Feb. 20, 1934. R. W. ZIMMERMAN 1,948,152

WINDOW

Filed July 23, 1930

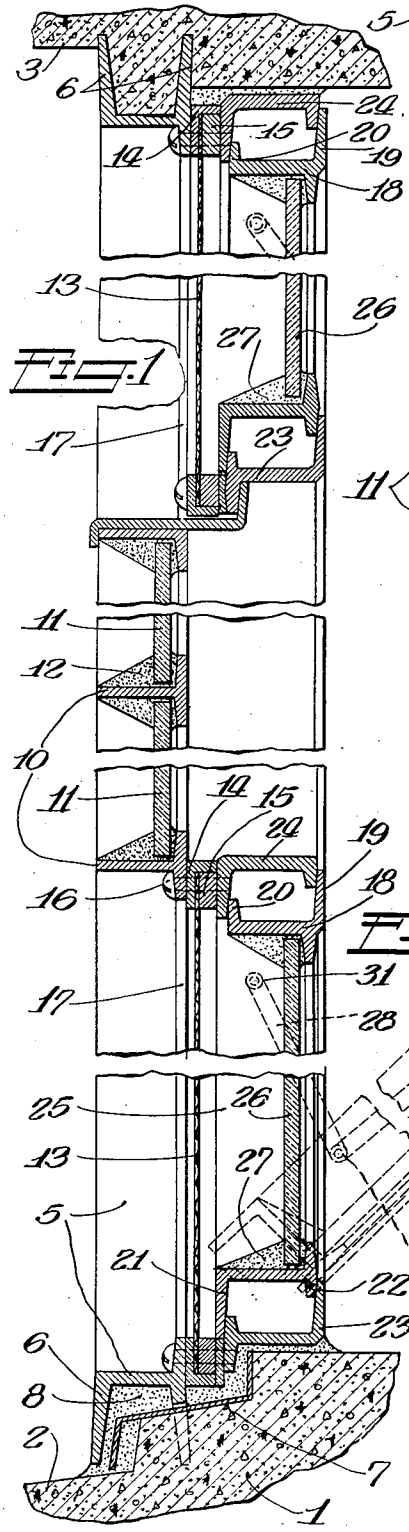


Fig. 1

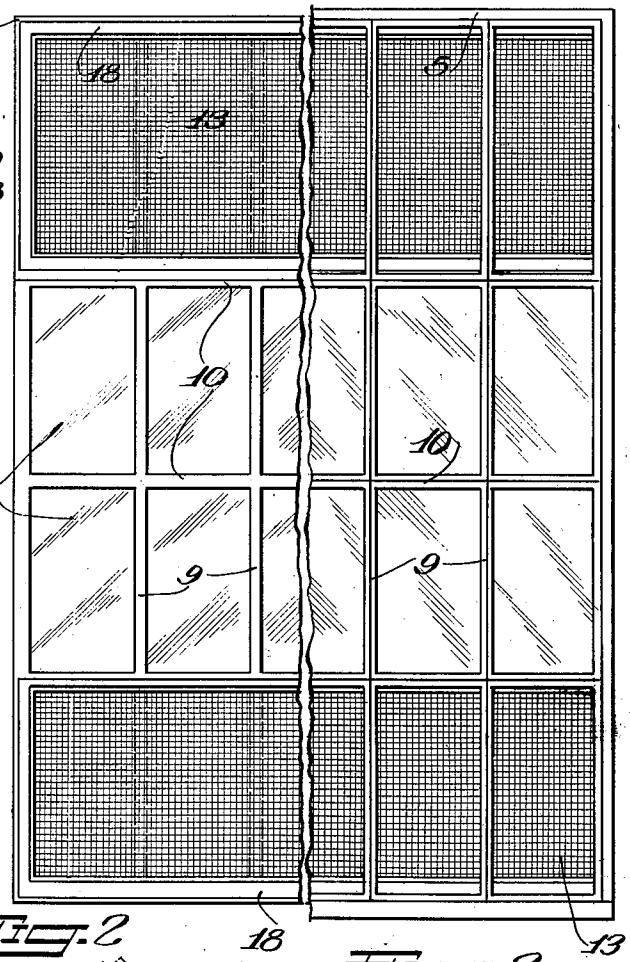


Fig. 2

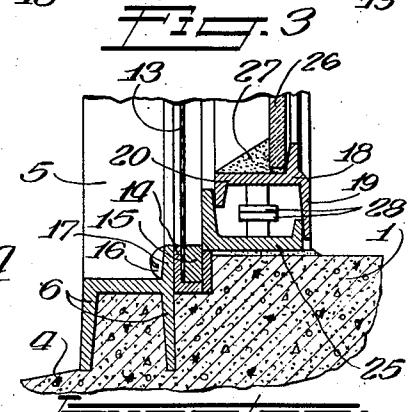


Fig. 3

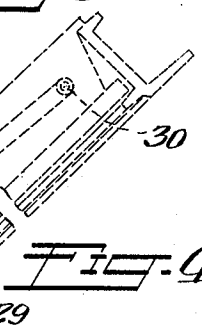


Fig. 4

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WINDOW

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17 Claims. (Cl. 189—64)

This invention relates to improvements in windows, and more particularly to improvements in windows of a type highly desirable for use in penitentiaries, asylums, and other similar places of confinement, although the invention might equally well be used in shops, factories, and many and various places as will be apparent to one skilled in the art.

In the past, many and various types of windows have been used, but the types heretofore known when used in places of confinement have in most instances proven objectionable in that they can very readily be broken by inmates or prisoners without detection until the actual breaking out of the inmates. In other words, these windows could be previously prepared for the actual breaking without detection of such preparation. Moreover, windows used heretofore in institutions of confinement themselves betokened their purpose so that it was obvious to the inmate as well as to an outsider that the very purpose of such a window was not only to admit light or air but also to confine. In some cases of insanity or even possibly drug addiction it is at least highly desirable if not absolutely necessary for best results that the inmate does not realize that he is actually undergoing confinement. Furthermore, windows previously in use, while they may provide the desired amount of light, are not capable of producing the proper kind of ventilation; nor do these windows prevent the throwing of objects therethrough by an inmate to an outsider or by an outsider to an inmate, and such practice obviously is one which must be effectually terminated.

With these and other objections in view, it is accordingly an object of the present invention to provide a window which is substantially of ideal construction in that it provides very adequate and proper ventilation, screening, affords the passage of sunlight through unscreened glass, and the construction of which, while not in itself being unbreakable, adequately defies or forestalls attempts at breaking.

Another important object of the present invention is the provision of a window of such construction that easy and general inspection will at once reveal even very slight attempts to escape or break through the window, while at the same time the window does not create an atmosphere of restraint so as to inform an inmate not aware of the actual circumstances that the particular window aids in establishing his confinement.

Still another object of the present invention is the provision of a window highly desirable for prisons, asylums, and the like which not only provides adequate light and ventilation of the proper kind, but also effectively prevents throwing or otherwise passing objects therethrough.

Still a further object of this invention is the provision of a window of such construction that, while it is not impossible to break through the window, yet a reasonable inspection will at once reveal not only whether or not an attempt has been or is being made to break through the window, but also the exact nature and location of the attempted breaking.

While some of the more salient features, characteristics, and advantages of a device embodying this invention have been above pointed out, others will become apparent from the following disclosures.

The invention includes these and other features of construction and combination of parts hereinafter described, and shown in preferred form on the drawing, as more particularly indicated by the claims.

On the drawing:

Figure 1 is a vertical sectional view in elevation showing the installation of a window embodying principles of the present invention.

Figure 2 is a reduced fragmentary inside elevation of the window shown in Figure 1.

Figure 3 is a fragmentary outside elevational view of the window.

Figure 4 is an enlarged fragmentary plan sectional view illustrating the mounting of the window and ventilators.

As shown on the drawing:

In the illustrated embodiment of the present invention there is shown a wall 1 which in this instance is of concrete, but which, of course, may be of any other material found desirable. The wall is provided with a suitable opening for a window, and adjacent the opening the wall is formed in the nature of a sash frame including a sill 2, a head 3 and a pair of sides 4.

Mounted within the window opening is a sash 5 having a bifurcated outer margin formed with the production of the flanges 6 which are preferably inserted in the wall 1 on all sides of the window opening. The sash 5 and as many other parts of the window as possible are preferably made of metal for the purposes of establishing durability as well as making the window sufficiently strong to render an attempted breaking of the window substantially difficult. Adjacent the sill 2 customary flashing 7 is provided and above and around the flashing a finer plastic material or caulking 8 is preferably utilized.

As seen more clearly in Figures 2 and 3, the

sash 5 is provided with vertical and horizontal muntins 9 and 10 respectively which outline the entire window into a series of rectangles, the spaces defined by the muntins being each preferably sufficiently small to preclude the passage of a person's body therethrough, the muntins, of course, being a sufficient substitute for bars customarily used over windows in institutions of confinement. Preferably only the central portion of the window is glazed, with spaces between the muntins in this portion of the window being provided with lights 11 held in place by any suitable material such as the putty 12. Any desirable portion of the window around the central glazed portion may be left unglazed; in this instance, the unglazed portion being above and below the central portion, certain of these vertical muntins 9 extending over the unglazed portion to function as bars. Although certain of the muntins extend over the unglazed portion, they are apparently merely a part of the window structure without any particular function, so that certain types of inmates will not be lead to believe by the simple structure of the window that the window actually aids in their confinement.

A screen 13, which may be the customary fly screen or of any other desirable type, is preferably disposed just inside the vertical muntins extending over each of the unglazed portions of the window. These screens in this instance are held in position by the clamping action of angle irons 14 and complementary blocks or bars 15 caused by the tightening of bolts 16 which extend from the outside inwardly through suitable flanges 17 upon the sash bars and various struts to effectively support the screen holding structure, the screens not being removable except from the outside of the window. Preferably inside of each of the screens 13 a pivoted ventilator is mounted.

The ventilator includes a sash 18, of which three sides, namely, the top and two vertical sides or stiles are provided with a relatively long inner flange 19 and a comparatively short outer flange 20, while the lower rail of the ventilator sash is provided with a relatively long outer flange 21 and a comparatively short inner flange 22. Beneath each ventilator, an angular base 23 is held in position by certain of the bolts 16 and acts as a support for the ventilator in all positions of adjustment, this angular base being provided with a relatively long inner flange and a relatively short outer flange. Above each ventilator a head or jam 24 is provided, each of the heads 24 having a relatively long outer flange through which certain of the bolts 16 pass and a comparatively short inner flange. The ventilator jambs 25 are similar in construction to the heads 24. It is also apparent that the various flanges above the ventilator sash and the flanges upon the head jamb, jambs and base for the ventilator cooperate when the ventilator is closed to form a substantially air-tight joint. Each of the ventilators is provided with a light 26 held in place by putty 27 or in any other desired manner. The ventilators are pivotal, preferably inwardly, upon a pair of arms 28 which are in turn pivotally connected at adjacent ends thereof as at 29, one of the arms having its outer end pivotally connected to the ventilator sash as at 30 and the other arm having its outer end pivotally connected to the ventilator jamb as at 31.

An installation of the present invention is a simple expedient for the obtainment of many desirable results. For instance, the lights 11, which may be of glass permitting the passage therethrough of the ultra-violet rays, afford ample unscreened sunlight for an inmate. The upper and lower ventilators furnish ample fresh air when properly adjusted, and the air is furnished in the most desirable manner. The screens 13 not only prevent the entrance of insects but also prevent throwing or otherwise passing objects through the window either by the inmates to an outsider or by an outsider to the inmates. In addition, the vertical muntins 9 extending across the unglazed portions of the window perform the same function as customary bars without inherently impressing upon the mind of an inmate the idea of actual confinement.

Further, it is to be expressly noted with the present invention that while the window is not absolutely unbreakable, yet a very cursory outside inspection of the window will at once reveal any attempt at mutilation of the window. For example, it is utterly impossible for an inmate to obtain access to the vertical muntins extending across the unglazed portions of the window without first cutting through the screens 13, and any cut or disfiguration of the screens will at once be revealed by even a casual observation. Equally so, any attempt to injure other parts of the window will be likewise apparent.

Of course it is to be noted that the window may be made up of a plurality of sashes properly located or by a large individual sash provided with the various ventilator sashes disposed as found most expedient.

From the foregoing, it will be apparent that I have provided a window highly desirable for practically any purpose for which windows are customarily used, and especially desirable for use in connection with institutions of confinement. Moreover, the present invention is very simple in construction, may be quite readily installed, and may be economically manufactured.

I am aware that many changes may be made and numerous details of construction may be varied through a wide range without departing from the principles of this invention, and I, therefore, do not purpose limiting the patent granted hereon otherwise than necessitated by the prior art.

I claim as my invention:

1. In a window, a fixed glazed portion, glazed ventilators adjacent the upper and lower margins of said fixed portion, and bars extending across the spaces for said ventilators.

2. In a window, a sash including muntins and having a glazed central portion with unglazed portions adjacent the central portion, certain of said muntins extending across said unglazed portions, a screen set in each of said unglazed portions, and an inwardly adjustable glazed ventilator adjacent each of said unglazed portions.

3. In a protective window, a sash having a plurality of muntins therein, certain of said muntins being glazed and the remainder unglazed, a ventilator behind the unglazed muntins, and a screen between said ventilator and unglazed muntins to prevent the passing of objects through said window.

4. In a protective window, a sash having a glazed portion and an unglazed portion, bars over said unglazed portion, a ventilator inside of said unglazed portion, and means between said bars and said ventilator designed to indicate an attempt to pass objects through said unglazed portion.

5. In a construction of the character described, a window structure, including a plurality of mullion bars dividing the window into multiple

spaces, window panes closing certain of the spaces leaving a group of such spaces vacant to form a ventilating area across which continuations of the mullion bars extend, an adjustable closure for said barred ventilating area, and a screen section for said area interposed between the closure and the bars.

6. In a construction of the character described, a window structure, including a plurality of mullion bars dividing the window into multiple spaces, window panes closing certain of the spaces leaving a group of such spaces vacant to form a ventilating area across which continuations of the mullion bars extend, an adjustable closure for said ventilating area, and a screen section therefor located at the inner side of said bars.

7. In a construction of the character described, a window structure, including a plurality of mullion bars dividing the window into multiple spaces, window panes closing certain of the spaces leaving a group of such spaces vacant to form a ventilating area across which continuations of the mullion bars extend, and an adjustable closure for said barred ventilating area located on one side of the bars, said closure including a frame removably mounted adjacent the ventilating area and a second frame adjustably mounted in the first frame.

8. In a construction of the character described, a window structure, including a plurality of mullion bars dividing the window into multiple spaces, window panes closing certain of the spaces leaving a group of such spaces vacant to form a ventilating area across which continuations of the mullion bars extend, and an adjustable closure for said barred ventilating area located on one side of the bars, said closure including a removable frame member that may be removed from the outside of the main window and a closure adjustably mounted in said frame member.

9. In a construction of the character described, a window structure, including a plurality of mullion bars dividing the window into multiple spaces, window panes closing certain of the spaces leaving a group of such spaces vacant to form a ventilating area across which continuations of the mullion bars extend, and an adjustable closure for said barred ventilating area located on the inside of the bars, said closure including a pair of removably mounted interpivoted members that may be removed from the outside of the window.

10. In a construction of the character described, a window structure, including a plurality of mullion bars dividing the window into multiple spaces, window panes closing certain of the spaces leaving a group of such spaces vacant to form a ventilating area across which continuations of the mullion bars extend, and an adjustable closure for said barred ventilating area located on one side of the bars, said closure including a removably mounted frame supporting a pair of relatively movably mounted closures, one of which is designed to indicate any attempt to pass objects through said ventilating area and the other adapted to close the ventilating area.

11. In a window, a fixed glazed portion, glazed ventilators oppositely disposed adjacent margins of said fixed portions and bars extending across the spaces for said ventilators.

12. In a window, a fixed glazed central portion, oppositely disposed ventilators adjacent the margins of said fixed portion and bars extending across the spaces for said ventilators.

13. A detention window including a plurality of transversely arranged T-shaped muntin bars dividing the window into a plurality of spaces some of which are glazed leaving a group of spaces vacant for ventilating area across which some of the muntins extend as detention bars, and a removable closure assembly for the ventilating area, said assembly including a fixed frame removably seated in fixed relation with respect to the protective window and means for securing said frame independent of said seating, said means being accessible from the outside of the window.

14. A detention window including a plurality of transversely arranged T-shaped muntin bars dividing the window into a plurality of spaces some of which are glazed leaving a group of spaces vacant for ventilating area across which bars extend as detention bars, and a removable closure assembly for the ventilating area including a frame having a bar, one of said bars having a sill arranged in hooked relation with respect to one of the other bars to support said closure assembly and means independent of said sill for removably attaching the closure assembly in fixed relation with respect to said protective window.

15. A detention window including a plurality of transversely arranged T-shaped muntin bars dividing the window into a plurality of spaces some of which are glazed leaving a group of spaces vacant for ventilating area across which bars extend as detention bars, and a closure assembly including a frame having one side thereof interlocked with one of said muntin bars and fastening means for securing another side of said frame to said protective window.

16. A window structure including transversely disposed muntin bars dividing the window into spaces some of which have glass panes leaving at least one space vacant for ventilating area across which extends detention bars, a closure frame therefor suited in size to fit the ventilating area, said window structure and said closure frame having interlocking relation with each other and means for fixedly attaching the frame and the window structure.

17. A protective window including a plurality of transversely arranged muntin bars dividing the window into a plurality of spaces some of which are glazed leaving spaces along one margin open for ventilating area across which some of the muntins extend as detention bars, and a detachable closure assembly marginally positioned on the inside of the window, means accessible from the outside of the window for securing said closure assembly to the window.

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