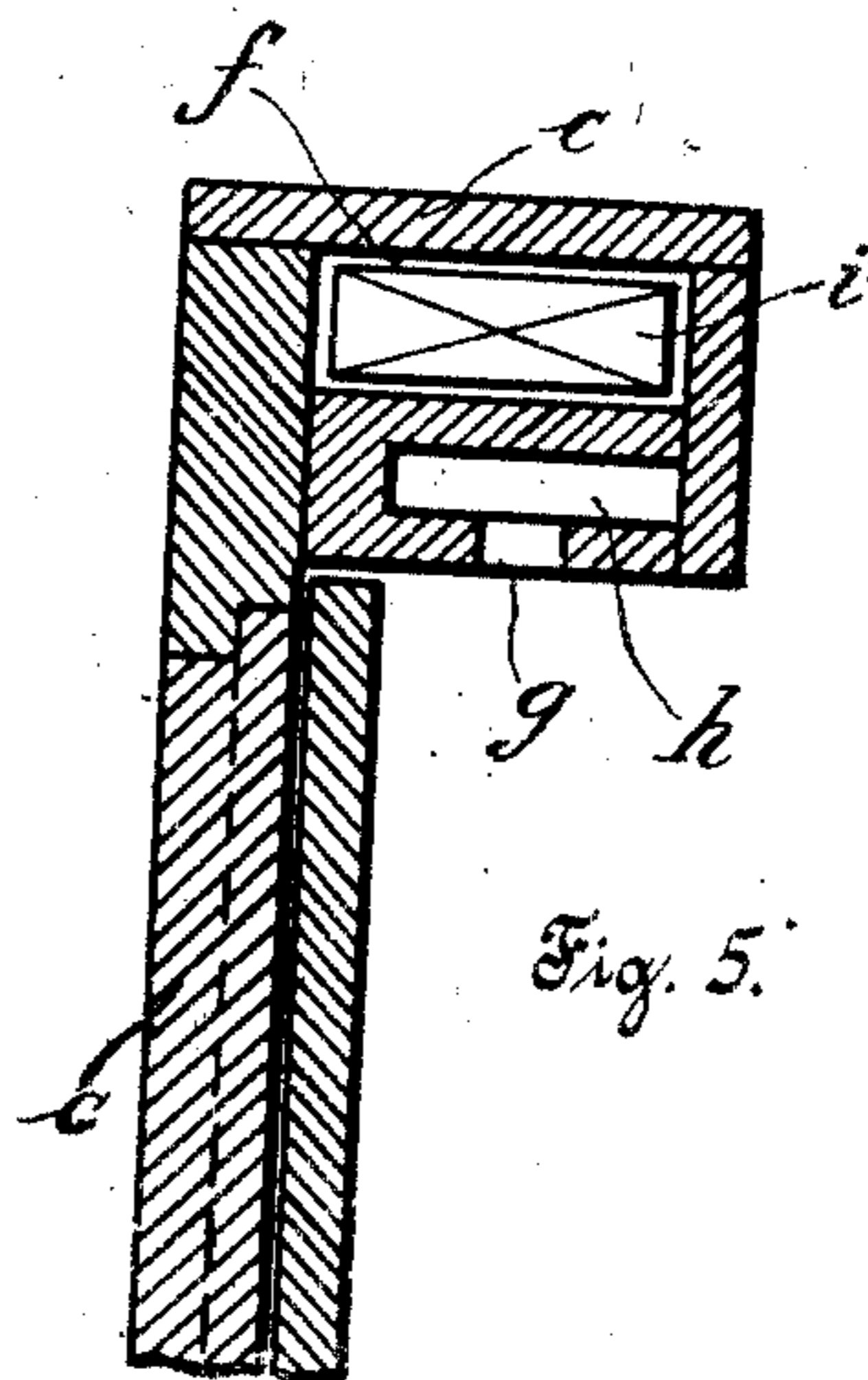
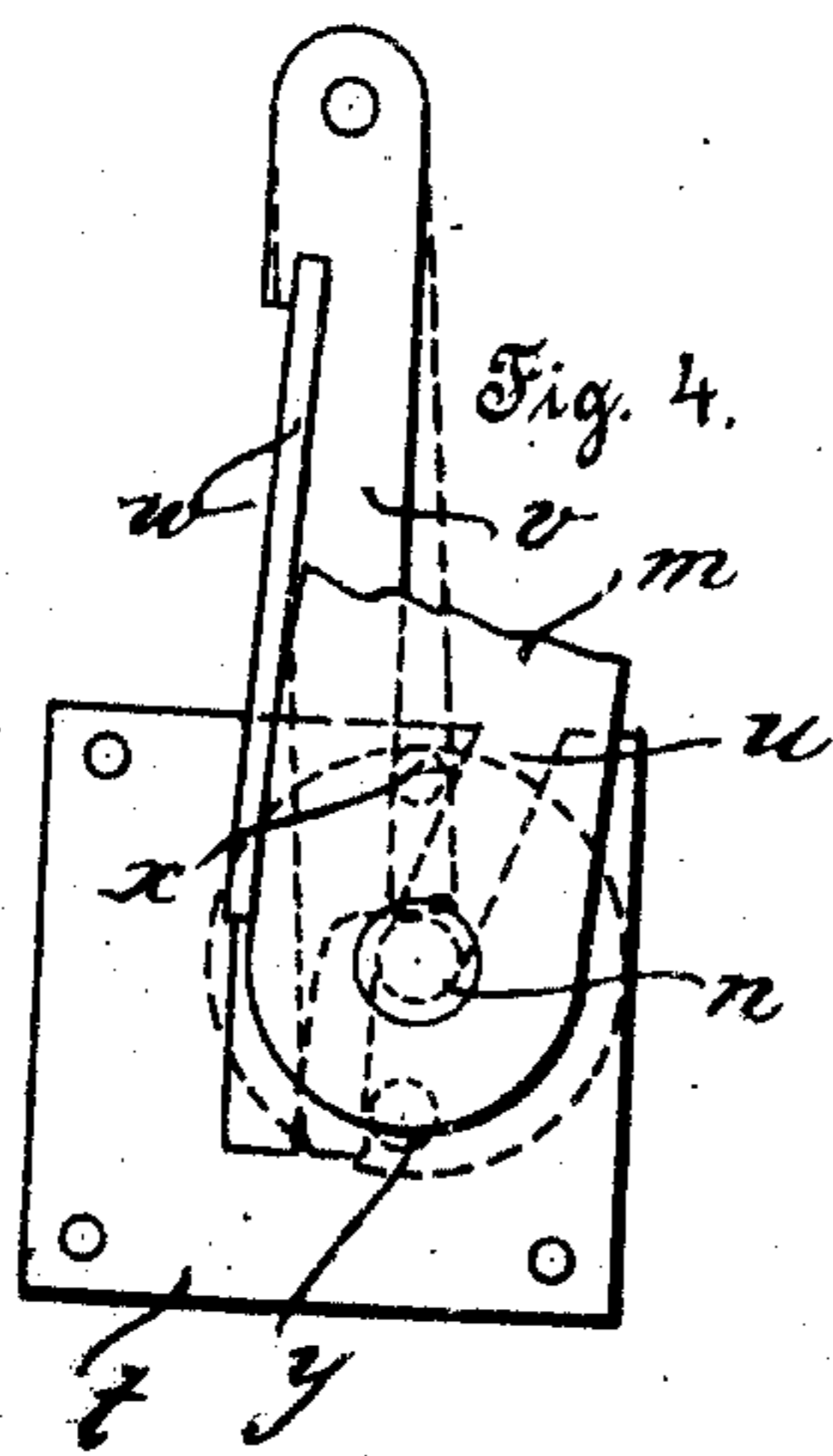
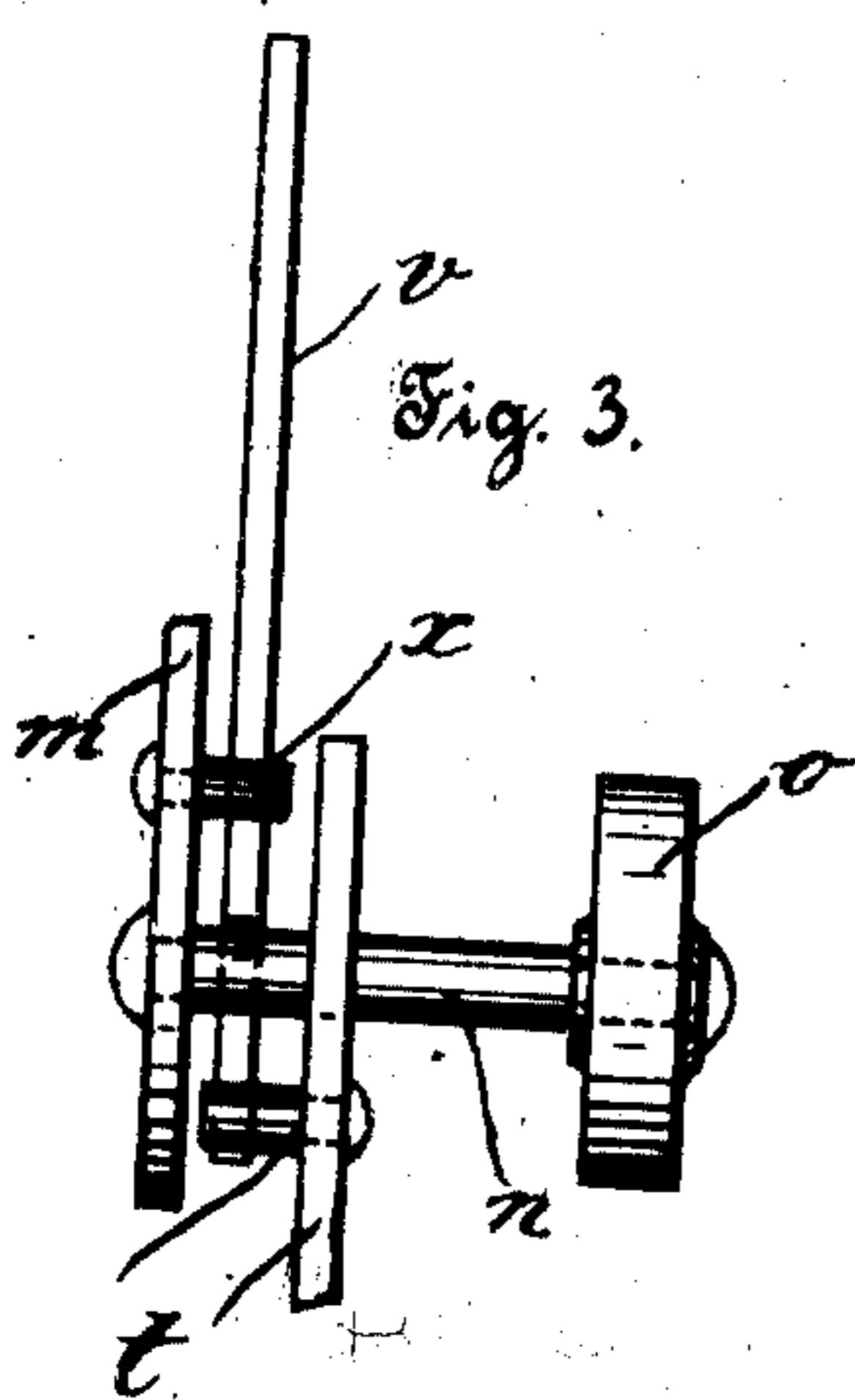
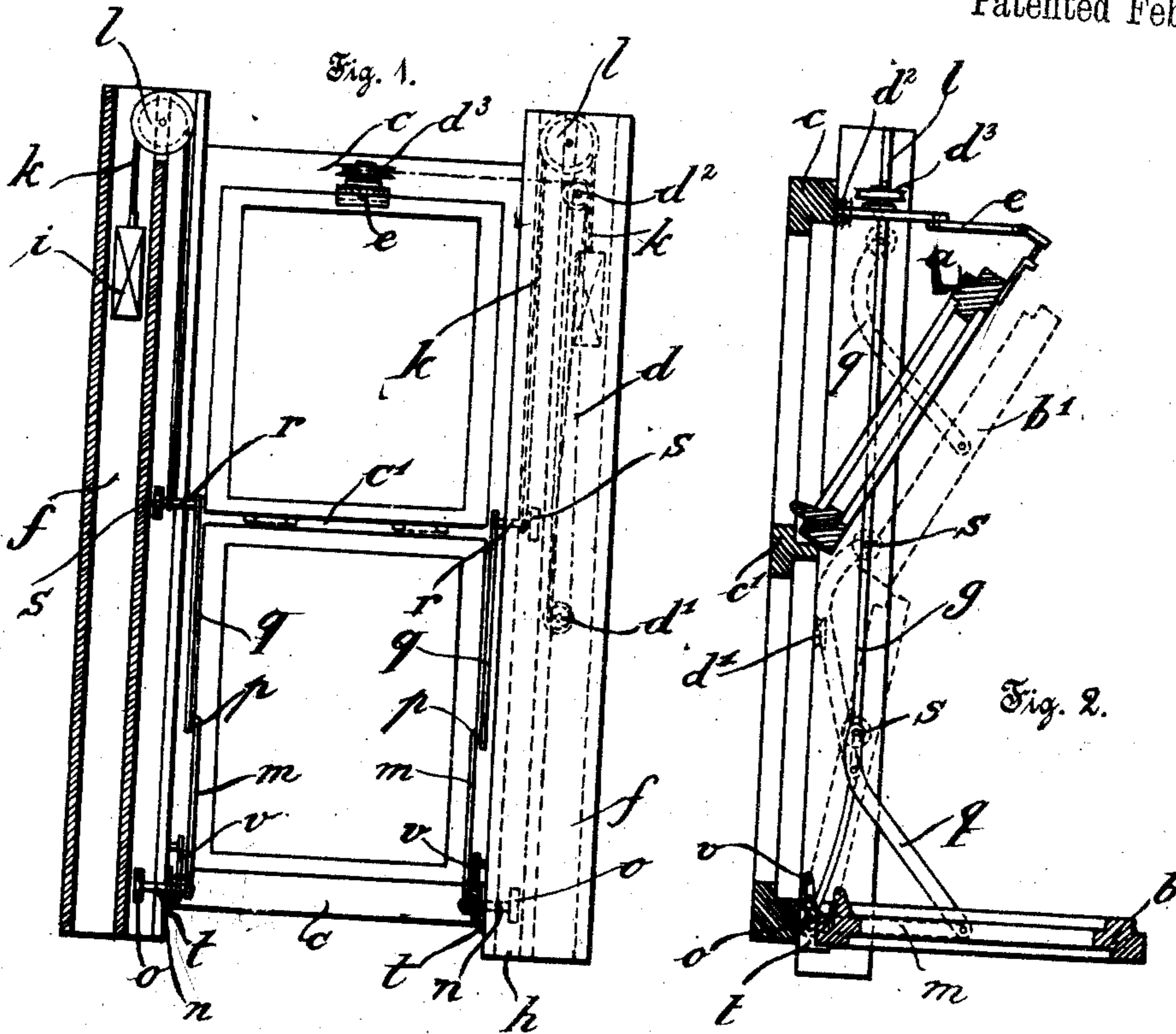


983,434.

C. FISCHER.  
SASH WINDOW.  
APPLICATION FILED MAY 13, 1909.

Patented Feb. 7, 1911.



Witnesses:  
Schwartzkopf  
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Inventor:  
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# UNITED STATES PATENT OFFICE

CARL FISCHER, OF KOBLENZ, GERMANY.

SASH-WINDOW.

983,434.

Specification of Letters Patent.

Patented Feb. 7, 1911.

Application filed May 13, 1909. Serial No. 495,589.

*Wherein it may concern:*

Be it known that I, CARL FISCHER, a subject of the German Emperor, and resident of Koblenz, Germany, have invented certain new and useful Improvements in Sash-Windows, whereof the following is a specification.

My invention relates to a sash-window with two sashes, of which the second or lower can be pushed upward in front of the first or upper sash. Furthermore, the arrangement is such that the lower or second sash can be shifted up and down in the frame of the window; and, in its lower position, said second sash can be turned on its lower edge so as to assume a horizontal position.

In the accompanying drawing forming a part of this specification a constructional form of the invention's object is represented.

Figure 1 is a front view with one half of the window-frame in section, the two sashes being left away for the sake of greater clearness, Fig. 2 is a vertical section of the window with opened sashes, Fig. 3 is a front view, Fig. 4 a side view of the guiding and stopping-device of the lower sash, and Fig. 5 a cross-section of a broken off part of the window-frame.

Similar letters refer to corresponding parts throughout the several views.

Referring to the drawings, the sashes *a* and *b* (Fig. 2) are guided in the window-frame *c*. The upper sash *a*, which is pivoted to the transverse ledge *e* of said window-frame *c*, so that said sash *a* can be turned on its lower edge, is opened and closed by means of a device of any desired kind, for example a pulling device consisting in a known manner of a cord *d* led over a system of small rollers or guide-pulleys *d*<sup>1</sup>, *d*<sup>2</sup> and over a roller or pulley *d*<sup>3</sup> (Figs. 1 and 2), the latter on being turned by the cord *d* acting so as to open more or less the upper window-sash *a* by means of a system of links *e* connected to the top of the frame *c* of said upper sash *a*. Further, in each stile of the window-frame *c* is provided a hollow space or recess *f* and also a suitably formed longitudinal guide-slot *g* communicating with a further hollow space or recess *h* in said window-frame *c*. In the spaces *f* slide the counter-weights *i* for the sash *b*. Said weights *i* are suspended to cords *k* passing over pulleys *l* and are fastened with their other ends to the sash *b*. Besides, to

each side of said sash *b* is screwed a strip *m* carrying below a lateral pin *n*, upon which is pivoted a roller *o*. Further, each strip *m* is provided above with a lateral pin *p* on which pivots the lower part of a bar or lever *q* carrying at its upper end a pin *r* upon which is pivoted a roller *s*. Owing to this arrangement the rollers *o* and *s* of the two symmetrical lever systems *m*, *q*, can slide in the respective spaces or recesses *h* of the window-frame *c*. Furthermore, on the inside of each stile of the window-frame is arranged, at the bottom of said stile, a plate *t* provided with a slot *u* which forms the end of, or is in line with, the guide-slot *g* (Fig. 2). Into the grooves *u* of said plates *t* engage the pins *n* of the strips *m*, when the lower sash *b* is at the bottom. On said pins *n* the sash *b* can be turned as shown in Fig. 2. In this horizontal position of the sash *b* the pins *n* are secured or retained by pawls *v* pivoted to the stile of the window-frame and recessed at their lower part. Said pawls *v* are standing under the action of springs *w* (Fig. 4), so that on the sash *b* being turned in its horizontal position, they place themselves with their recessed lower part automatically over the pins *n*, as shown in dotted lines in Fig. 4.

When the sash *b* is turned out of the horizontal position into the inclined position represented in dotted lines in Fig. 2 the pawls *v* are pushed away by the pins *x* fixed laterally to the strips *m*, so that the pawls *v* assume now the position shown in Fig. 4 in full lines. Now, the sash *b* can be moved upward vertically in the window-frame. The pins *y* on the plates *t* limit the position of said pawls *v*.

If the upper sash is closed, the lower one can be pushed straight upward. Again, if the upper sash *a* is open, the sash *b* can be moved out of the window-frame into the position *b*<sup>1</sup> indicated in Fig. 2 by dotted lines.

Having thus fully described my invention, what I claim and desire to secure by United States Letters Patent is:—

1. In a sash-window, the combination with a window-frame having two lateral guide-ways and provided in the middle with a transverse ledge, of an upper sash pivoted to the transverse ledge of said window-frame, a lower counterweighted sash, rollers *o* disposed on both sides of said lower sash, each roller *o* being in engagement with one of said lateral guide-ways of the window-

frame, two levers *q* pivoted with their ends to the corresponding sides of said lower sash, and rollers *s* disposed at the other ends of said levers *q*, each roller *s* being in engagement with one of said lateral guide-ways, whereby the lower sash is adapted to be brought either in a horizontal position or in an inclined position or even in front of the upper sash by correspondingly moving said lower sash and displacing its rollers in said guide-ways; substantially as described.

2. In a sash-window, the combination with a window-frame having two lateral guide-ways and provided in the middle with a transverse ledge, of an upper sash pivoted to the transverse ledge of said window-frame, a lower counterweighted sash, two strips *m* fixed to the sides of said lower sash, horizontal pins *n* connected to the bottom of said strips *m*, rollers *o* pivoted upon said pins *n*, each of said rollers *o* being in engagement with one of said lateral guide-ways of the window-frame, two levers *q* pivoted with their ends to the corresponding sides of said lower sash, horizontal pins *r* connected to the upper part of said levers *q*, rollers *s* pivoted upon said pins *r*, each roller *s* being in engagement with one of said lateral guide-ways, so that the lower sash can be brought into the desired position by correspondingly moving the same and displacing its rollers in said guide-ways of the window-frame, substantially as described.

3. In a sash-window, the combination with a window-frame having two lateral guide-ways and provided in the middle with a transverse ledge, of an upper sash pivoted to the transverse ledge of said window-frame, a lower counterweighted sash, two strips *m* fixed to the sides of said lower sash, horizontal pins *n* connected to the bottom of said strips *m*, rollers *o* pivoted upon said pins *n*, each of said rollers *o* being in engagement with one of said lateral guide-ways, plates *t* fixed to the lower part and inside of the stiles of the window-frame, each plate *t* being provided with a groove *u* in one line with the guide-slot *g* of the window-frame and adapted to receive the corresponding pin *n* carrying a roller *o*, spring-pressed pawls *v* linked to the lower part and inside of the stiles of the window-frame, each pawl *v* being provided below with a recessed part adapted to lock the corresponding roller pin *n*, and pins *x* fixed laterally to the strips *m*, the pawls *v* being pushed aside by said pins *x*, when the lower sash is turned from the horizontal into an inclined position substantially as described.

In witness whereof I have hereunto signed my name this 1 day of May 1909, in the presence of two subscribing witnesses.

CARL FISCHER.

Witnesses:

R. H. DUNLAP,  
BESSIE F. DUNLAP.