

946,577.

Patented Jan. 18, 1910.

Fig. 1.

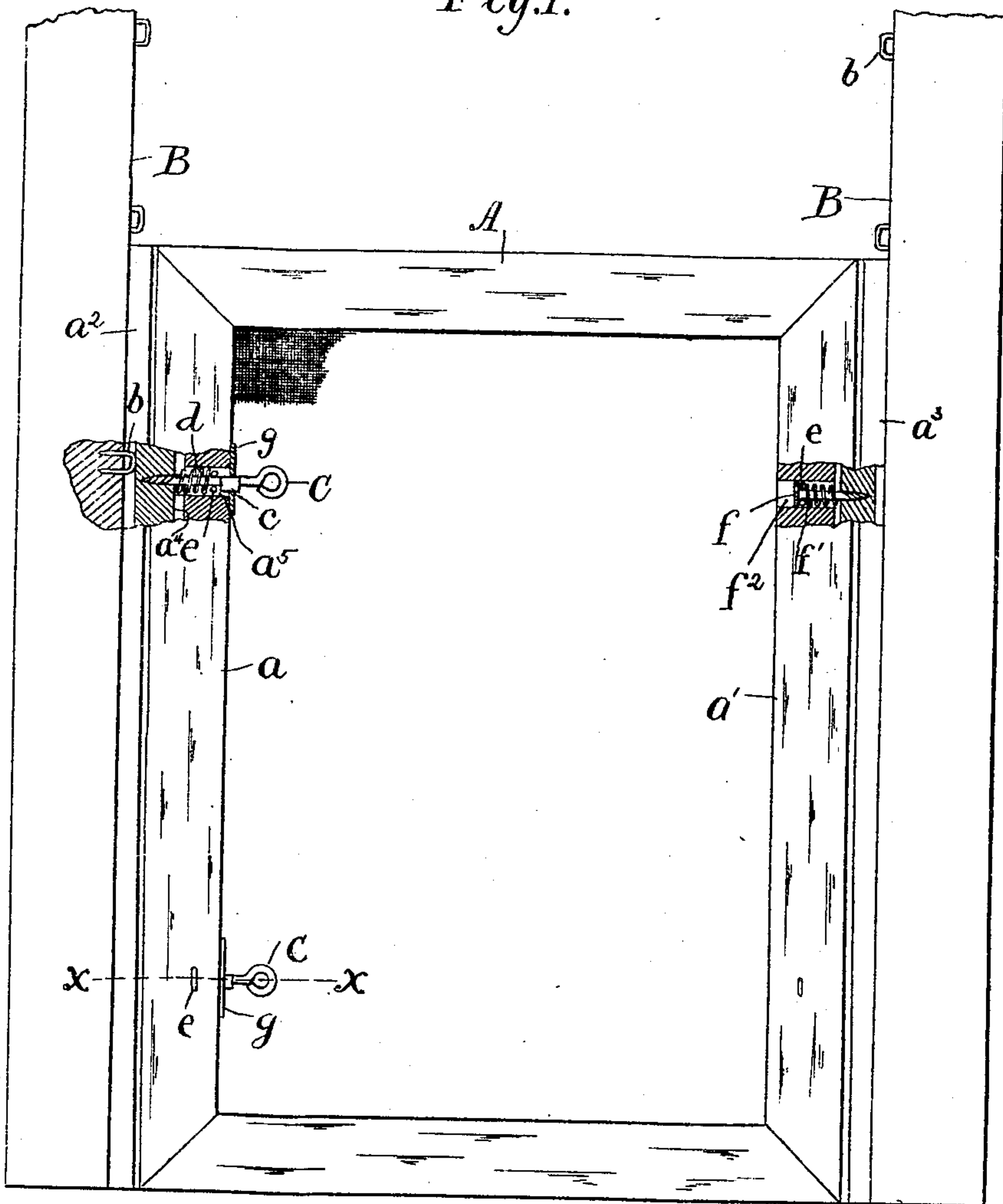


Fig. 3.

Fig. 4.

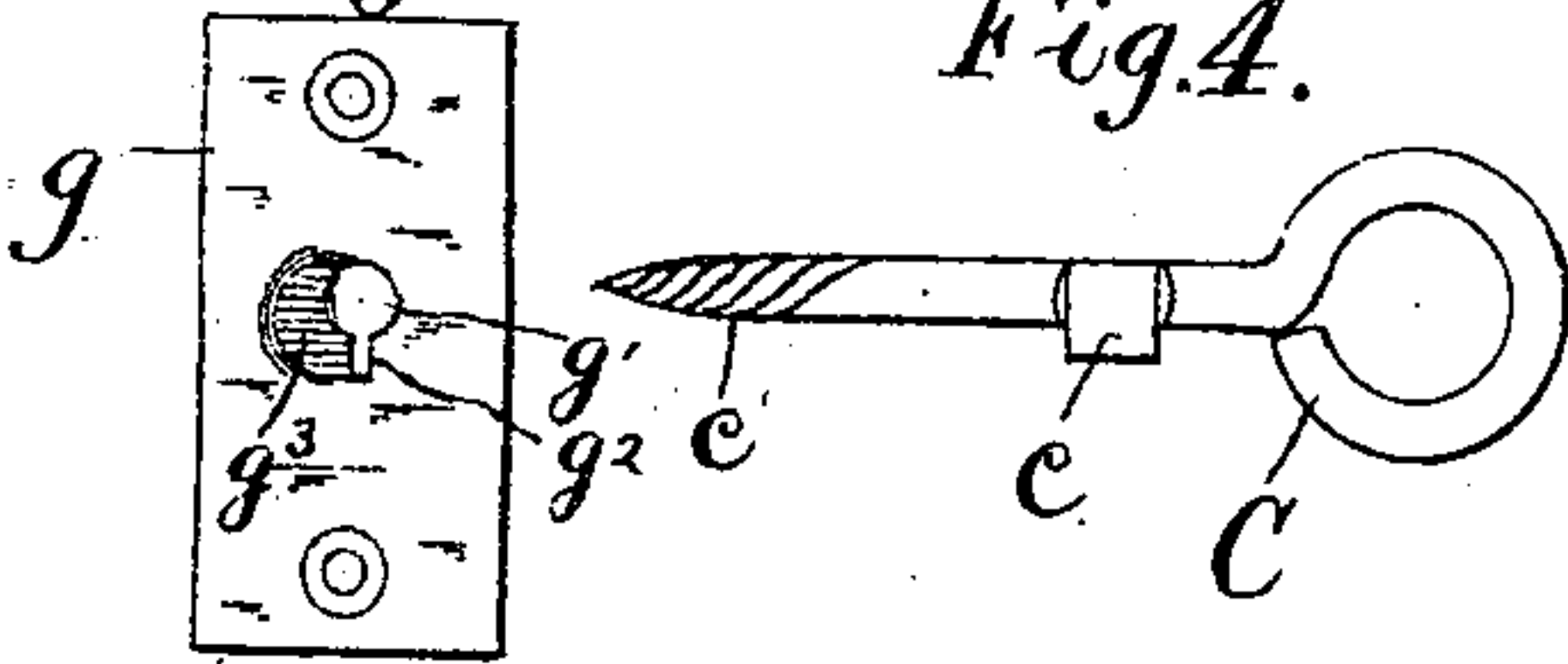


Fig. 5.

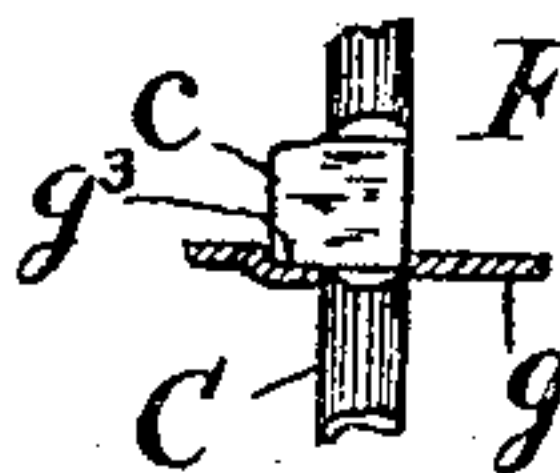
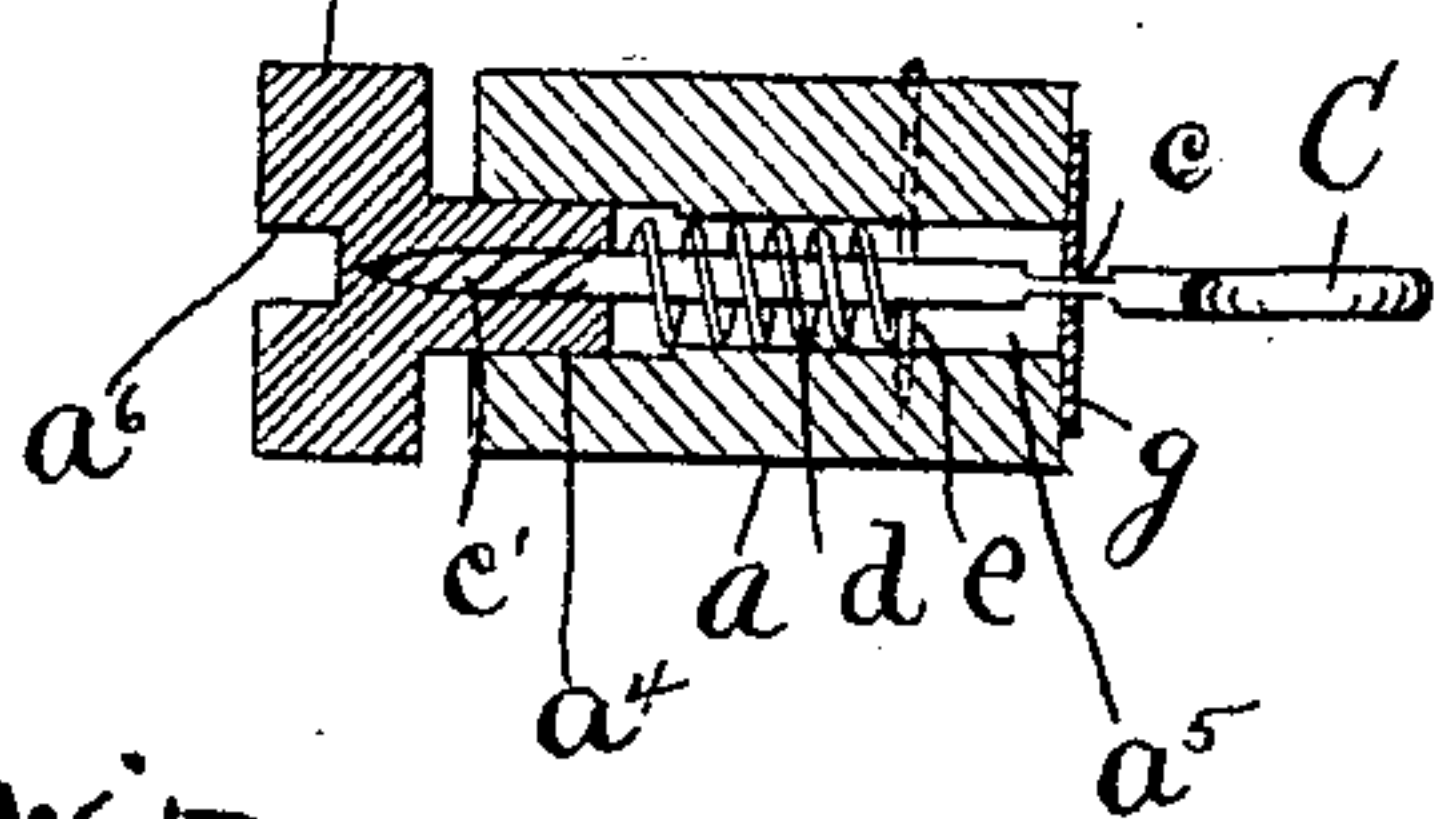


Fig. 2.



Witnesses:
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UNITED STATES PATENT OFFICE.

WILLIAM S. MARQUIS, OF AUBURN, MAINE.

WINDOW-SCREEN.

946,577.

Specification of Letters Patent.

Patented Jan. 18, 1910.

Application filed July 12, 1909. Serial No. 507,047.

To all whom it may concern:

Be it known that I, WILLIAM S. MARQUIS, a citizen of the United States of America, and a resident of Auburn, in the county of Androscoggin, State of Maine, have invented certain new and useful Improvements in Window-Screens, of which the following is a specification.

My invention relates to window screens of that class in which a screen frame is held in the window by means of vertical guides secured to the sides of the casing, the frame having spring pressed extension strips on one or both sides for the purpose of contracting the width to enable it to be inserted in the guides.

The object of my invention is to construct a screen of this class which will combine cheapness, efficiency and ease of application and which will be adapted to be put on the market ready made in stock sizes.

The invention consists of the device constructed and arranged as hereinafter set forth.

I illustrate my invention by means of the accompanying drawing in which—

Figure 1 is a front elevation of the screen and adjacent casing, Fig. 2 is a section on the line $x x$ of Fig. 1, Fig. 3 is a detail of the holding plate, Fig. 4 is a detail of the retracting bolt, and Fig. 5 is a detail of a portion of the retracting bolt with the holding plate in section.

In the drawing, B B represent the two side casings of the window between which the screen is held, A is the screen frame with side bars, a and a' and a^2 a^3 are the expansion strips, preferably one on each side. Springs are provided for pressing the expansion strips outward against the casing. Considering first the strip a^2 , I bore a horizontal hole a^5 in each end of the side bar a extending from the inner edge of the bar to the groove in which the tongue a^4 of the expansion strip a^2 plays and in this hole I insert a spiral spring d . This spring presses outward on the tongue a^4 and the inner end impinges against a staple e which is driven in from the face of the side bar and passes through the hole a^5 .

The expansion strip a^2 is retracted by means of the bolt C which has cut on its outer end a wood screw point c' whereby it may be screwed into the inner edge of the tongue a^4 . The bolt C extends through the spiral spring and it is provided on the outer

end with a suitable knob or handle whereby it may be grasped and retracted. Means are provided for retaining the bolt when it is at its inner position and when the strip has been retracted for inserting the frame. For this purpose I secure to the inner edge of the side bar a fastening plate g having an opening g' with a connecting slot g^2 . The bolt has on it a projection c preferably formed by flattening it at the proper point and the opening in the plate is such that when in its normal or released position the bolt will pass freely through the opening but when turned out of its normal position, the projection c will bring up on the side of the opening and hold the bolt in its inner position. In order to prevent the bolt from being turned in one direction sufficiently to turn out the screw point, I depress the surface g^3 at one side of and adjacent to the opening so that the projection will rest in this depressed space and cannot be turned entirely around. Thus when the bolt is to be locked, it will be turned so that the projection c will swing over the depressed surface g^3 and when it is to be released it will be turned in the opposite direction to its original position. The screw will in this construction be turned back and forth one quarter of a revolution and consequently will not be loosened in its hold on the tongue.

The strip a^3 on the opposite side of the frame from the one described is pressed outward by a spring f' in an opening f^2 in the side bar and it acts against the inner edge of the tongue of the strip a^3 and against a staple e like the one already described. The screw bolt f is screwed into the tongue in the same manner as the bolt C but it is provided with a head which does not extend beyond the inner edge of the side bar so that it cannot be retracted. When the strip is at its outer position, the head impinges on the staple and prevents the removal of the strip from its groove.

It will be understood that each side bar is preferably provided with a spring at each end so as to distribute the bearing at four points and to cause the strips to conform to any irregularities in the casing.

Guides are secured to the casing to hold the frame in place and allow it to be raised and lowered. For this purpose, instead of using the strips such as are commonly used I provide a series of staples b which are driven in each casing to form a vertical

guide on each side, the heads of the staples entering the vertical slot a^6 in the expansion strip. These staples may be secured in place by simply driving them in the casing and they may be sold with each screen and the screen easily installed by their use.

To put the screen in place in the window casing, each of the two bolts C is pulled in and locked. The strip a^3 is now placed in position, the staples b entering the groove of the strip. By pressing the frame against the strip a^3 the frame will be narrowed up sufficiently so that the retracted strip a^2 may be swung in by the staples which form its guide and when the bolts C are released the strip a^2 will be pressed outward by its spring against the window casing.

My screen as above described may be cheaply built, it has sufficient lateral adjustability so that it will fit any regular casing and it does not need a skilled workman to install it. It is thus well fitted to be put on the market in stock sizes according to the size of glass in the sash and to be sold directly to the user as a ready made screen.

I claim:—

1. The herein described window screen comprising a frame having side bars, one of said side bars having a longitudinal groove in its outer edge, and a horizontal opening connecting with said groove, an expansion strip fitting said groove, a retracting bolt having a lateral projection on one side and a wood screw formed on its outer end said bolt extending through said opening and entering said strip, a plate secured to the inner edge of the side bar having an opening through which said bolt passes and so formed as to let the projection pass when the bolt is in its normal position, but to stop it when out of its normal position, a spiral spring surrounding said bolt and bearing against the inner edge of the strip and a staple extending through from the face of the side bar and embracing the bolt to form the inner bearing for the spring.

2. The herein described window screen comprising a frame having side bars, one of said bars having a longitudinal groove in its outer edge and a horizontal opening connecting with said groove, an expansion strip fitting said groove, a retracting bolt having a lateral projection on one side and a wood screw formed on its outer end said bolt extending through said opening and entering

said strip, a plate secured to the inner edge of the side bar having an opening through which said bolt passes and so formed as to let the projection pass when the bolt is in its normal position but to stop it when out of its normal position, a depression being formed in said plate at one side of the opening to limit the motion of the projection, a spiral spring surrounding said bolt and bearing against the inner edge of the strip and a staple extending through from the face of the side bar and embracing the bolt to form the inner bearing for the spring.

3. The herein described window screen comprising a frame having side bars, one of said side bars having a longitudinal groove in its outer edge, and a horizontal opening connecting with said groove, an expansion strip fitting said groove, a retracting bolt having a lateral projection on one side and a wood screw formed on its outer end said bolt extending through said opening and entering said strip, a plate secured to the inner edge of the side bar having an opening through which said bolt passes and so formed as to let the projection pass when the bolt is in its normal position, but to stop it when out of its normal position, and a spiral spring surrounding said bolt and bearing outward against the inner edge of the strip.

4. The herein described window screen comprising a frame having side bars, one of said side bars having a longitudinal groove in its outer edge and a horizontal opening connecting with said groove an expansion strip fitting said groove, a retracting bolt having a lateral projection on one side and a wood screw formed on its outer end said bolt extending through said opening and entering said strip, a plate secured to the inner edge of the side bar having an opening through which said bolt passes and so formed as to let the projection pass when the bolt is in its normal position but to stop it when out of its normal position, a depression being formed in said plate at one side of the opening to limit the motion of the projection, and a spiral spring surrounding said bolt and bearing outward against the inner edge of the strip.

In witness whereof I have hereunto set my hand this 8th day of July, 1909.

WILLIAM S. MARQUIS.

Witnesses:

FOREST E. LUDDEN,
E. M. HATCH.