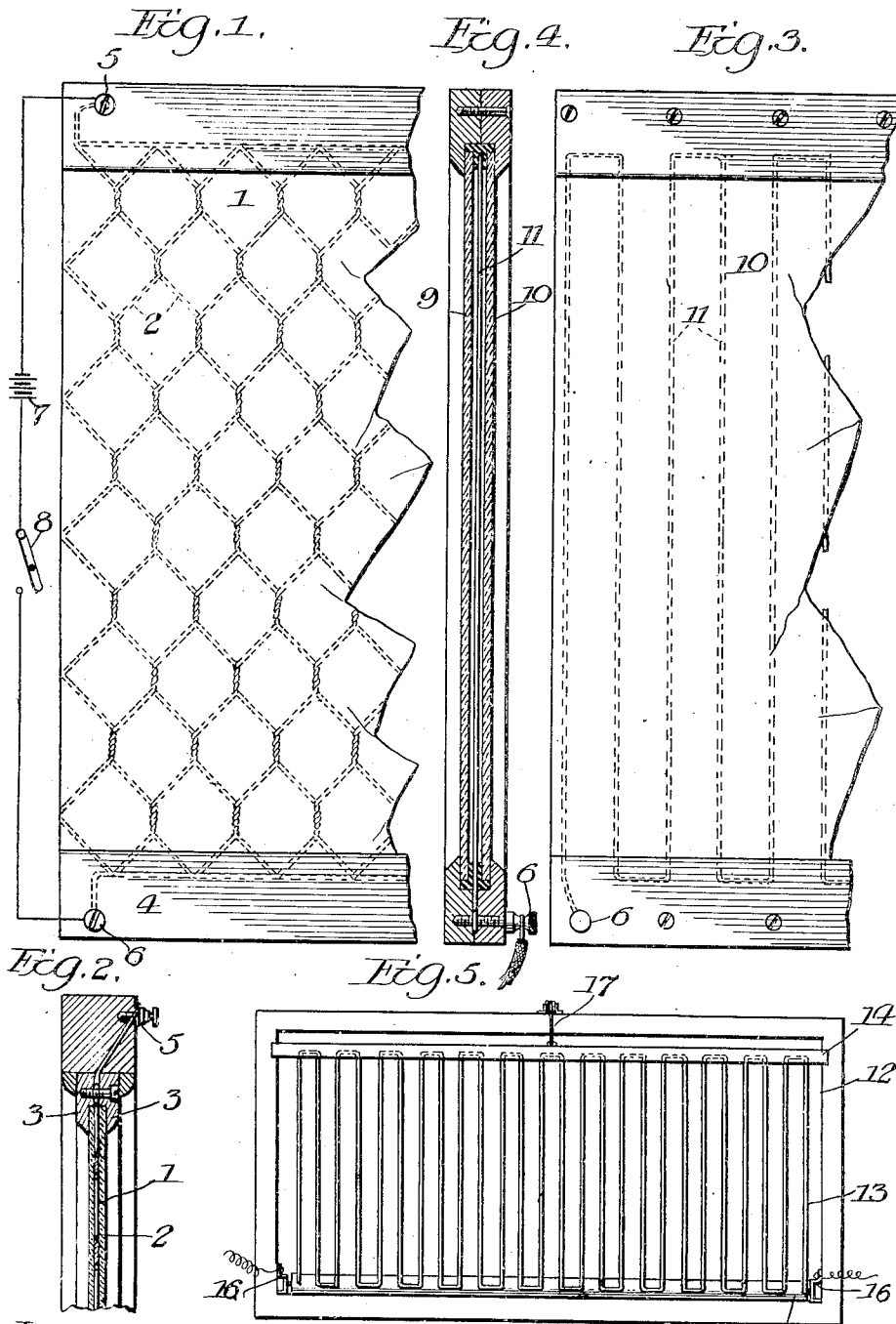


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CLARIFYING TRANSPARENT MEDIA.
APPLICATION FILED FEB. 11, 1913.

1,117,128.

Patented Nov. 10, 1914.



Witnesses
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CLARIFYING TRANSPARENT MEDIA.

1,117,128.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, CHARLES EDWARD CAMM, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a certain new and useful Improvement in Clarifying Transparent Media, of which the following is a full, clear, concise, and exact description, reference being had to the accompanying drawings, forming a part of this specification.

My invention relates to means for keeping transparent media free from moisture, ice, or similar deposits, a specific application for instance being its use in connection with keeping the windows of vehicles or other windows for that matter free from ice, moisture or similar deposits. It is of course well known that the look-out windows of locomotives or the wind shields of automobiles, or the windows in the vestibules of cars should be kept in a transparent state in order to permit the driver of the vehicle to see the path ahead. It is also well known that moisture deposits very readily on these windows when the windows are cold and that this moisture may even develop into ice or frost. Moreover snow or sleet deposits itself very readily upon these exposed parts and thus renders such windows more or less opaque, thus to interfere with an unobstructed view ahead.

My invention contemplates the provision of means to prevent the formation of this frost or ice, which means likewise tend to dispel very rapidly water which may be driven against the window, and which means practically instantaneously melt snow or sleet driven against the window. The means of my invention contemplate the provision of suitable heating devices to perform the objects desired.

My invention may of course be variously applied and the heat may of course be applied in any suitable form. I will, however, in the description which follows set forth some specific ways of carrying out my invention more particularly by the aid of electrical heating devices. These specific forms of carrying out the invention are illustrated in the accompanying drawing forming part of this application, in which—

Figure 1 is a front view of a window constructed in accordance with my invention;

Fig. 2 is a sectional view thereof; Fig. 3 is a front view of a modified form; Fig. 4 is a sectional view of the device illustrated in Fig. 3; and Fig. 5 further illustrates a modified form of the invention.

Referring more particularly to Figs. 1 and 2, I show a pane of glass 1 which is provided with wires 2, 2 extending from one end thereof to the other. The wires 2 are of course embedded in the glass, being entirely surrounded by the glass as is more clearly apparent from Fig. 2. These wires are connected to metallic plates 3 at one extremity thereof and to a metallic plate 4 at the opposite extremity thereof. Suitable binding posts 5 and 6 respectively lead to the plates 3 and 4. A source of current 7 may then be connected to the binding posts 5 and 6 through the interposition of a suitable switch 8 and when this current passes through the wires, the wires are heated, thereby heating the pane of glass, and thus through the agency of the heat thus generated, serving to evaporate or dispel any moisture which is being deposited upon the glass, thus to prevent the same from being opaque from such a deposit. Likewise any sleet or ice which may be driven against the outside of the window will be rapidly melted and rain which is being driven against the window will in a minute be evaporated, thus to maintain the transparency of the window without the use of auxiliary cleaning devices and thus permit an unobstructed view so that the driver of the car may control the same properly and unhampered by an opaque window in front of him. Of course it will be readily apparent that the entire window need not be thus heated so long as a sufficient portion of the window is provided with means to keep it clear.

In Figs. 3 and 4, I have shown a modification in which I utilize two windows 9 and 10 respectively between which the resistance wire 11 is strung and the heat generated by the wire is maintained between the plates 9 and 10 thus to keep them heated to a sufficient degree to carry out the objects desired. Suitable binding posts 5 and 6 connected to the terminals of the resistance wire 11 serve to conduct current thereto to heat the same. Of course the plates 9 and 10 need not both be of glass, if not found desirable; but one for instance may be of

glass or celluloid or any other suitable transparent materials may be utilized if desired. The two plates 9 and 10 may or may not rest against the wire 11 as may be determined by conditions, all as will be readily apparent to those skilled in the art.

In Fig. 5 I show a further modification in which the window 12 has a network of wires 13 arranged in front of it. These wires are connected between a plate 14 and a roller 15 in such a manner that when the plate 14 through the agency of the cord 17 is released, the wires may be wound upon top of the roller 15. Suitable binding posts 16 and 16 serve to conduct current through the wire 13 in any suitable manner in order to heat the same. The net work of wire 13 it will be seen in this instance is not embedded in the glass nor between two transparent plates as shown in Fig. 4, but rests against it, or close to it, thus to provide the necessary heat to carry out the objects intended.

From what has been described the general nature of my invention will be readily apparent to those skilled in the art. It will also be apparent that the embodiments herein shown are illustrative in character of the nature of the invention, and that many modifications may be made without departing from the spirit of my invention.

Having however thus shown various forms which my invention may take, what

I claim as new and desire to secure by Letters Patent is:

1. The combination with a window framework, of a pair of transparent glass panes mounted therein side by side with an intervening confined space, a resistance wire interposed between said panes for the purpose of heating said panes, an insulating distance piece for separating said panes and supporting the convolutions of said resistance wire, and means for supplying current to said resistance wire.

2. The combination with a window framework, of a pair of transparent glass panes mounted therein side by side with an intervening confined space, a resistance wire interposed between said panes for the purpose of heating said panes, an insulating distance piece for separating said panes and supporting the convolutions of said resistance wire, and means for supplying current to said resistance wire, said window framework being made in two halves and means for clamping said halves together with said panes and insulating distance piece between them.

In witness whereof, I hereunto subscribe my name this 29th day of January, A. D., 1913.

CHARLES EDWARD CAMM.

Witnesses:

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