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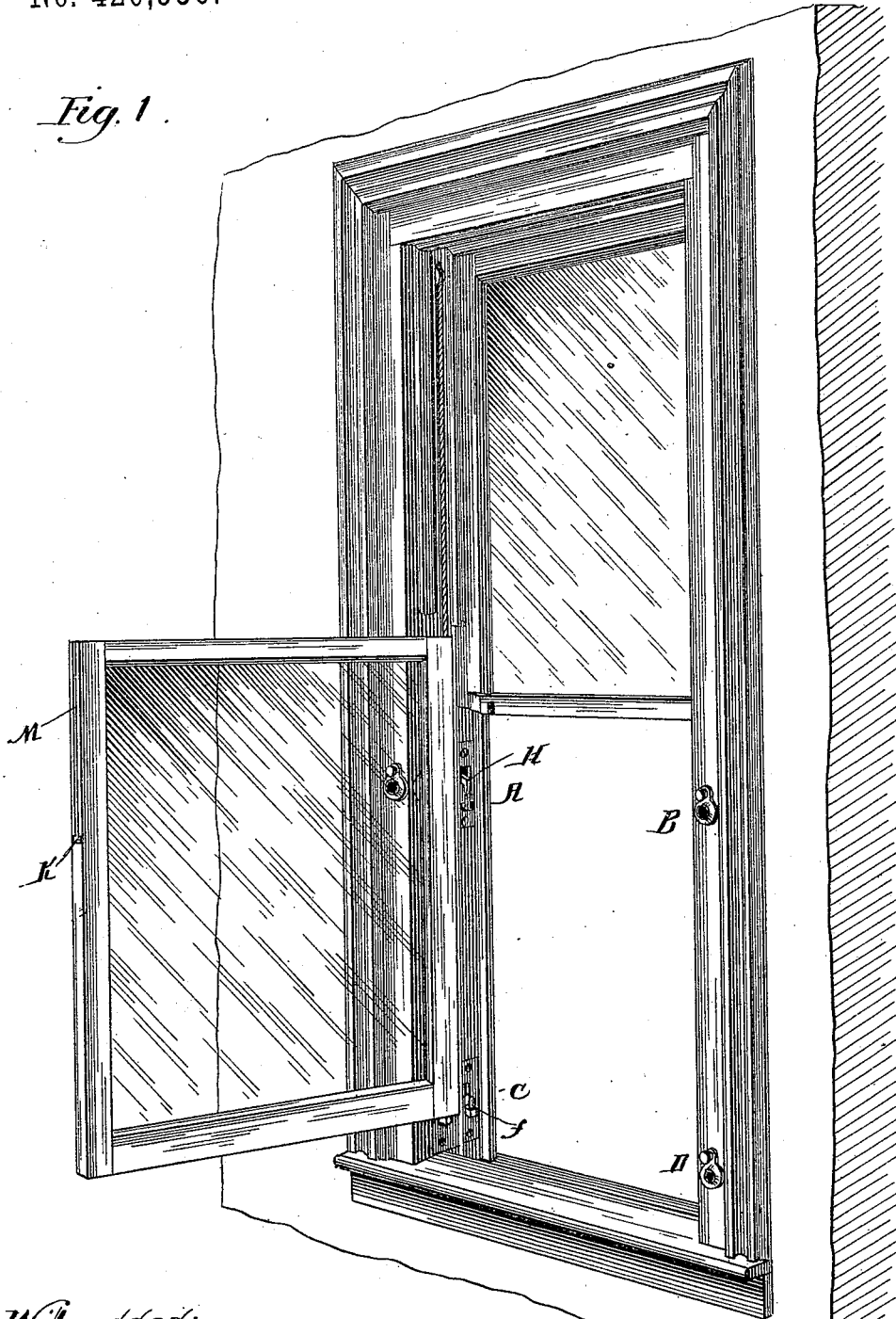
5 Sheets—Sheet 1.

C. F. OLCESE.
WINDOW ATTACHMENT.

No. 420,956.

Patented Feb. 11, 1890.

Fig. 1.



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Attorney.

(No Model.)

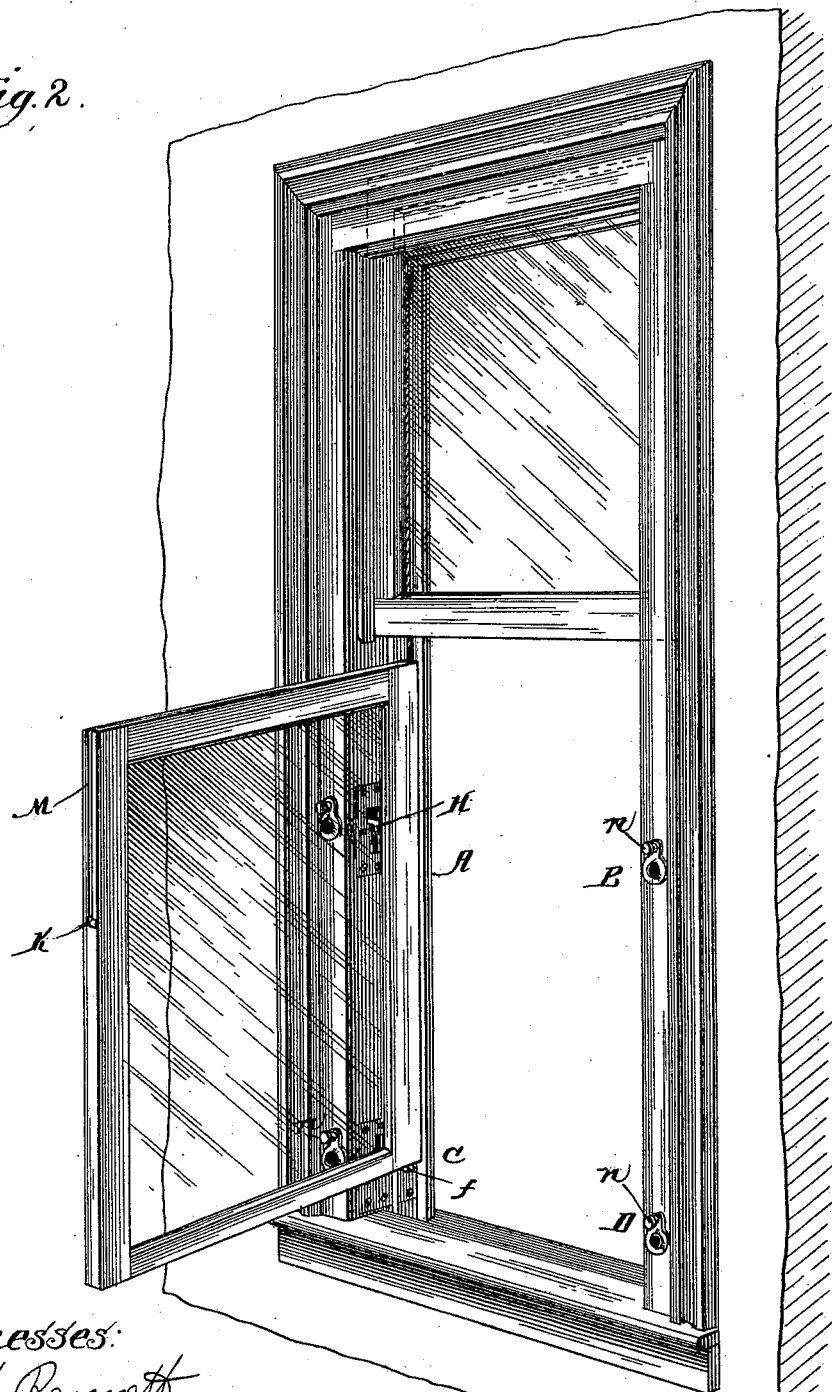
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Fig. 2.



Witnesses:

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Fig. 4.

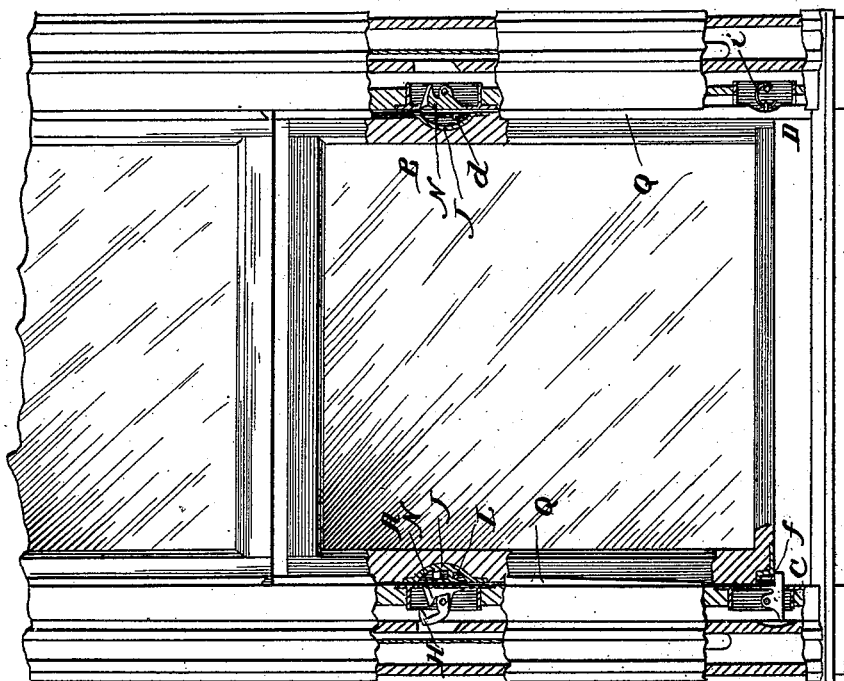
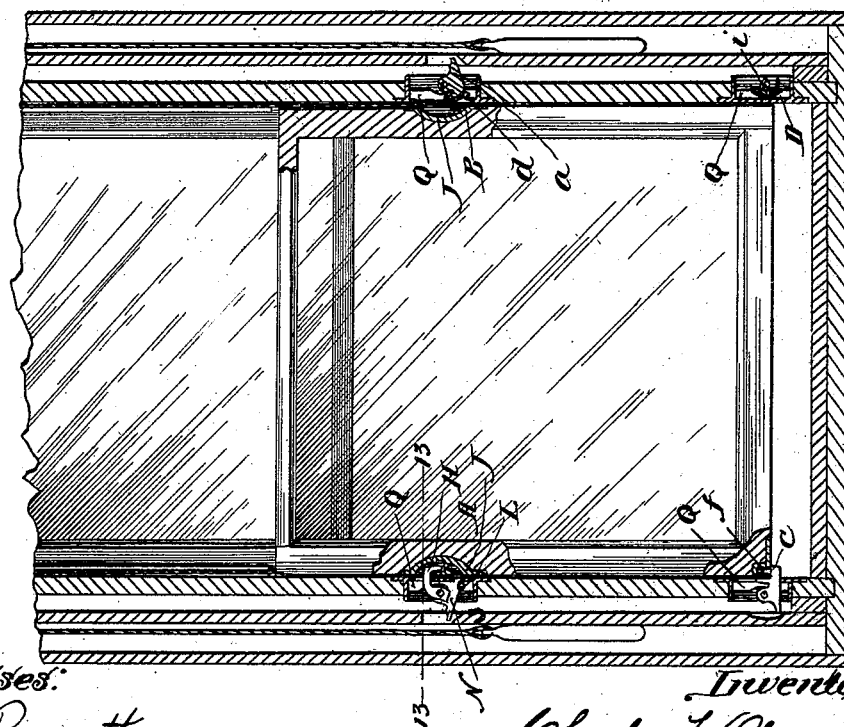


Fig. 3



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5 Sheets—Sheet 4.

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WINDOW ATTACHMENT

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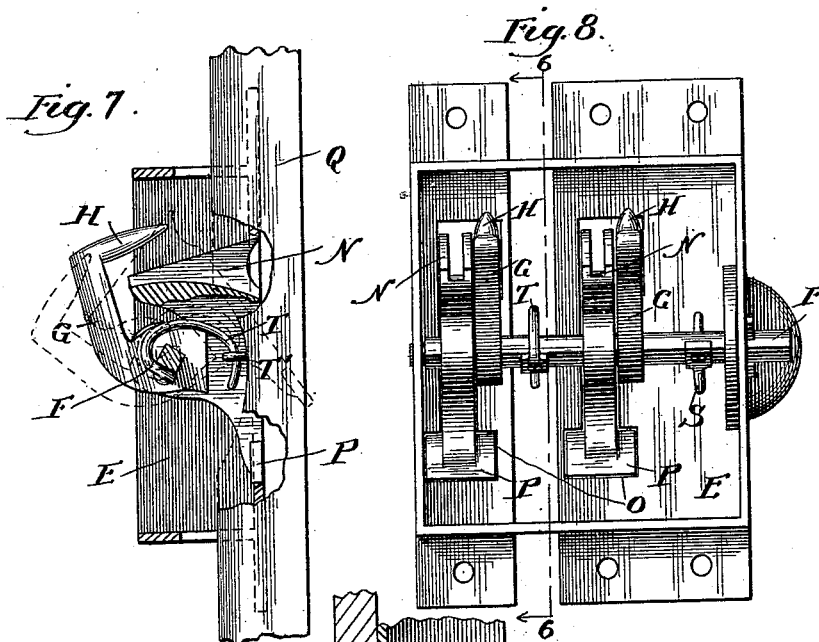
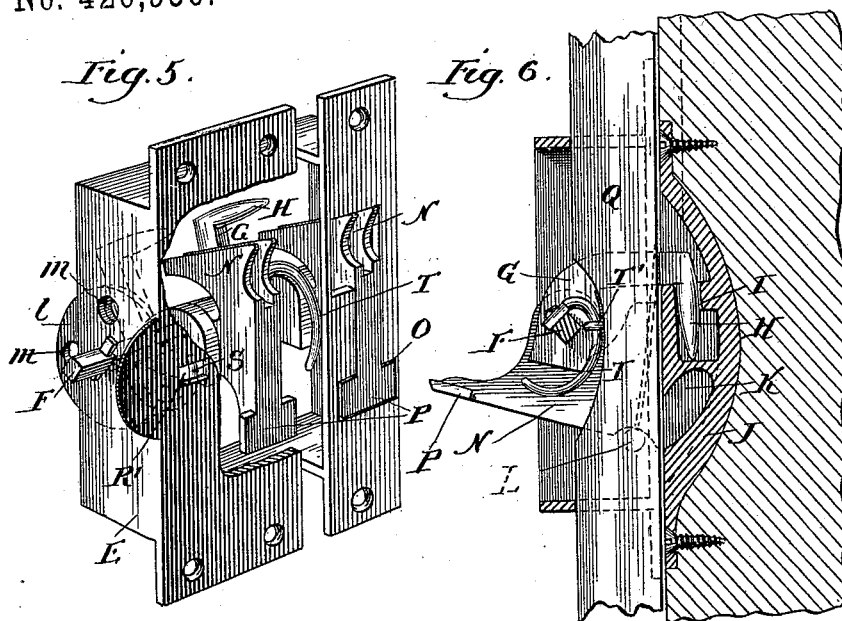
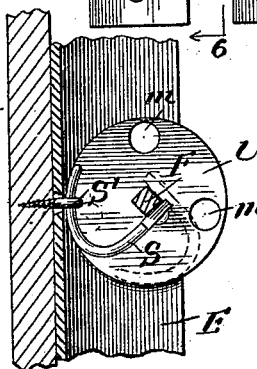


Fig. 9.



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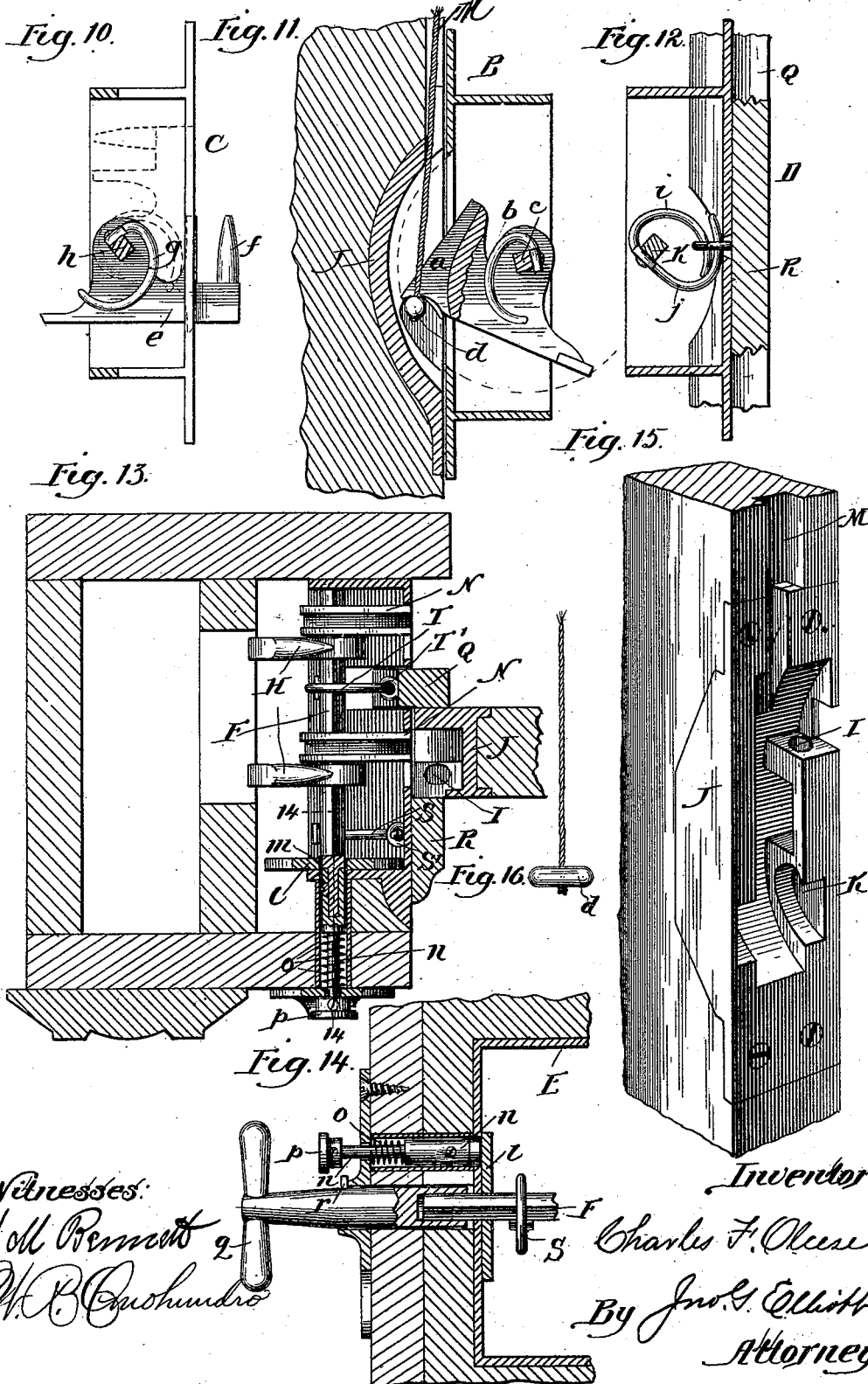
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WINDOW ATTACHMENT

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UNITED STATES PATENT OFFICE.

CHARLES F. OLCESE, OF CHICAGO, ILLINOIS.

WINDOW ATTACHMENT.

SPECIFICATION forming part of Letters Patent No. 420,956, dated February 11, 1890.

Application filed February 18, 1889. Serial No. 300,319. (No model.)

To all whom it may concern:

Be it known that I, CHARLES F. OLCESE, a citizen of the United States, and a resident of Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Window Attachments, of which the following is a specification.

This invention relates to improvements in that class of window attachments designed to enable the partial removal or disconnection of the sash from the window-frame for convenience in cleaning, glazing, and painting the outside of the window.

The prime object of this invention is to enable the swinging of the sash upon temporary hinges, whereby the operator will be entirely relieved of the weight of the sash and the latter will swing in substantially the same manner as a door, thus enabling the cleaning of the outer surface as well as the inner surface of the window from the inside of the building.

Another object is to enable the swinging of either or both sashes upon temporary hinges of such a character as not to interfere with the perfect operation of the sashes when in their normal positions, suspended by the weights of the sash.

A further object is to enable the temporary disconnection of the sash-cords from the sash and the simultaneous projection of the temporary hinges upon which the sash will be supported, and the reversing of these conditions—that is, the reattachment of the cords to the sash and withdrawal of the hinges—restoring the sash to its normal suspended condition upon the sash-cord.

A still further object is to enable the removal of the guide-strip and the withdrawal of the parting-strip in order that the sash, as a whole, may swing upon its hinges simultaneously with the detachment of the sash-cord and the hinging of the sash.

I attain these objects by the devices illustrated in the accompanying drawings, in which—

Figure 1 represents a perspective view of a window sash and frame with my attachments applied thereto, showing the lower sash swung inwardly on its hinges and the upper sash elevated in its normal position by the sash-cords; Fig. 2, a similar view showing the

upper sash drawn down and swung inwardly on its hinges and the lower sash raised and suspended on its sash-cord and sufficiently elevated to permit the free swinging of the lower sash on its hinges; Fig. 3, a central vertical section taken through the lower sash, showing the latter supported on its hinges, the sash-cords disconnected therefrom, and the sash ready to be swung inwardly on the hinges; Fig. 4, a similar view taken through the upper sash shown lowered onto the lower hinge, but just prior to the detachment of the sash-cords and the projection of the upper hinge; Fig. 5, a perspective view of the upper hinge-blocks and sash-cord detachers for use at one side of the window only; Fig. 6, a vertical section thereof on the line 6 6 of Fig. 8, looking in the direction indicated by the arrows, showing the upper hinge projected and engaging the sash-rail and the parting-strip withdrawn; Fig. 7, a similar view showing the hinge withdrawn and the parting-strip projected in its normal position, the dotted lines therein showing a further movement of the hinge-block, in order to permit the detachment of the parting-strip from the frame; Fig. 8, a rear elevation of the upper hinge and sash-cord detacher in the position shown in Figs. 5 and 7; Fig. 9, a detail view showing the manner of attaching and securing the guide-strip for the lower sash in position when the sash is in its normal position suspended upon the sash-cords, the dotted lines therein showing the movement of the parts when the sash-cord is detached and the hinges projected, which permits the detachment and removal of the guide-strip; Fig. 10, a detail section of the lower hinge-block on the side corresponding with the upper hinge-block, which is unprovided with a sash-cord detacher; Fig. 11, a sectional view showing the sash-cord detacher at the opposite upper side of the frame in the act of detaching the cord from the window-sash, this detacher being unaccompanied by a hinge; Fig. 12, a detail section of the guide and parting strip holders located near the bottom of the frame on the same side with the sash-cord detacher last mentioned unaccompanied by either a sash-cord detacher or hinge; Fig. 13, an enlarged detail horizontal section on the line 13 13 of Fig. 3; Fig. 14, a detail vertical section on the line 14 14 of Fig.

13, and Fig. 15 a detail perspective view of the upper portion of a sash-rail provided with a hinge-socket for the reception of the upper hinge.

5 Similar letters of reference indicate the same parts in the several figures of the drawings.

The attachments comprised in my invention necessary for furnishing a single sash of
10 double windows are divided into the four parts A, B, C, and D, located, respectively, as shown in the drawings, the first two near the center of the frame composing the upper end of the side rail of the lower sash, while the two latter
15 are located near the bottom of the frame, opposing the lower ends of the lower sash-rails. The parts A C constitute the temporary hinges for both the upper and lower sash, upon which either one of them may
20 swing inwardly; or, in fact, both might swing inwardly upon these hinges at the same time; but the operation of one at a time is preferable for convenience in cleaning. The parts B D serve only to detach the sash-cords from
25 both the upper and lower sashes while resting upon the hinges, and also to withdraw and remove the parting-strip and guide-strip from that part of the frame in order that the sash may swing bodily inward, these parts
30 also serving to restore and secure the parting-strip and guide-strip in position after the return of the sashes, so as to constitute the usual guides therefor. Each of these four parts differs from the others, and necessarily
35 so, because the part A, by reason of its location, has the most to do, being required to operate the parting-strip, the guide-strip, the upper hinges, and detach the sash-cords in both sashes, while the part B has only to detach
40 the sash-cord at that side and operate the parting and guide strips, no hinge being necessary on this side. The part C, on the other hand, furnishes the lower hinges for both sashes and operates the parting and
45 guide strips, which is the extent of its functions, while the remaining part D has only to operate the parting and guide strips, no hinge being required at this side and no sash-cord
50 detachers being necessary at either of the bottom sides of the frame.

With this understanding, I will first explain the manner of operating the sashes, and afterward describe in detail the mechanism by which the operation is accomplished,
55 taking each of the four parts separately.

First, assuming the sashes to be in their normal position in the frame, with the parting-strip and guide-strip extending uninterruptedly from the top to the bottom of the
60 frame, as usual, in order to form the guides for the sashes in raising and lowering them, the first step is to raise the lower sash slightly above the plane of the lower parts C D, after which the part C is operated so as to project
65 the lower hinge, or, rather, the pintles of the hinge, each of which lies slightly to one side of the center of the grooves in which the two

sashes work. The sash being provided with a socket in the bottom rail thereof is then brought down until the pintle of the hinge
70 enters the socket, which constitutes a support for the sash. Simultaneously with the projection of the hinge the lower end of the parting-strip is withdrawn into the casing
75 flush with the surface thereof, and the lower end of the guide-strip is released, so that it may be detached from the frame.

The next step is to operate the part A so as to project the upper pintles of the hinge into a recess formed in the sash-rail, thus
80 constituting the complete hinge for the sash, and simultaneously with this action the upper end of the parting-strip is withdrawn into the frame corresponding with the lower end, and the upper end of the guide-strip
85 likewise released and may now be immediately detached from the frame, it being understood that the lower half only of the parting-strip and guide-strip are operated upon, the upper half being permanently fixed in
90 position; also, simultaneously with the projection of the upper hinge the sash-cord is detached from the sash and held, so that the sash-weight cannot fall, and at the same time
95 be in position for reattachment to the sash when returned to its normal position.

The third step is to operate the part B, which detaches the sash-cord from that side of the sash and simultaneously withdraws the parting-strip and releases the upper end of the
100 guide-strip, and the last step is the operation of the part D, which simultaneously withdraws the lower end of the parting-strip and releases the lower end of the guide-strip, which latter may now be detached from the frame, as was
105 the corresponding part on the opposite side of the frame, when the sash may be swung out upon the hinges, as clearly shown in Fig. 1, being supported entirely by the parts A C.

In restoring the lower sash to its normal position the steps are exactly reversed, the sash-cords being reattached by the parts A B and the upper hinges withdrawn, so as to permit the raising of the sash in the usual guide-grooves; but if it is desired to operate the
115 upper sash immediately after the lower sash has been operated, and restore its normal position, the parts C D need not be operated, the parts A B being sufficient to attach the sash-cords to the lower sash, withdraw the
120 hinges, and permit the raising of the front sash to the upper part of the window-frame, as shown in Fig. 2. The upper sash will then be brought down onto the lower hinge, furnished by the part C, the parts A B be again
125 operated so as to detach the sash-cords and project the upper hinge and withdraw the parting-strips, after which the lower sash may be swung on the hinges in position for washing the outer side of the window, as illustrated in Fig. 2.

With this understanding of the operation of my invention, I will now describe the parts in detail, beginning with the part A, which

is shown in detail in Figs. 5, 6, 7, 8, 9, 13, and 14. Referring now to these figures, E indicates a rectangular casing, preferably of metal, and designed to be countersunk within the frame, as shown in Figs. 1 and 2, in which is journaled a horizontal shaft F, extending transversely across the casing parallel with the inner face of the window-frame, upon which shaft are fixed a pair of radial arms G, terminating at their free ends in right-angled pintles H, which constitute the upper hinge of the sash-frame and are designed to enter sockets I, provided in the edge of the sash-rail near the top thereof, by means of a countersunk casting J, or in any other well-known and convenient manner, the said casting also furnishing a socket K for receiving an oblong cross-pin or button L, attached to the end of the sash-cord, which latter lies in the groove M, extending from this socket to the upper end of the sash-rail, the said button, while lying in the socket K, spanning the lower end of the groove and thus is held in position within the sash-rail.

The hinging-pintles before referred to, when the shaft is partially rotated, are designed to swing forward and downward, projecting beyond the face of the window-frame so as to enter the socket in the sash-rail, which socket and consequently the pintle, by reason of the necessary central location of the sash-cord, are arranged at one side of the center of the sash-rail, as clearly shown in Figs. 8, 13, and 15 of the drawings, the cross-pin or button of the sash-cord lying in the socket in the sash-rail immediately below the pintle-socket in said rail. In order to remove this cross-pin or button from the socket, and thus detach the sash-cord from the sash, there are also provided upon the shaft F two pairs of fingers N, projecting from a casting rigidly attached to the frame, arranged so as to enter the socket-plate J simultaneously with the pintle and straddling the sash-cord, so that when the shaft is turned sufficiently to fully insert the pintle in its socket these fingers will have caught the button of the sash-cord and withdrawn it from its socket and carried it beyond the plane of the sash-rail, so that the latter is now free to move unrestricted by the tension of the cord, and the cord is held so that the sash-weight will not only fall, but be in position for reinsertion into its socket simultaneously with the withdrawal of the hinging-pintle, as clearly shown in Fig. 6.

It will of course be understood that one of the pintles and one pair of the fingers operate upon the lower sash and the other upon the upper sash when lowered into position for swinging on the hinges. The casing E is also provided with a pair of oblong openings O in the face thereof, of greater width than the fingers N, through which the button of the sash-cord is drawn within the casing by the fingers, and to provide a means for closing this oblong opening the casting supporting the fingers is extended downwardly and

has a cross or T end P, which is designed to fit snugly within the opening and slot when the parts are in their normal position; but it moves inwardly simultaneously with the downward movement of the fingers, and thus leaves the openings free for the passage of the buttons.

The parting-strip Q and guide-strip R, the relative location and operation of which are more clearly shown in Figs. 6, 9, and 13, which constitute the guides for the sashes in raising and lowering, are each composed of two parts, being divided just above the center of the frame, and of course must be removed out of the path of the sashes before the latter can swing on their hinges. To accomplish this action, the shaft F is also provided with a pair of hooks S and T, the operative part of the former of which is concentric with the center of the shaft and arranged to engage an eye S', attached to the rear face of the guide-strip R, and project through an aperture R' in the face of the casing whenever the shaft is rotated, so as to withdraw the hinges and place all of the parts in their normal position, for at this time the guide-strip will be firmly locked against removal and cannot be detached from the frame until the shaft is rotated to the position shown by dotted lines in Fig. 9, at which time the hinged pintles are projected, the sash-cord and the window ready for swinging upon the hinges. The other hook T is curved eccentrically to the axis of the shaft F, in effect operating as a cam, and is designed to engage an eye T', attached to the inner edge of the parting-strip at all times, whether the hinges are projected or withdrawn into the casing, being so arranged that when the hinges are projected the cam will withdraw the parting-strip into the frame through a groove provided therein in the casing E, so that the outer edge thereof will lie flush with the face of the frame, and thus offer no obstruction whatever to the swinging of the sash upon its hinges; but when the operation is reversed and the pintles withdrawn into the casing the cam-action of the hook T will be reversed and cause the parting-strip to project beyond the surface of the frame parallel with the remaining fixed portion of the parting-strip, and thus be in normal position for performing its usual function—that of guiding the sashes when lifted and lowered. If, however, for any reason it should be desired to entirely detach the parting-strip from the sash, but more particularly when the parting-strip is originally placed in position by giving the shaft a still further rotation beyond its normal position in which it is usually locked by the devices hereinafter described, throwing the parts to the position shown by dotted lines in Fig. 7, the hook T will be entirely disengaged from the eye T', and the parting-strip may then be readily detached from the frame.

The function and operation of the remain-

ing parts B, C, and D of the window attachments are simply modifications of the devices just described in full—that is to say, each of the parts has a portion only of all of the parts included in the part A, according to the location and function of the part, the operation of which, however, is identical with that of the part just described. For instance, the part B, illustrated in detail in Fig. 11, and located at the opposite side of the window-frame, at a height corresponding with the part A, comprises only the sash-cord detaching-fingers, which in this figure are lettered *a*, the parting-strip cam-hook *b* corresponding with the hook T of the part A, and a hook corresponding to the hook S for the guide-strip, (which is not shown in detail,) all of which are attached to a rotatable shaft *c*, corresponding to the shaft F of the part A. The detaching-fingers *a* operate upon a sash-cord button *d* in precisely the same manner as the corresponding parts upon the part A, as do all of the other parts before described.

The part C, which is located near the bottom of the frame upon the same side as the part A, as illustrated in detail in Fig. 10, comprises only the radial arm *e*, corresponding with the arm G of the part A, carrying the hinging-pintle *f*, a cam-hook *g* for operating the lower end of the parting-strip, and a hook for operating the lower end of the guide-strip R, corresponding with the hook S, all of which parts are attached to a rotatable shaft *h*, corresponding with the shaft F of the part E. The function and operation of all these parts are identical with that of the corresponding parts in the part A, excepting that the pintle rises and projects upwardly, engaging a socket in the lower end of the sash-rail, instead of downwardly, as in the part A.

The part D, located at the opposite side of the frame, near the bottom thereof, and illustrated in detail in Fig. 12, comprises only the cam-hook *i* for operating the parting-strip, and the hook *j* for operating the guide-strip, both of which are attached to a rotatable shaft *k*, corresponding with the shaft F of the part A, the operation of which parts is also identical with the corresponding parts in the part A.

I may here state that the parts B and D are not provided with hinges, because they are needed at only one side of the sash, and that the parts C and D are not provided with sash-cord detachers, because the sash-cords never go below the upper parts A and B, and the employment of any such parts would be a useless duplication.

From the foregoing description it will be understood that all four of the parts A, B, C, and D have two positions in which they should be temporarily fixed—one, the normal position within the frame when both sashes are in their normal positions, and the other projected out of the casing when it is desired to swing either one of the sashes upon their hinges; and in order to secure these parts in these

two positions I mount upon each one of the rotatable shafts F, *c*, *h*, and *k* a metallic disk *l*, (more clearly shown in Figs. 5, 9, 13, and 14,) provided with two holes *m*, adapted and arranged to be engaged by a spring-actuated pin *n*, bearing and working through the frame, said pin being normally actuated to project inwardly through the said holes by means of a coiled spring *o*, sleeved upon the pin and confined between a shoulder thereon and the frame in which the pin works. The outer end of this pin is provided with a thumb-piece *p*, for convenience in withdrawing the pin and overcoming the tension of the spring whenever it is desired to shift the position of the shaft and its accompanying devices. The holes *m* are so arranged that the pin will project into one of them and effectually lock the shaft against rotation in either direction when the parts are in one position—say the normal withdrawn position—while the other hole registers with and receives the pin when the parts reach their other or projected position, it being only necessary when it is desired to shift the position of the parts to withdraw the pin from engagement with the hole and rotate the shaft, during which rotation the pin may be released, and will automatically shoot into the other hole when brought to register therewith. The shaft is preferably caused to operate by a detachable key *q*, provided with a squared socket therein fitting upon the projecting end of the shaft, and provided with a radial pin *r*, designed to impinge against shoulders or stops provided upon the frame or a metallic rose, so as to limit the rotation of the shaft, prevent the turning of the shaft in the opposite direction, and at the same time indicate the direction in which the shaft should be turned. This hand-key and the spring-pin *n* are so located relatively to each other that they may both be grasped and manipulated with one hand, the pin being first withdrawn from engagement with the disk *l* by the fingers, and then the key operated so as to partially rotate the disk, during which rotation the pin may be released, as upon the completing of the movement of the key and disk the pin will automatically shoot into the other hole in the disk and lock the parts in that position until it is desired to reverse them.

Having described my invention, what I claim, and desire to secure by Letters Patent, is—

1. The combination, with a window sash and frame, of a sash-cord detacher attached to the frame for detaching the sash-cords from the sash, and a movable pintle for temporarily hinging the sash to the frame at one side edge thereof, substantially as and for the purpose described.

2. The combination, with a window frame and sash, of a sash-cord detacher and a hinging-pintle connected together and attached to the frame for simultaneously disconnecting the sash-cords from the sash and tempo-

rarily hinging the sash at one side edge thereof to the frame, substantially as described.

3. The combination, with a window sash and frame, of a sash-cord detacher attached to the frame for disconnecting the sash-cords from the sash, mechanism for simultaneously withdrawing and detaching the guide and parting strips of said frame, and a movable pintle for temporarily hinging the sash at one side edge to the frame, substantially as described.

4. The combination, with a window sash and frame, of a sash-cord detacher, and hooks and a hinging-pintle connected together and attached to the frame for simultaneously detaching the sash-cords from the sash, withdrawing and detaching, respectively, the guide and parting strips of said frame, and temporarily hinging the sash at one side edge to the frame, substantially as described.

5. The combination, with a window frame and sash, said sash being provided with sockets at one side thereof, of hinging-pintles attached to the frame and adapted and arranged to engage said sockets in the sash, and a sash-cord detacher for detaching the sash-cords from the sash, substantially as described.

6. The combination, with a window frame and sash, said sash being provided with sockets at one side thereof, of hinging-pintles attached to said frame, adapted and arranged to engage said sockets, a sash-cord detacher for detaching the sash-cords from the sash, and mechanism for simultaneously withdrawing and detaching, respectively, the parting and guide strips of said frame, substantially as described.

7. The combination, with a window frame and sash, said sash being provided with sockets at one side thereof, of hinging-pintles attached to said frame, a sash-cord detacher connected with said pintle and adapted and arranged to detach the cord from the sash simultaneously with the projection of said pintle into the upper one of said sockets, and a sash-cord detacher attached to the frame at the opposite side thereof for detaching the other sash-cord from the sash, substantially as described.

8. The combination, with a window frame and sash, said sash being provided with sockets at one side thereof, of hinging-pintles attached to said frame, a sash-cord detacher connected with said pintle and adapted and arranged to detach the cord from the sash simultaneously with the projection of said pintle into the upper one of said sockets, and a sash-cord detacher attached to the frame at the opposite side thereof for detaching the other sash-cord from the sash, and mechanism for simultaneously withdrawing and detaching, respectively, the parting and guide strips of said frame, substantially as described.

9. The combination, with a window frame and sash, of a sash-cord detacher and a movable pintle attached to the frame for simultaneously disconnecting the sash-cords from

the sash and temporarily hinging the sash at one side edge thereof to the frame, and a lock device for securing said detacher and pintle in either adjusted position, substantially as described.

10. The combination, with a window sash and frame, of a sash-cord detacher, hooks and a hinging-pintle connected together and attached to the frame for simultaneously detaching the sash-cords from the sash, withdrawing and detaching, respectively, the parting and guide strips of said frame and temporarily hinging the sash at one side edge to the frame, and a lock device for securing said mechanism in either adjusted position, substantially as described.

11. The combination, with a window frame and sash, said sash being provided with open-ended recesses at the side edges thereof, of a sash-cord provided with a button fitting in said recesses, and a sash-cord detacher attached to said frame and adapted and arranged to withdraw the button from engagement with the recesses, substantially as described.

12. The combination, with a window-frame provided with a detachable guiding-strip and an adjustable parting-strip, and a sash provided with hinging-sockets at one side thereof, and open-ended recesses for the sash-cord button, of the part A, comprising a rock-shaft having attached thereto a hinging-pintle, a sash-cord detacher, a cam-hook for adjusting the parting-strip, and a lock-hook for securing the guide-strip, the part B, comprising a rock-shaft having attached thereto a sash-cord detacher, a cam-hook, and a lock-hook, the part C, comprising a rock-shaft having attached a hinging-pintle, a cam-hook, and a lock-hook, and the part D, comprising a rock-shaft having attached thereto a cam-hook and a lock-hook, all arranged substantially as described.

13. The combination, with a window-frame provided with a detachable guiding-strip and an adjustable parting-strip, and a sash provided with hanging sockets at one side thereof, and open-ended recesses for the sash-cord button, of the part A, comprising a rock-shaft having attached thereto a hinging pintle, a sash-cord detacher, a cam-hook for adjusting the parting-strip, and a lock-hook for securing the guide-strip, the part B, comprising a rock-shaft having attached thereto a sash-cord detacher, a cam-hook, and a lock-hook, the part C, comprising a rock-shaft having attached thereto a hinged pintle, a cam-hook, and a lock-hook, and the part D, comprising a rock-shaft having attached thereto a cam-hook and a lock-hook, all of said parts being so arranged that a rocking of the shafts in one direction will cause a simultaneous detaching of the sash-cords, engagement of the hinging-pintles with the sockets in the sash, the withdrawing of the parting-strips, and detachment of the guide-strips, while a rocking in the reverse

direction will reverse each of said operations, and a lock device for securing said parts in their adjusted positions, substantially as described.

5 14. The combination, with a window-frame provided with a detachable guiding-strip, of an adjustable parting-strip, and a sash provided with hinging-sockets at one side thereof, and open-ended recesses for the sash-cord
10 button, of the part A, comprising a rock-shaft having attached thereto a hinging-pintle, a sash-cord detacher, a cam-hook for adjusting the parting-strip, and a lock-hook for securing the guide-strip, the part B, comprising a
15 rock-shaft having attached thereto a sash-cord detacher, a cam-hook, and a lock-hook, the part C, comprising a rock-shaft having attached a hinging-pintle, a cam-hook, and lock-hook, and the part D, comprising a rock-
20 shaft having attached thereto a cam-hook and a lock-hook, stops on each of said rock-shafts, and spring-actuated pins working through the window-frames engaging said stops for locking the rock-shafts in their ad-
25 justed position, substantially as described.

15. The combination, with a window-frame

provided with a detachable guiding-strip, and an adjustable parting-strip, and a sash provided with hinging-sockets at one side thereof, and open-ended recesses for the sash- 30
cord button, of the part A, comprising a rock-shaft having attached thereto a hinging-pintle, a sash-cord detacher, a cam-hook for adjusting the parting-strip, and a lock-hook for
35 securing the guide-strip, the part B, comprising a rock-shaft having attached thereto a sash-cord detacher, a cam-hook, and a lock-hook, the part C, comprising a rock-shaft having attached a hinging-pintle, a cam-hook,
40 and a lock-hook, and the part D, comprising a rock-shaft having attached thereto a cam-hook and a lock-hook, stops on each of said rock-shafts, a spring-actuated pin working through the window-frame engaging said
45 stops, a key for oscillating said shafts, and a stop for limiting the movement of said key, substantially as described.

CHARLES F. OLCESE.

Witnesses:

W. R. OMOHUNDRO,
A. M. BENNETT.