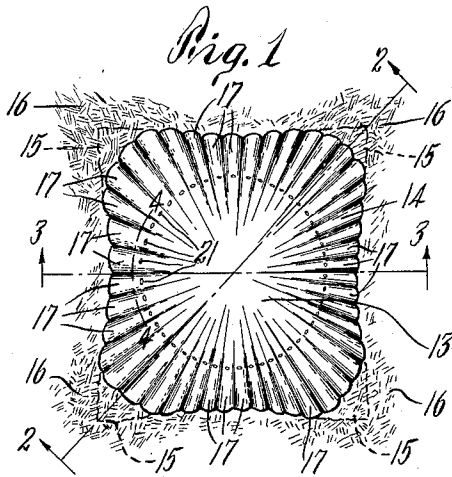
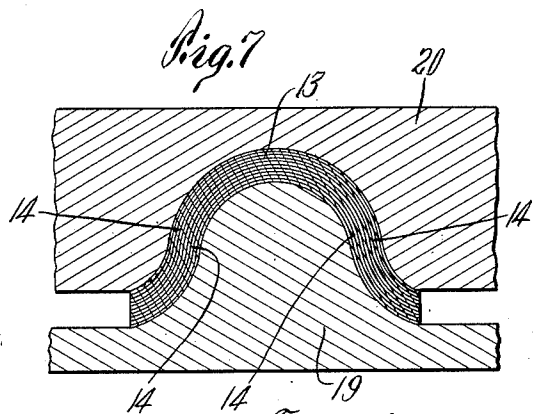
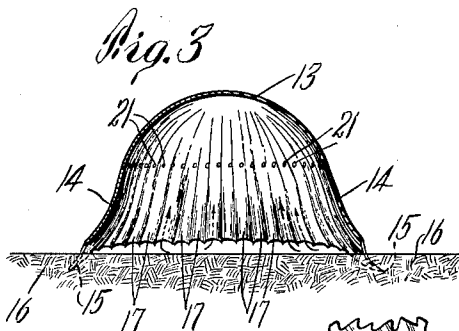
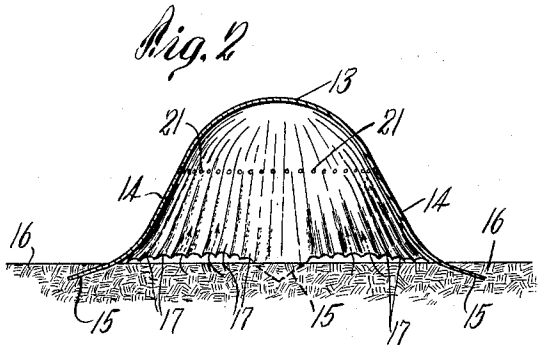
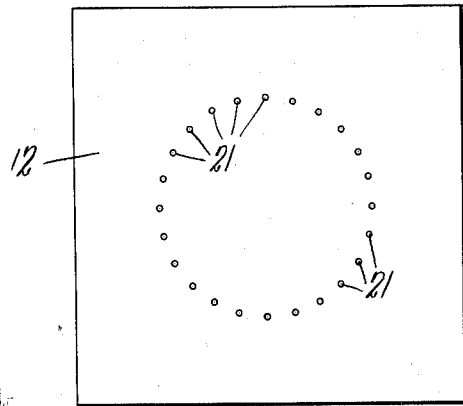


Fig. 6



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UNITED STATES PATENT OFFICE

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PLANT PROTECTOR

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This invention relates to protectors adapted to cover immature plants growing in earth, and protect the same against injury by cold and other causes.

5 The invention is embodied in a protector composed of a single piece of sheet material, such as waxed paper, not easily softened by water, molded by dies to form a body adapted to bear on an earth area and cover a
10 plant, and having a plurality of anchoring corners adapted to be engaged with the earth at uniformly spaced apart points to securely confine the protector against liability of displacement by wind blowing in
15 different directions, and edge portions between the anchoring corners formed and arranged to admit air to the interior of the protector between the earth and said edge portions, the protector being stiffened by
20 corrugations which facilitate the entrance of air, the form of the protector being such that a plurality of identical protectors can be formed at one operation by a pair of dies.

Of the accompanying drawing forming a part of this specification,—

Figure 1 is a top plan view showing my improved protector anchored to an earth area.

30 Figure 2 is a section on line 2—2 of Figure 1, said line intersecting two of the anchoring corners.

Figure 3 is a section on line 3—3 of Figure 1.

35 Figure 4 is a fragmental section on line 4—4, Figures 1 and 5 showing the preferred form of the corrugations.

Figure 5 is a perspective view showing the protector anchored as shown by Figures 1, 2 and 3.

40 Figure 6 is a plan view of the square piece or blank from which the protector is formed.

45 Figure 7 shows in section a pair of molding dies and a plurality of protectors formed thereby at a single operation.

The same reference characters indicate the same parts in all of the figures.

50 My improved protector is molded from a single square piece, or blank, 12 (Fig. 6) of sheet material, preferably waxed paper, the

blank being preferably eighteen inches square.

The molding operation is performed by dies hereinafter described, formed to produce from the blank the protector shown by
55 Figures 1, 2, 3 and 5.

The protector has a concavo-convex central portion 13 whose convex side constitutes a dome-shaped top surface of the protector and a substantially square margin
60 which is contracted by the molding operation, as may be seen by comparing Figure 1 with Figure 6.

A skirt portion 14 is curved downwardly and outwardly from the central portion 13
65 to the margin.

The protector thus formed has four angular corner portions 15 inclined outwardly from the skirt portion, and formed to be anchored as best shown by Figures 1, 2,
70 and 5, at spaced apart portions of an earth area 16 on which the protector rests, the anchoring being conveniently effected by earth portions superposed on said corner portions.
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The protector is provided with corrugations 17 extending radially from the central portion 13 to the edges of the margin. Said corrugations are preferably formed in cross section as shown by Figure 4, and are tapered from end to end, their inner ends being
80 extremely narrow, or vanishing to pointed inner ends, and their outer ends, which are on the margin of the protector, being much wider.
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The arrangement is such that when the corner portions 15 are anchored, the edge portions between the anchored corner portions are slightly raised above the earth area, and the wider ends of the corrugations
90 17 permit access of air to the interior of the protector, as indicated by arrows in Figures 3 and 5.

It will now be seen that the protector, when anchored at four points as shown, is
95 not liable to be displaced by wind blowing in any direction, and is conditioned to provide air inlets between its margin and the earth area, permitting access of air to a plant covered by the protector, the wider
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ends of the corrugations 17 facilitating the entrance of air.

The central and skirt portions formed as shown and described, impart an ogee curve to any cross section of the protector radiating from its center, so that a plurality of blanks may be molded by a male die 19 and a female die 20, formed as shown in section by Figure 7, the forming faces of said dies being shaped to convert, by a single operation, a plurality of blanks placed therebetween into a plurality of operative protectors, each characterized as hereinbefore set forth. I have found that by using any suitably thin paper, twenty-five or more protectors may be formed by one operation of the dies, so that the cost of making the protectors may be reduced to a minimum.

The preferred height of the center of the portion 13 above the earth area on which the protector rests is about six inches.

Additional air inlets 21 may be formed in the protector if desired.

I claim:

As an article of manufacture a plant protector composed of a single piece of sheet material having a concavo-convex central portion whose convex side constitutes a dome shaped top surface, a substantially square margin, and a skirt portion curved downwardly and outwardly from the central portion to the margin, the four angular corner portions of the protector projecting outwardly from the skirt portion, and adapted to be anchored in spaced apart portions of an earth area on which the protector rests, the protector being provided with tapered corrugations extending radially from the central portion to the edges of the margin, the form of the protector being such that when the corner portions are anchored, air inlets are provided between the anchored corner portions permitting access of air to a plant covered by the protector.

In testimony whereof I have affixed my signature.

BERT W. FLANDERS.

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