H. C. GEORGE.

WINDOW SASH.

APPLICATION FILED AUG. 25, 1911.

1,054,685.

Patented Mar. 4, 1913.

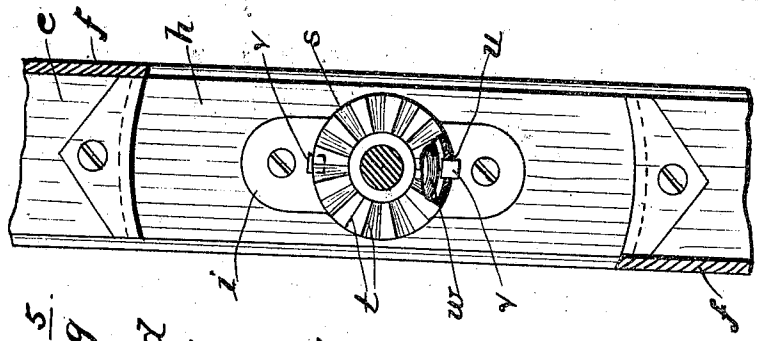

FIG. 4.

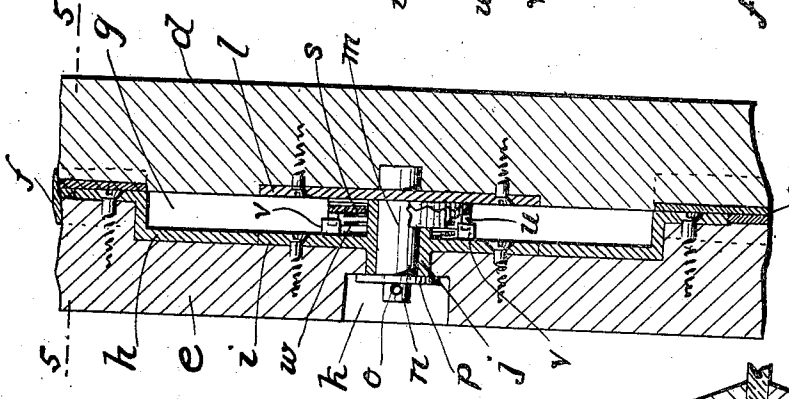

FIG. 2.

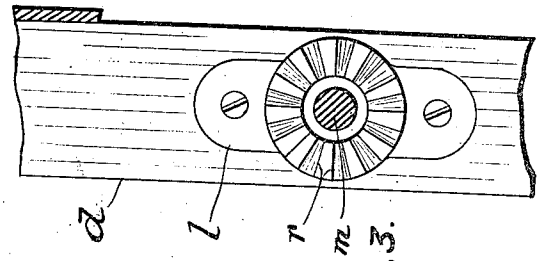

FIG. 3.

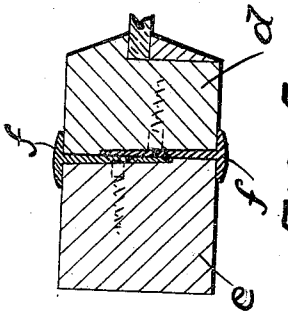

FIG. 5.

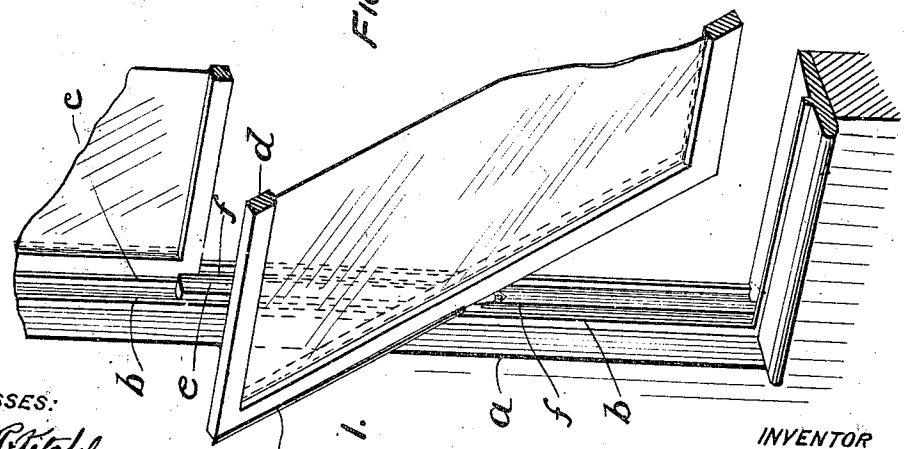

FIG. 1.

WITNESSES:

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UNITED STATES PATENT OFFICE.

HENRY C. GEORGE, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR, BY MESNE ASSIGNMENTS, TO INTERNATIONAL WINDOW MANUFACTURING COMPANY, OF DOVER, DELAWARE, A CORPORATION OF DELAWARE.

WINDOW-SASH.

1,054,685. Specification of Letters Patent. **Patented Mar. 4, 1913.**

Application filed August 25, 1911. Serial No. 645,928.

To all whom it may concern:

Be it known that I, HENRY C. GEORGE, a citizen of the United States, residing at Philadelphia, county of Philadelphia, and State of Pennsylvania, have invented a new and useful Improvement in Window-Sashes, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, which form a part of this specification.

The object of my invention is to provide a window sash adapted to swing on a horizontal axis located between its upper and lower ends and adapted to be automatically held open at any angle to which it is moved.

In the drawings, which illustrate a preferred embodiment of my invention: Figure 1 is a perspective view of a part of a window frame and sash embodying my invention; Fig. 2 is a vertical section through one of the pivot points of a shoe and sash; Fig. 3 is a face view of a part of the sash; Fig. 4 is a face view of a part of the shoe; Fig. 5 is a cross-section on the line 5—5 of Fig. 2.

a is the window frame having the ordinary sash guides *b* and *c*, one guide for the lower sash and the other for the upper sash.

The invention is shown as applied to one sash only, but it will be understood that it is applicable to either or both sashes.

Instead of making a sash of ordinary width, I provide a sash *d* of less width than the distance between guides *b* on opposite sides of the frame, and pivot the sash, on a horizontal axis, midway between its upper and lower ends, as hereinafter described, to shoes *e* slidable vertically in the sash.

It will be understood that the invention may be applied to any ordinary window by taking out the sash and sawing off the sash frame at opposite sides to form the shoes.

Along adjacent corners of the sash *d* and shoe *e* are formed rabbets in which are insert T-shaped plates *f*, one plate secured to the sash and the other to the shoe.

The above construction, so far as described, is more fully described and also claimed in the patent issued to me November 29, 1904, No. 776,177.

I will now describe the novel subject-matter of the present invention.

The face of each shoe opposite the sash is recessed between its upper and lower ends at *g* and in this recess is inserted the outer plate *h* and the inner plate *i*.

k is an orifice extending through the shoe from the face thereof next the window frame to the recess *g*, that part of the orifice nearest the recess *g* being of smaller diameter than the part of the orifice adjoining the window frame. The plate *i* is provided with a boss *j*, one part of which extends toward the sash and the other part of which extends into the narrower part of the recess *k*.

l is a plate secured to the face of the sash adjacent to the recess *g*. On this plate is formed a pivot pin *m* which extends within, and is turnable upon, the boss *j*. Projecting beyond the outer end of the pin *m* is a projection *n*, through which extends a cotter pin *o*.

p is a washer surrounding the projection *n* and resting between the cotter pin *o* and the ends of the boss *j* and pivot pin *m*.

Secured to or formed upon the outer face of the plate *l* is a series of radially extending teeth *r*. A cup or disk *s* is sleeved on the boss *j* within the recess *g* and is provided with similar teeth *t* engaging the teeth *r*. The flange of the cup *s* is provided with recesses *u* engaging projections *v* on the plate *i*, thereby preventing the cup from turning, but permitting the cup to have a slight movement toward and from the shoe *e*. Between the plate *i* and cup *s* and surrounding the boss *j* is a flat spiral spring *w*, which normally presses the teeth of cup *s* into engagement with the teeth *r* on the sash.

From the foregoing description it will be understood that the sash *d* is turnable upon the shoe *e*. In said turning movement the teeth *r* on the plate *l* ride over the teeth *t* on the cup, causing the cup *s* to vibrate toward and from the shoe *e*, but the cup cannot turn owing to the engagement of projections *v* in recesses *u*. After the sash has been turned to the desired position, the spring *w* holds teeth *t* of cup *s* in engagement with the teeth *r*, thereby holding the sash in the position to which it has been turned. It will also be understood that the sash can be moved vertically as desired, the shoes sliding in the window frame guides in the manner of an ordinary sash.

Having now fully described my invention,

what I claim and desire to protect by Letters Patent is:

1. A sash pivot comprising a plate, a boss on the plate, a cup sleeved on the boss and having a plurality of radially extending teeth, means permitting the cup to slide on the boss but preventing it from turning, a second plate having a portion turnable in the boss and having a plurality of radially extending teeth engaging the teeth on the cup and a spring between the first plate and the cup normally pressing the cup teeth into engagement with the teeth on the second plate.

2. A sash pivot comprising a plate, a boss on the plate, a cup sleeved on the boss and having a plurality of radially extending teeth, means permitting the cup to slide on the boss but preventing it from turning, a second plate having a portion turnable in the boss and having a plurality of radially extending teeth engaging the teeth on the cup, and elastic means normally pressing the cup teeth into engagement with the teeth on the second plate.

In testimony of which invention, I have hereunto set my hand, at Philadelphia, Pa., on this 23rd day of August, 1911.

HENRY C. GEORGE.

Witnesses:

FRANK S. BUSSER,

MARY E. HAMER.