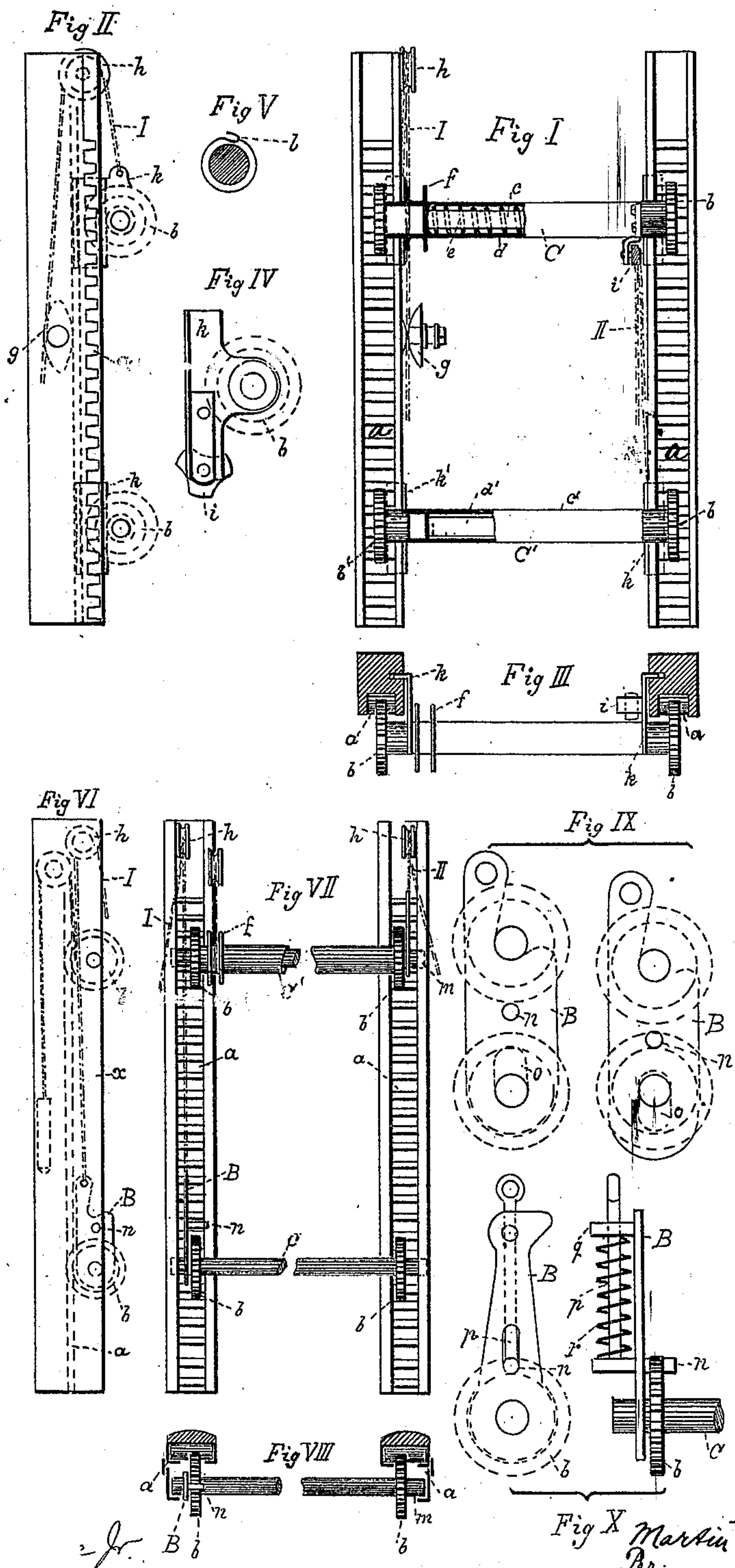


(No Model.)

M. G. MITTER.
WINDOW BLIND OR SHADE.

No. 362,524.

Patented May 10, 1887.



Inventor:
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UNITED STATES PATENT OFFICE.

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WINDOW BLIND OR SHADE.

SPECIFICATION forming part of Letters Patent No. 362,524, dated May 10, 1887.

Application filed June 8, 1886. Serial No. 204,448. (No model.) Patented in Germany June 21, 1884, No. 31,299; in Belgium September 15, 1884, No. 66,315; in France September 15, 1884, No. 164,288; in Austria-Hungary December 6, 1884, No. 32,960 and No. 56,720; in England July 25, 1885, No. 8,976; in Luxemburg March 31, 1886, No. 669; in Italy May 20, 1886, No. 225; in Denmark July 28, 1886, No. 679, and in Spain August 20, 1886, No. 9,263.

To all whom it may concern:

Be it known that I, MARTIN GEORG MITTER, manufacturer, of the city of Berlin, Prussia, Germany, have invented certain new and useful
5 Improvements in Window Blinds or Shades; and I do hereby declare that the following is a full, clear, and exact description thereof.

The object of my invention is to produce an adjustable blind or shade for windows that can
10 be drawn up like an ordinary blind, and lowered from the top and raised from the bottom to any extent without entirely removing it from the window.

Referring to the drawings, Figure I is a
15 side view of my improved window-blind and adjustable attachment. Fig. II is a side view of the same. Fig. III is a plan sectional view of the same. Fig. IV is an enlarged side view of the roller and attachment. Fig. V is a
20 detached sectional view of the roller. Fig. VI is a side elevation of a modification. Fig. VII is a front elevation of the modification of Fig. VI. Fig. VIII is a plan view of Fig. VII. Fig. IX is a detached enlarged side view of Fig. VII.
25 Fig. X is a detached enlarged side and end view of Fig. VII.

a a are two ratchet bars placed one on each side of a window or opening.

CC' are two rollers, provided with cog-wheels
30 *b b'* at their outer extremities, corresponding with the teeth of the ratchet-bars *a a*. These rollers are suspended on the movable frame *k*, which slides in grooves cut in the window-casing. (See Fig. III.) These rollers are made
35 double, the object of which is to enable the said rollers to fit any size window or opening. In some cases the rollers are provided with a spiral spring, *c*, to give elasticity to the movements of said rollers. Over these rollers is
40 placed the blind or shade, which is wound and unwound from one roller to the other. The two rollers, with their carriers, are moved up and down by the cord which passes over wheel
45 *h*, and is connected to winding-roller *g*. Although the roller *C* can move with roller *C'* when the said roller *C* is moved upward, yet there are times when it is necessary to roll the shade up from the lower roller. In order to accomplish this I use the cord *D*, attached at one end to

the sliding frame *k*, and passing over the pulley *i*, attached to the frame *k*, secured to the upper roller.

The operation of my invention is as follows: The window blind or shade is first attached to the rollers *C* and *C'*. If the blind or shade is
55 first required to be entirely rolled up, it is wound around roller *C*. If it is required to be rolled down, it is wound around roller *C'*. Should the blind or shade be required to cover but only half of the window, the roller *C* is
60 lowered by cord *I*. As the roller *C* is lowered the cog-wheels *b b'* rotate the same by coming in contact with teeth of the ratchet-bars *a a*. If the lower roller is likewise required to be rolled up to admit light through the window under
65 the blind or shade, all that has to be done is to pull up the cord *I*. As the roller moves it likewise rotates the same, owing to the cog-wheel coming in contact with the teeth of the ratchet-bars *a a*.
70

In the modification shown in Figs. VI, VII, and VIII, *x* is a guide-rail, made of wood or metal, placed on both sides of the racks. The part *m* at the end of the rollers is smaller in
75 diameter than the roller itself. The parts *m* extend beyond the cog-wheel *b*, Figs. VI and VIII, and are placed in the guide-rail *x*, for guiding the same in ascending and descending. By this means the blind can be fixed closer to the racks and allow the window to move up
80 and down. Again, by these guide-rails the blind receives an easier motion, as the friction of the bearing in sliding is avoided, which is an advantage, because the blind is exposed to the influence of the weather. Furthermore, in
85 Figs. VI and VIII a contrivance is presented which has for its object the fitting of the blind when arranged out of doors in rough and stormy weather, and likewise prevents the falling of the rollers. This contrivance consists of
90 a plate, *B*, to which the cords *I* and *II* are fastened. The plate *B* has a slit, *o*, in which the narrower part of the roller *m* of the upper and lower roller is placed, respectively, so that it can revolve. The plate *B* has over the periphery of the cog-wheels *b* a peg, *n*, which,
95 when desirable, enters between two teeth of the cog-wheels lying under it. When this con-

trivance is put in action, the rods I II are loosened, respectively. The plate B will then, by its own weight, fall so far that the peg *n* comes in close contact with the cog-wheel, and in this way holds fast the roller. By drawing the cord the plate B moves on peg *m* in slit *o*. This movement frees the peg *n* from the action of the cog-wheel.

The above-described device for adjusting blinds or shades has these advantages: It enables the blind to be drawn up like an ordinary blind. It also enables the blind to be lowered from the top or raised from the bottom without necessitating the removal of the blind entirely from the window.

Having thus described my invention, I desire to claim—

In a window blind or shade, the rollers C C', provided with cog-wheels *b b'* at each end, and

made in two parts, which are forced outward by spiral springs *e*, the roller C being connected to the roller C' by cord D, fastened at one end to the roller C', and passing over pulley *i* on frame *k*, and both these rollers as connected being moved up and down by a cord, I, passing over wheel *h*, attached to the window-frame and fastened to the winding-roller *g*, and rotated by the ratchet-bars *a a*, fastened onto the sides of the window-frame, all arranged substantially as and for the purpose set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 3d day of May, 1886.

MARTIN GEORG MITTER.

Witnesses:

EMIL GEORG PRILLWITE,
B. ROY.