(No Model.)

C. T. WAGGONER.

AUTOMATIC SASH FASTENER.

No. 584,567. Patented June 15, 1897.

Fig. 1.

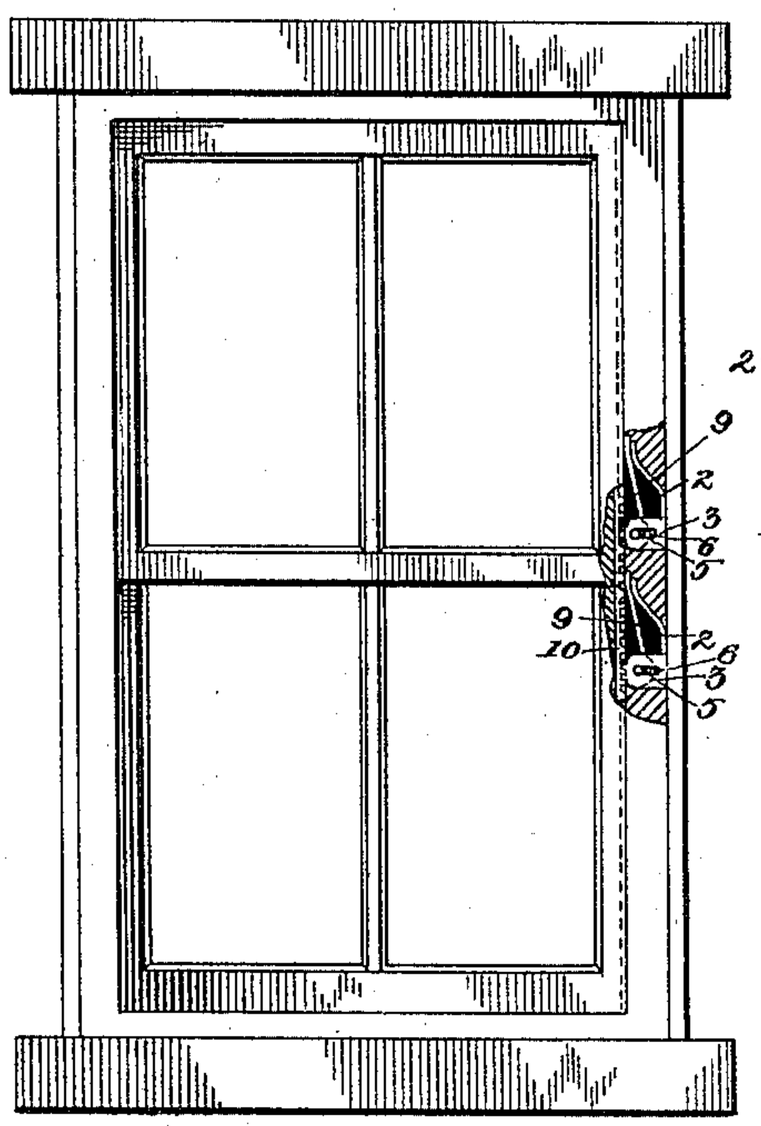


Fig. 2.

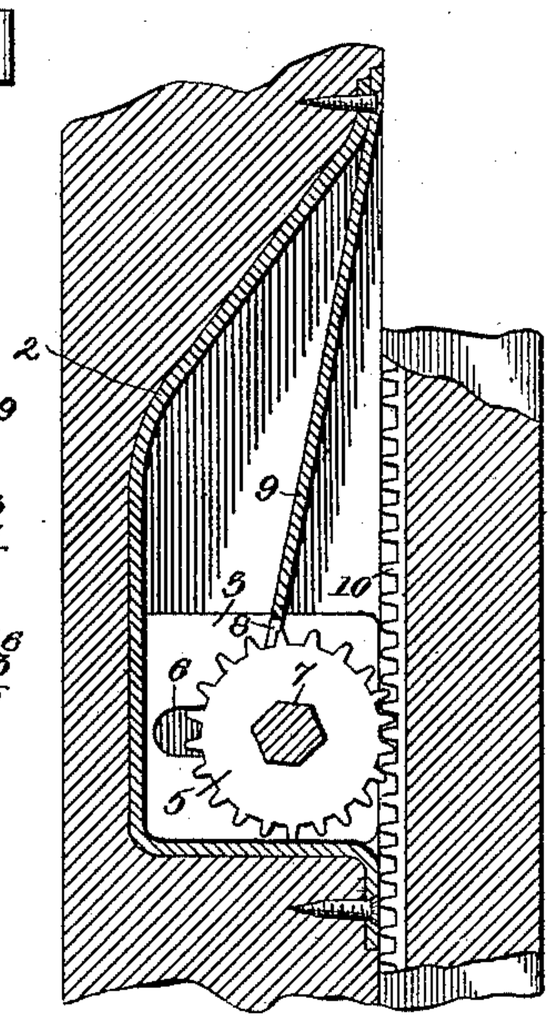


Fig. 3.

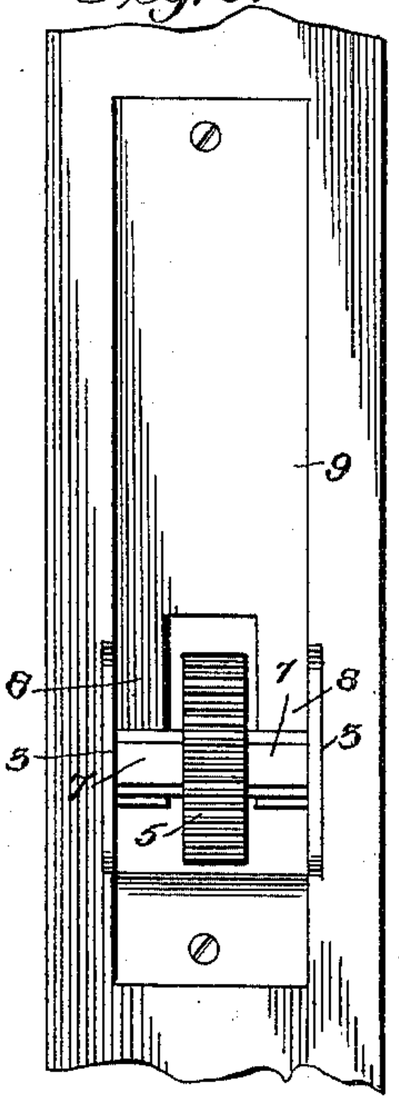


Fig. 4.

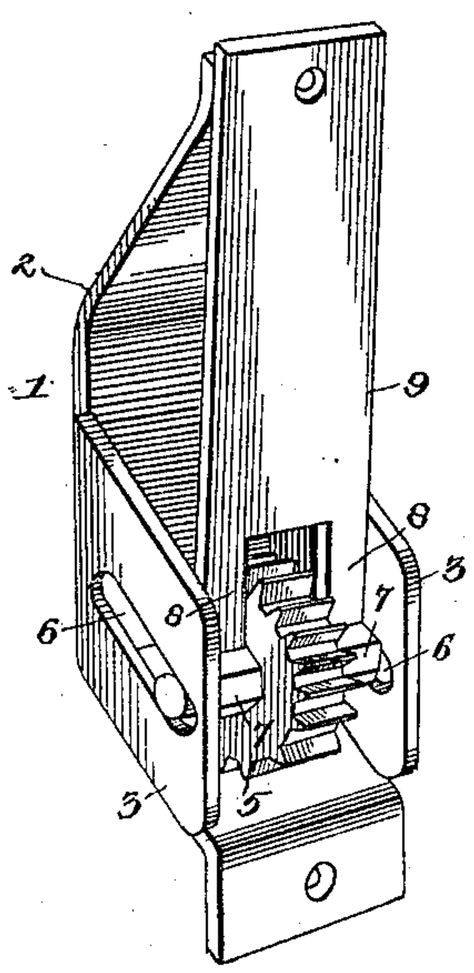
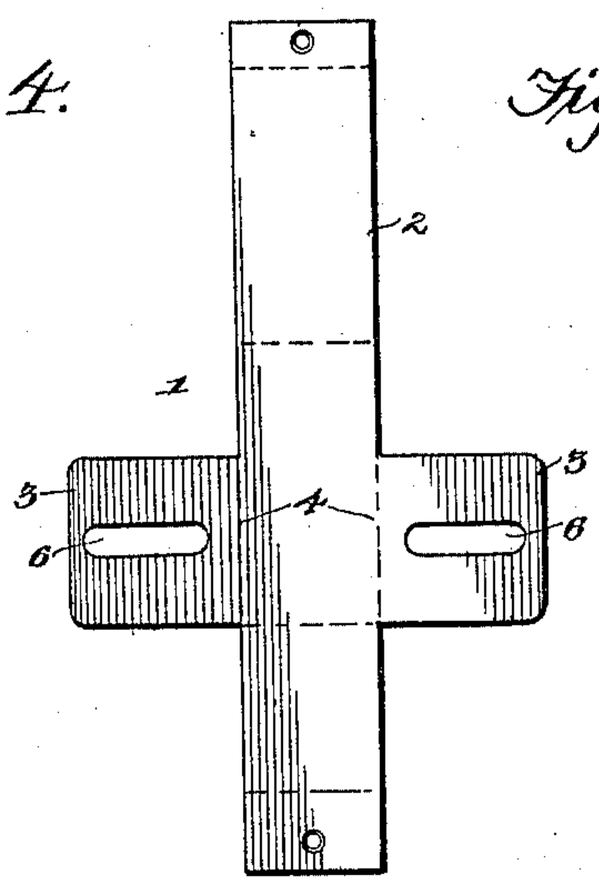


Fig. 5.



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By his Attorneys,
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UNITED STATES PATENT OFFICE.

CHARLES T. WAGGONER, OF SPARTANSBURG, PENNSYLVANIA.

AUTOMATIC SASH-FASTENER.

SPECIFICATION forming part of Letters Patent No. 584,567, dated June 15, 1897.

Application filed February 10, 1896. Serial No. 578,781. (No model.)

To all whom it may concern:

Be it known that I, CHARLES T. WAGGONER, a citizen of the United States, residing at Spartansburg, in the county of Crawford and State of Pennsylvania, have invented a new and useful Automatic Stop for Windows, &c., of which the following is a specification.

This invention relates to an improvement in automatic stops for windows, and while especially designed for use in connection with window-sashes may be applied to any form of slide or panel or wherever such a device may be found desirable.

The object of the present invention is to provide a simple and reliable article of the character referred to which when in its applied position is entirely concealed from view and by means of which all cords, pulleys, weights, &c., are dispensed with, the said device serving to retain the window-sash at any desired elevation. This and other objects of the invention will appear in the course of the subjoined description.

The invention consists in certain novel features and details of construction and arrangement of parts, as hereinafter fully described, illustrated in the drawings, and finally pointed out in the claim.

In the accompanying drawings, Figure 1 is a front elevation of a window, the casing thereof being partly broken away in section to show the application of the improved device. Fig. 2 is an enlarged vertical section through the window-casing and the holding device. Fig. 3 shows the device in front elevation as applied to the window-casing. Fig. 4 is a detail perspective view of the improved holding device complete and ready for application. Fig. 5 is a plan view of the blank from which the frame of the device is formed.

Similar numerals of reference designate corresponding parts in the several figures of the drawings.

Referring to the accompanying drawings, 1 designates a metal blank, cut, preferably, from sheet metal and comprising an elongated body portion or strap 2, having intermediate the ends thereof oppositely-disposed side flaps 3. In bending this blank to form the frame of the holding device the side flaps 3 are bent upon the lines 4 until they are brought to a position at right angles to the body or strap 2 and into parallel relation to each other. The longer portion of the body or strap 2 is then deflected forward until its extremity is brought into the plane of the forward edges of the flaps 3, such end being perforated, as shown, to receive a retaining-screw or other fastening device, which passes into the window-casing or other object to which the device is applied. The remaining shorter portion of the body or strap 2 is also deflected to bring its extremity into the same plane with the other extremity, and it is also perforated similarly to the long end to receive a screw or fastener.

The flaps 3 and the short arm of the body or strap 2 form a casing or frame in which is mounted a spur-pinion 5, and the flaps 3 are formed with elongated slots 6, in which the journals of the pinion are mounted, this arrangement providing for the movement bodily in and out of the said pinion 5. The pinion 5 is provided upon each side with a hub portion 7, and such hub portion comprises a series of flattened peripheral surfaces, the number of which may be varied according to the resistance which it is intended the device shall offer to the movement of the window-sash. The hub portions 7 occupy the spaces between the pinion 5 and the flaps 3, and the flattened surfaces thereof are correspondingly disposed, so as to be operated upon simultaneously by the bifurcated ends 8 of a slotted spring 9, perforated at one end and fastened to the casing by the same screw or other device which secures the long end of the body or strap 2 in place. The slot in the spring is at the free end thereof, and it is by this means that the spring is enabled to straddle the pinion 5 and rest at its bifurcated extremities against the flattened surfaces of the hubs 7.

The device above described is introduced into a correspondingly-shaped mortise in the window-frame and at a point preferably in proximal relation to the upper corner of the lower sash or the lower corner of the upper sash. Toothed racks 10 are secured to the adjacent edges of the upper and lower window-sashes and arranged so as to mesh with the pinions 5.

In operation as the window-sash is lifted the pinion rotates in its frame and meshes with its respective rack and is held in close

engagement therewith by the spring 9. As before stated, the bifurcated ends of the spring bear against the flattened surfaces of the hub portions of the pinion, and the window will naturally come to a rest at a point where one of such flattened surfaces will be in coöperation with the spring. The sash is thus held suspended until sufficient force is applied thereto to deflect the spring 9 and permit the pinion to rotate. Where the holding device is used in connection with a light sash, the number of flattened surfaces on the hubs may be increased—as, for instance, the hubs may be made octagonal in cross-section. Where the sash is a heavy one, the number of flattened surfaces may be reduced to as few as three. This will afford increased leverage and resisting power to the spring 9 and render the pinion much harder of rotation.

It will be seen that the device is very simple, that it may be manufactured at a very low cost, and that it is capable of being adapted to window sashes or slides or panels of varying weights.

Changes in the form, proportion, and minor details of construction may be resorted to without departing from the spirit or sacrificing any of the advantages of this invention.

Having thus described the invention, what is claimed as new is—

The herein-described holding device, comprising a suitable casing formed from sheet metal and embodying a strap portion which is bent to form the rear top and bottom walls of the casing, and lateral flaps which are bent forward at right angles to the rear wall to form the sides of the casing, said flaps being slotted as described, in combination with a pinion having its journal slidingly mounted in said slots and provided with a flattened hub, and a spring attached at one end to said casing and bearing at its free end against said flattened hub for resisting the rotation of the pinion, substantially as described.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

CHARLES T. WAGGONER.

Witnesses:
C. H. GABRIEL,
E. A. ALSDORP.