

Feb. 28, 1939.

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2,148,930

METALLIC SASH FOR WINDOWS AND LIKE BAYS

Filed Aug. 18, 1936

Fig. 1

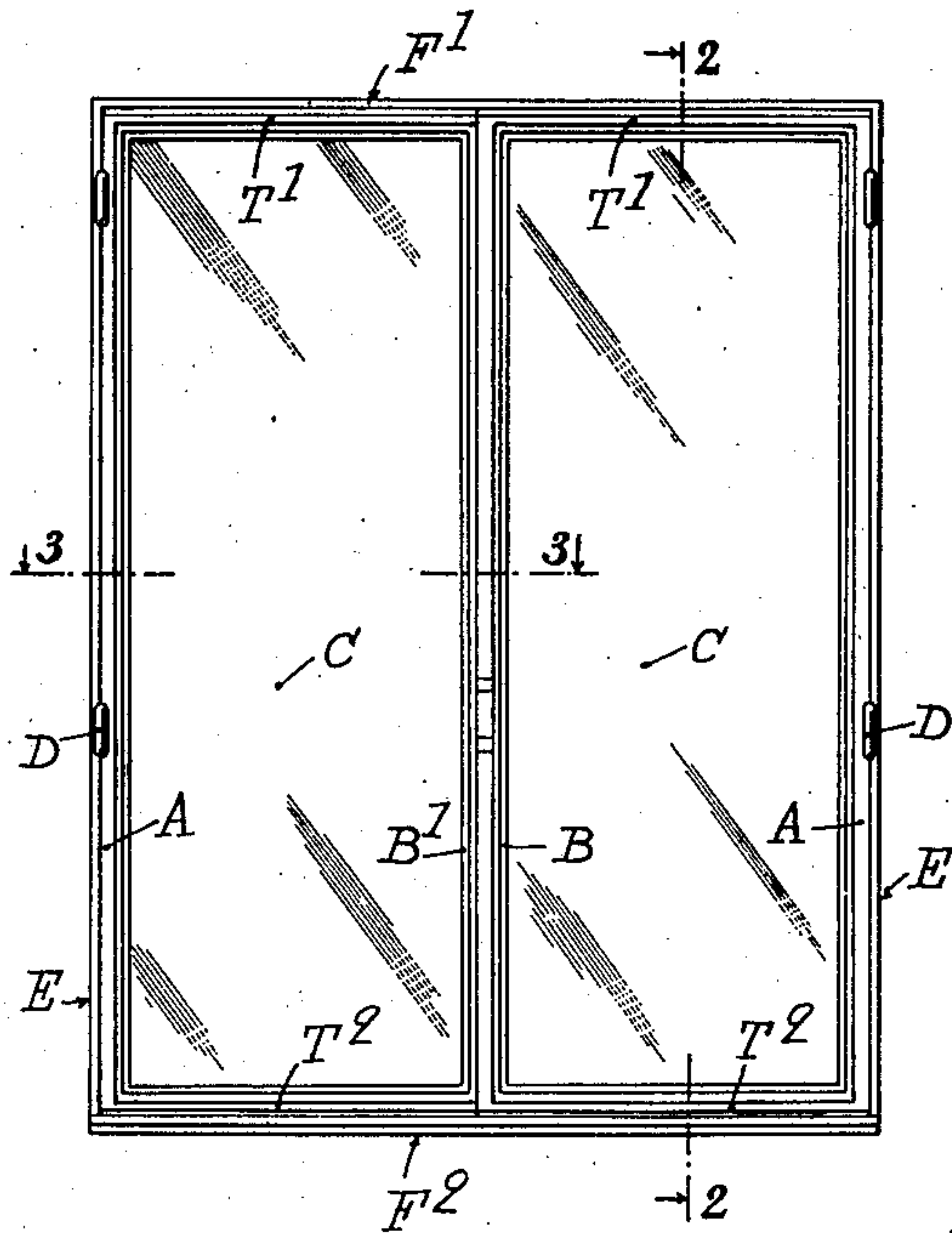


Fig. 2

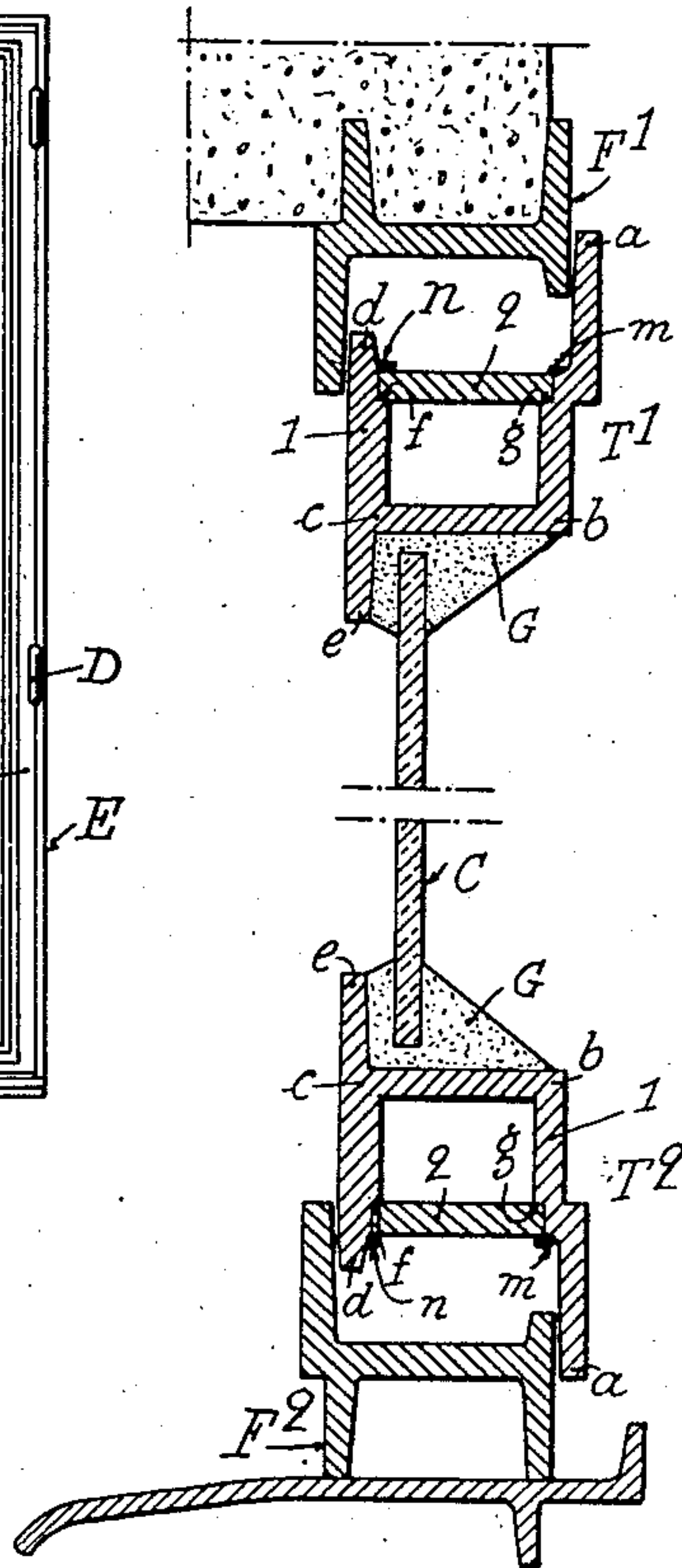
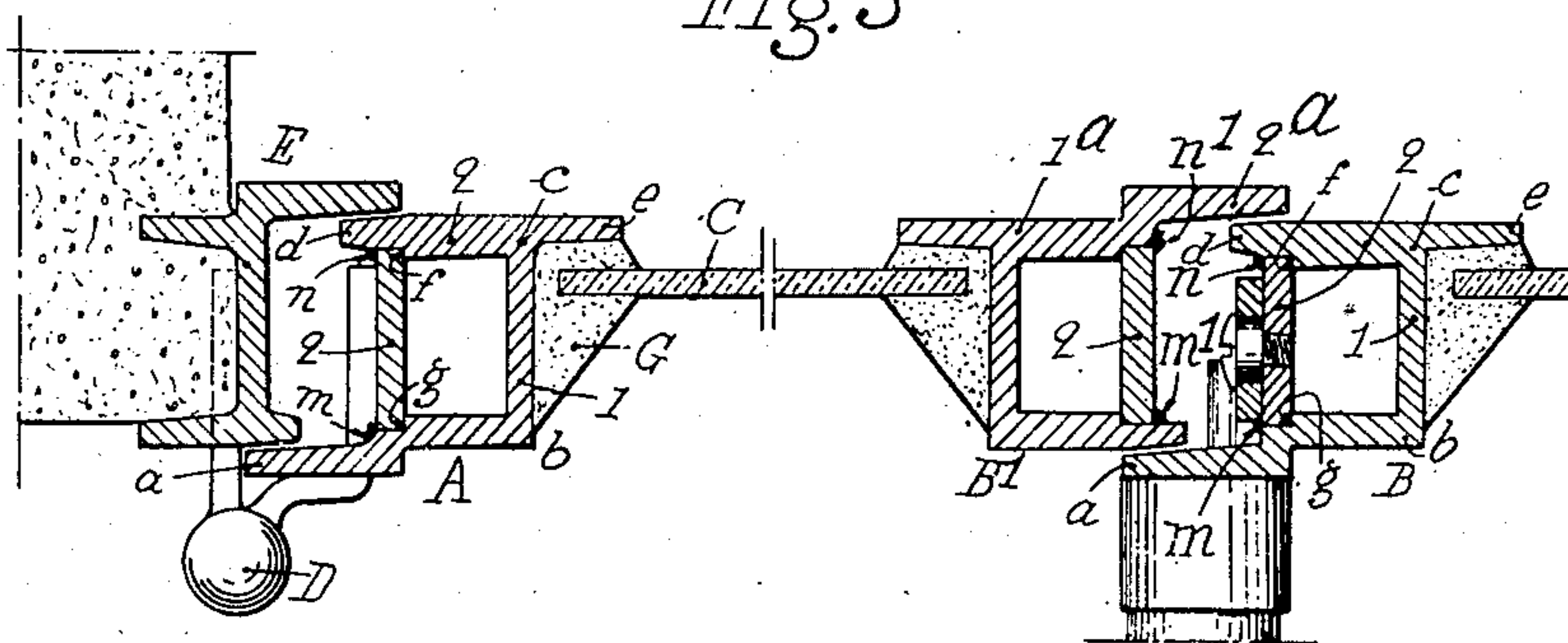


Fig. 3



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UNITED STATES PATENT OFFICE

2,148,930

METALLIC SASH FOR WINDOWS AND LIKE
BAYS

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Application August 18, 1936, Serial No. 96,624
In France November 8, 1935

1 Claim. (Cl. 189—76)

The present invention has for its object a metallic sash for windows, door-windows and like bays, having a great rigidity and a very reduced cost price.

In the accompanying drawing, which is given solely by way of example:

Fig. 1 is a front view of a window with a metallic sash according to the invention.

Fig. 2 is a vertical section on a larger scale, on the line 2—2 of the window represented in Fig. 1.

Fig. 3 is a horizontal section on the line 3—3 of Fig. 1.

It is a known fact that in a window provided with a metallic sash (Fig. 1), each leaf of the window comprises a metallic sash frame consisting of two uprights (A—B) or (A—B¹) which are connected by two cross-pieces T¹ and T², and in which is maintained a pane of ordinary or plate glass C, or any other panel. Each leaf is mounted by hinges D on the uprights of a window frame, which consists in the same manner of two metallic uprights E and of two metallic cross-pieces F¹ and F² which are secured to the masonry.

The two uprights A, the uprights B and the cross-pieces T¹ and T² are constituted, according to the invention, of the assemblage of a section bar 1 having a general U shape (abcd) and of a flat bar 2. The web bc of the U-shaped bar 1 is perpendicular to the flanges, which have unequal widths, the flange ba being wider than the flange cd; on the contrary this latter flange cd is extended to e, beyond the web bc.

The flat bar 2 is fitted between the flanges of the section bar 1 and is preferably in contact with two shoulders f and g of the said bar.

The bar 2 is secured by welding to the bar 1, according to two longitudinal lines of welding m and n, which are both situated in a same plane. Said two welding lines may thus be executed in two successive operations without changing the position of the assemblage 1, 2 or they may preferably be executed simultaneously by means of a welding apparatus provided with two welding heads. As will be observed, the lines m and n of the assemblage are concealed after the mounting of the sash, so that these lines m and n may remain in the rough state after the welding.

The web and the extension ce of the bar 1 form the rabbet which is adapted to receive the glass pane C or other panel, this being held by putty G or by any other known means.

The upright B¹ which receives the upright B of the other leaf is constructed, in a similar man-

ner, by means of a section bar 1^a having a U shape (Fig. 3) and of a flat bar 2. These two members are assembled according to the two lines m¹ and n¹ which have the same features as the lines mn above mentioned.

As will be observed, the assemblage requires only the use of three types of section bars 1, 2, 1^a; all of the uprights and cross-pieces are tubular and are thus quite rigid, their thickness being very exact, as it depends upon that of the bars 1 or 1^a; the assembling is not expensive, as the operations are limited to two weldings which can be effected without handling the upright or the cross-piece between these two weldings, and which may remain in the rough state.

It is thus apparent that, in the sash shown in Figs. 1 to 3, the sides, or certain of these, are tubular and are formed by the assemblage of two section bars, the shape of which is such that one of these bars forms both lateral faces of the sash elements, and that the two longitudinal lines of the assemblage will occur upon the same face of one of the section bars and at such places that these lines will be concealed when the sash is mounted and has received the glass panes or like panels.

From this it will result, that:

It is an easy matter to give to the upright or the cross-piece a very exact thickness which is quite independent of the assemblage;

The two welding lines of the assemblage may be effected simultaneously, without making it necessary to overturn the whole device, since the two lines of the assemblage are situated on the same side of the main section bar;

The welding lines may remain in the rough state after the welding.

Hence, the assemblage, which comprises only three types of section bars, is most economical.

The section bars may consist of any metal or alloy, and use may be chiefly made of bronze, aluminium or their alloys which may be treated by the drawing process.

The uprights B and B¹ of the middle part may in certain cases have a simple profile in order to afford greater lightness, the other three sides remaining tubular. In certain cases, the construction may be tubular only for the uprights A which are situated on the side next the hinge.

Having now described my invention what I claim as new and desire to secure by Letters Patent is:

A tubular metallic member for casement window sashes and the like, formed by the combination of a channel section bar having a web and

two flanges disposed at right angles to said web, one of said flanges including a main portion having substantially the same width as the other of said two flanges and an outer portion extending beyond said main portion and being offset outwardly relative to said main portion so that its inner face is substantially in line with the outer face of said main portion, each of said flanges being provided with a shoulder on its inner face, and a flange portion extending either one of said

flanges beyond said web to form a glazing rabbet, and a flat bar disposed between said two flanges at right angles therewith and resting on said shoulders and secured by two continuous welding seams to said flanges, the shoulders being so positioned that the flat bar and the welds are recessed below the edges of the flanges to which the flat bar is attached.

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