May 16, 1933. C. F. KUNEY 1,909,111

STEEL SASH

Filed Sept. 5, 1930 2 Sheets-Sheet 1

Fig. 1

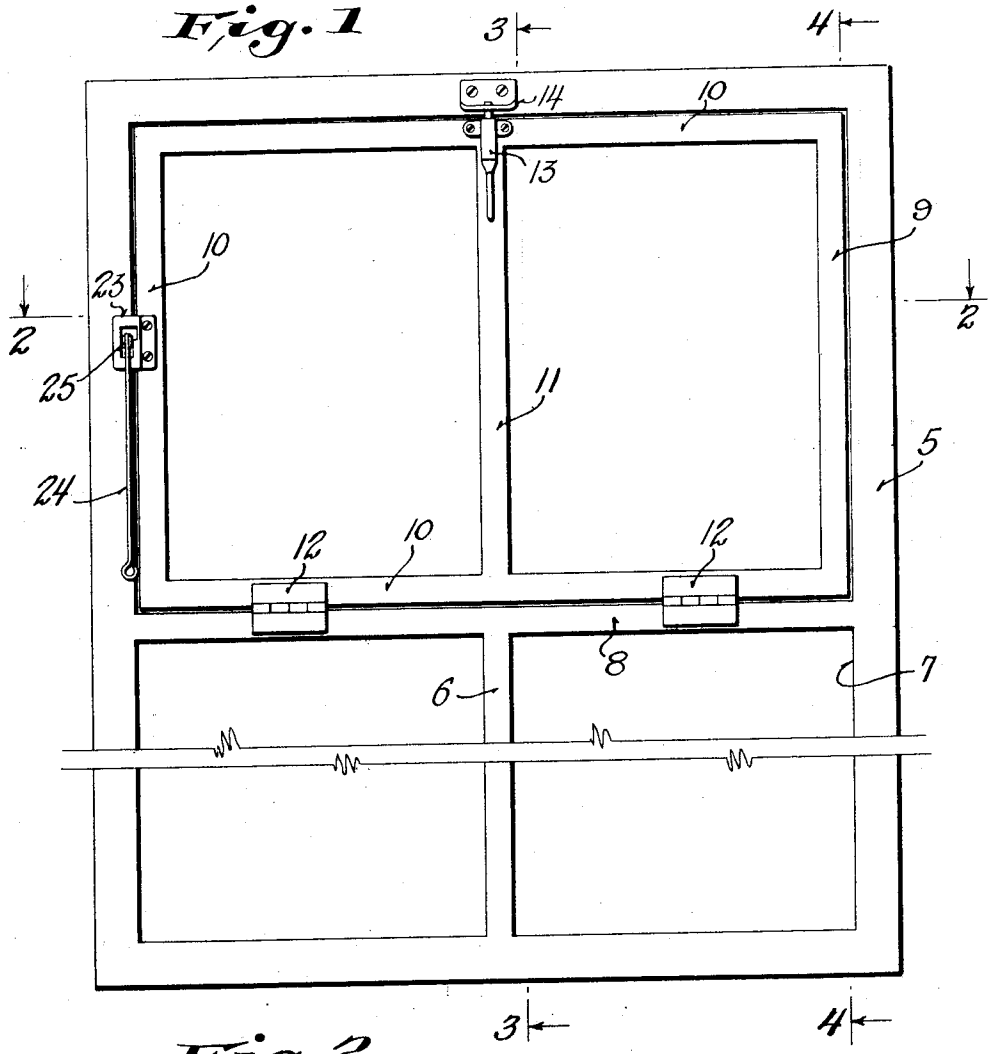
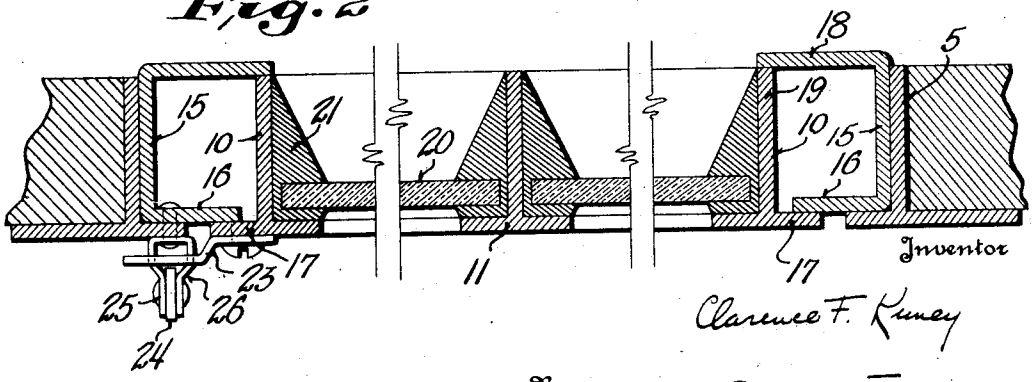


Fig. 2



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Filed Sept. 5, 1930 2 Sheets-Sheet 2

Fig. 3

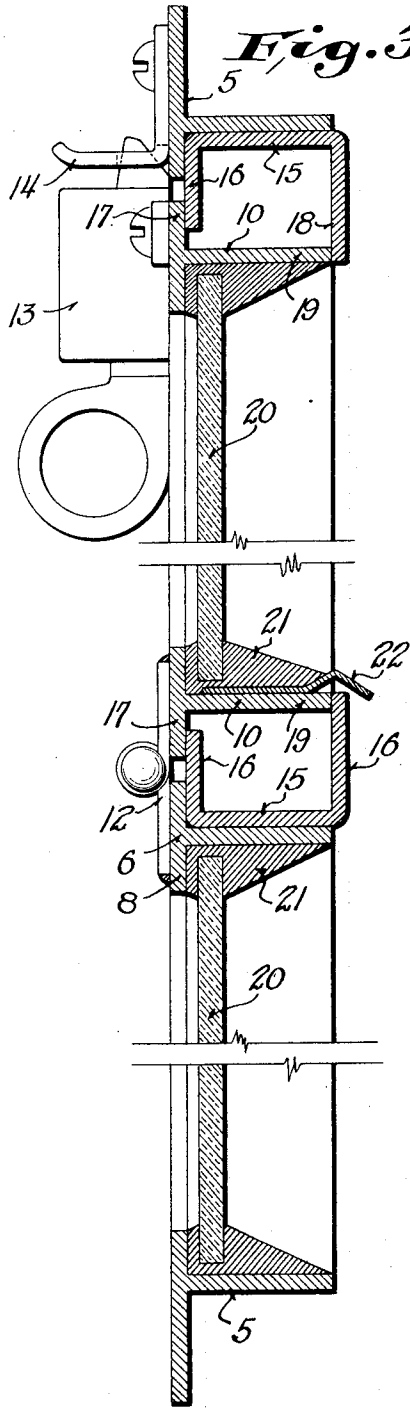
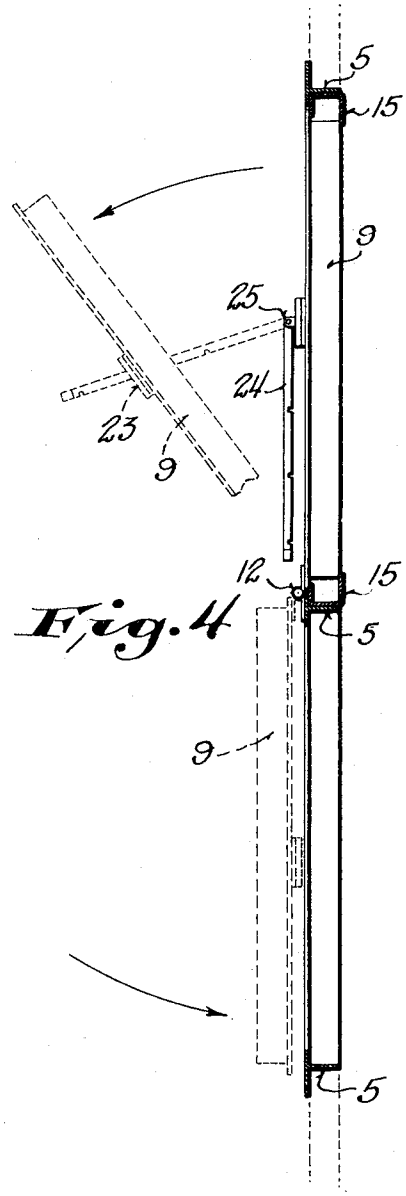


Fig. 4



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UNITED STATES PATENT OFFICE

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STEEL SASH

Application filed September 5, 1930. Serial No. 479,897.

The invention relates to steel sash.

Heretofore constructors of sanitary dairy barns and other agricultural buildings have used wood sash, and prior to this invention so far as I am aware, no steel sash, such as could be obtained on the market, was suitable to meet conditions of service encountered in such buildings.

The object of the present invention is to provide a steel sash construction which has been especially devised for use in sanitary dairy barns and other farm buildings and which has been found to satisfactorily meet service requirements where the usual so-called industrial steel sash has not.

More particularly the present invention provides a steel sash with outside glazing so that the inner face of the sash may be readily kept in a sanitary condition and be free as far as possible from projections and dust catching and holding surfaces. Furthermore the present construction provides a steel sash with a ventilator section which swings inwardly and may be held in partially open position or be swung to completely open position adjacent the fixed sash or the wall of the building. Also the steel sash as hereinafter described is so constructed and arranged as to attain the above described objects in a simple and efficient manner.

The invention further consists in the several features hereinafter set forth and more particularly defined by claims at the conclusion hereof.

In the drawings, Fig. 1 is an elevation view of steel sash embodying the invention, as viewed from the interior side thereof, parts being broken away;

Fig. 2 is a detail enlarged horizontal sectional view taken on the line 2—2 of Fig. 1, parts being broken away;

Fig. 3 is a detail enlarged vertical sectional view taken on the line 3—3 of Fig. 1, parts being broken away;

Fig. 4 is a detail vertical sectional view taken on the line 4—4 of Fig. 1.

Referring to the drawings, the numeral 5 designates the relatively fixed sash frame which is formed of side and end T-bars which may be welded or otherwise suitably secured together at the corners so as to form a frame and which may have one or more muntin bars 6 of T section welded thereto to provide the window openings 7 and which also includes a transverse T-bar 8.

The ventilator section 9 is formed by T-bars 10 joined, as by welding, at the corners and to a muntin bar 11 of similar section; said section being hingedly connected to the bar 8 of the main frame by spaced hinges 12 and secured in closed position by a suitable latch 13 cooperating with a keeper 14 on the main frame.

For securing a weathering contact between the fixed sash frame and the ventilator section, the inner sides of the upper opening in the fixed frame that receives the ventilator section have channel bars 15 secured thereto as by welding so that the inner sides 16 of said bars form an inner weathering surface against which the outer flanges 17 of the ventilator section abut and the outer flanges 18 form a weathering seal with the ends of the legs 19 of the T-bars 10 of the ventilator section.

It will be noted from Figs. 2 and 3 that when the ventilator is closed that the construction is such that bars forming the fixed frame and ventilator section are aligned and present flat surfaces to the interior of the building and that the windows 20 for these sections are secured in their respective frame by outside glazing 21 so that substantially the entire interior surface of the complete sash is formed of plane flat surfaces and free from crevices where dirt and dust can collect and may be readily and efficiently cleaned by the use of a water hose.

To provide a water shed at the lower joint of the ventilator section I may secure a longitudinally extending plate 22 to its lower frame member to project over the joint as shown in Fig. 3.

With this construction also it will be noted that the ventilator swings inwardly and in Fig. 4 I show the ventilator in closed position in full lines and the partially open and full open positions in dotted lines, it being noted that for the partially open position I have provided a latch plate 23 at one side of

the ventilator section that cooperates with a notched bar 24 pivotally mounted at 25 on a bracket 26 secured to the fixed frame and adapted to have any one of its notches engage the plate 23 to hold the ventilator in different partially open positions.

It will be noted that the notch in the plate 23 in which the bar 24 works permits said bar to be disengaged therefrom so that the ventilator may be swung to a position substantially parallel to the plane of the fixed sash frame.

With the above construction it is a simple matter to keep the inner surfaces of the sash that form a part of the wall of a dairy barn or other farm building in a sanitary condition, and the full capacity of the ventilator is realized when the same is swung down through an angle of substantially one hundred and eighty degrees.

I desire it to be understood that this invention is not to be limited to any particular form or arrangement of parts except in so far as such limitations are included in the claims.

What I claim as my invention is:

1. A window comprising an opening in a wall, a frame lining the edges of said opening and extending around sidewardly to cover interior portions of said wall adjacent to said opening, said frame having an inwardly extending flange in the plane of said wall covering portions, muntins composed of dividing webs backed by interior flanges, the latter being in a plane with said frame flange and joining therewith said muntins being secured to the frame dividing the same into a ventilator opening and smaller sights, panes within said sights seated against the interior of said frame flanges and said web flanges and embraced by the lining portions of said frame and said webs, exterior glazing for securing said panes in said sights and a ventilator including panes, hingedly mounted in said ventilator opening and arranged to swing inwardly.

2. A window comprising an opening in a wall, a frame lining the edges of said opening and extending around sidewardly to cover interior portions of said wall adjacent to said opening, said frame having an inwardly extending flange in the plane of said wall covering portions, muntins composed of dividing webs backed by interior flanges, the latter being in a plane with said frame flange and joining therewith, said muntins being secured to the frame dividing the same into a ventilator opening and smaller sights, panes within said sights seated against the interior of said frame flanges and said web flanges and embraced by the lining portions of said frame and said webs, exterior glazing for securing said panes in said sights, and a ventilator including panes providing flat interior frame portions flush with said frame flanges when closed, said ventilator being hingedly mounted in said ventilator opening and arranged to swing inwardly.

3. A window comprising an opening in a wall, a frame lining the edges of said opening and extending around sidewardly to cover interior portions of said wall adjacent to said opening, said frame having an inwardly extending flange in the plane of said wall covering portions, muntins composed of dividing webs backed by interior flanges, the latter being in a plane with said frame flange and joining therewith said muntins being secured to the frame dividing the same into a ventilator opening and smaller sights, panes within said sights seated against the interior of said frame flanges and said web flanges and embraced by the lining portions of said frame and said webs, exterior glazing for securing said panes in said sights, and a ventilator including panes providing flat interior frame portions flush with said frame flanges when closed, said ventilator being hingedly mounted in said ventilator opening and arranged to swing inwardly, and means for holding the ventilator in various partially opened positions and for permitting said ventilator to swing inwardly to a position substantially parallel with the plane of said window.

In testimony whereof, I affix my signature.

CLARENCE F. KUNEY.