Wieterich & Hagen,

Curtain Fixtures,

No. 15,076, Patented Sept. 2, 1856.

Fig. 2

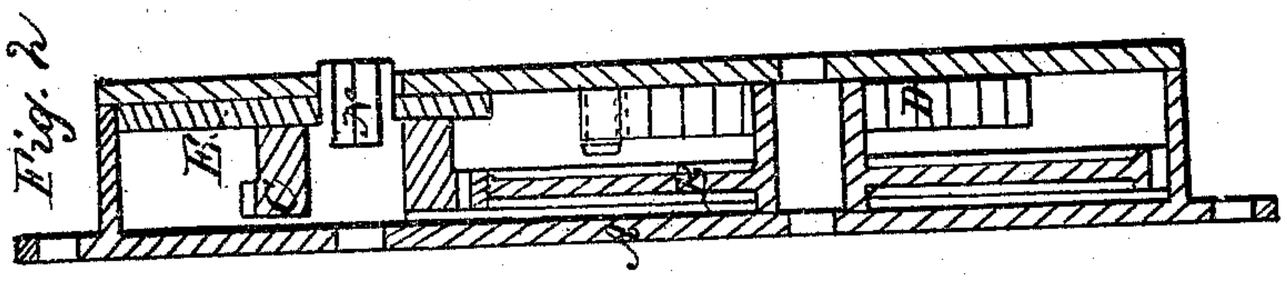
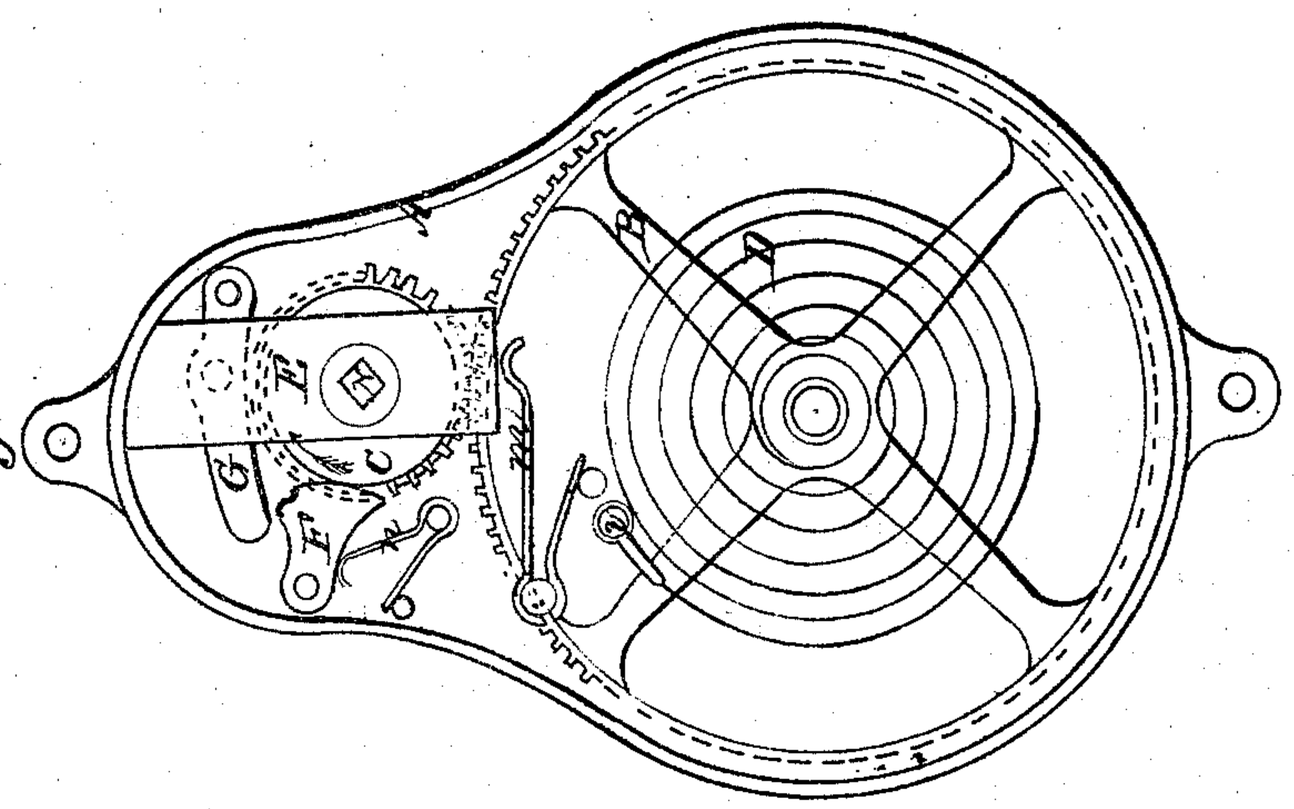


Fig. 1



UNITED STATES PATENT OFFICE.

FERDINAND WÜTERICH AND KONRAD HAGEN, OF NEW YORK, N. Y.

CURTAIN-FIXTURE.

Specification of Letters Patent No. 15,676, dated September 2, 1856.

To all whom it may concern:

Be it known that we, FERDINAND WÜTERICH and KONRAD HAGEN, both of the city of New York, in the county and State of New York, have invented a new and Improved Apparatus for Raising and Lowering Window Shades or Curtains; and we do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings and to the letters of reference marked thereon.

The nature of our invention consists in the construction of an apparatus to which the roller of the window shade is attached, acted upon by spring and friction cam in connection with the weight of the curtain in such a manner that the shade or curtain will be held stationary in any desired position.

Figure I represents a front view of the apparatus with the cover of the casing removed and Fig. II is a cross section of the same.

A is the casing containing the machinery provided with suitable lugs, to attach the same to the side of the window.

B is a spur wheel turning freely in the side of the casing, to the heel of which said wheel a scroll spring D (similar to a watch spring) is attached, the other end of which is attached to the pin (V) fast to the casing A. This spring is made light and only of sufficient strength to roll up the curtain after the latter is relieved of some of its weight.

C is a pinion working into the spurwheel B and fast on the shaft N, capable of turning freely in the side of the casing A and in the slide E. This shaft N, projects a little through the cover of the casing and is provided on that side with a square hole to receive one end of the roller to which the window shade is attached. The hole in the casing through which the end of the shaft N projects is made large enough to allow said shaft to be moved a little downward, for the purpose hereafter explained.

E is a slide supporting one end of the shaft N, capable of an up and down motion, and guided by suitable projections fast to the cover of the casing. A spring (*m*) of the required strength bears against the bottom of said slide so as to keep this slide upward and counter balance the same together with everything attached to it.

F is a cam turning upon a center fast to the casing, acted upon by the spring (*n*) and bearing against the periphery of the hub of the pinion C. This cam is so constructed as to act like a brake upon the pinion C in one direction, and at the same time giving full liberty for said pinion to turn in the opposite direction.

G is a lever turning upon a center fast to the casing and attached to the slide E, capable of being moved up or down with the same. The end of this lever bears against a projection (*a*) on the cam F so as to press said cam away from the periphery of the hub of the pinion C, liberating thereby said pinion so as to be capable of being turned in the direction indicated by the arrow.

The operation of the apparatus is as follows: One end of the curtain or window shade roller is provided with a square pin and fitted into the hole of the shaft N of the pinion C. When the curtain is pulled down the extra weight or power applied to the curtain to pull the same down, overcomes the power of the spring (112) and pulls at the same time the slide E a little downward, by which motion the lever G will likewise be moved downward so as to press the cam F away from the periphery of the hub of the pinion C, thereby allowing said pinion to turn around in the direction indicated by the arrow and unwinding thereby the window shade. By this running down of the curtain the pinion C acts upon the spur wheel B turning the same around and thereby winds the scroll spring D up. If the curtain is, in any position, let loose the spring *m* will push up again the slide E and lever G, which latter will relieve the cam F so as to be acted upon by its spring (*n*) when the friction produced by said cam against the periphery of the hub of the pinion C, will hold the same and consequently the window shade in the exact position it was left and prevents thereby the excess of the weight of the window shade above the strength of the spring D from letting the shade fall lower, while this excess of weight of the window shade prevents at the same time the winding up of said shade by the action of the spring D. If we require now to wind up the shade again we overcome by raising up the lower part of the shade the excess weight of the same above the power of the spring D when consequently said spring, (which has been wound up by the unrolling of the shade as before mentioned) will act upon the wheel B and pinion C so as to roll up thereby the window

shade. By rolling up the shade the pinion C will turn in the opposite direction of the position indicated by the arrow, in which direction the cam F will offer no obstruction. When I relieve again the window-shade at any desired position, then the whole weight of the shade or curtain overcomes again the power of the spring D, when the cam F acts again upon the periphery of the heel of the pinion C preventing the greater weight of the curtain from unwinding itself as before described and consequently the curtain will be retained in the desired position.

We do not claim the application of a scroll spring wound up by the running down of the curtain and then drawing up the same by its recoil, as we are aware the same has been done before, but

What we claim as our invention and desire to secure by Letters Patent is—

Supporting one end of the shaft (N) in a movable slide (E) connected with the lever (G) which latter is made to act upon the cam (F) in the manner and for the purpose described.

FERDINAND WÜTERICH.
KONRAD HAGEN.

Witnesses:
HENRY E. RAEDER,
RUFUS LAPHAM.