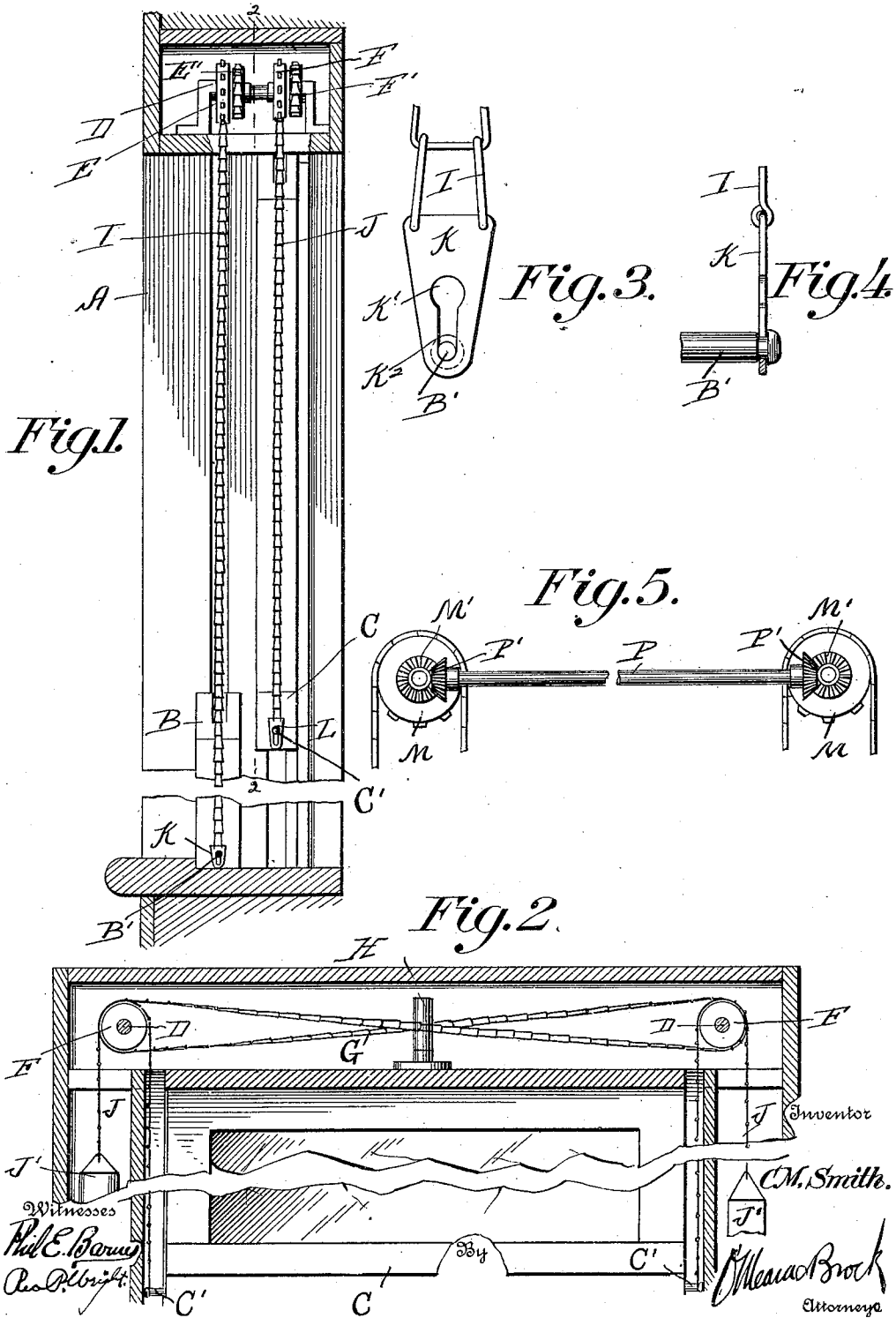


C. M. SMITH.
SASH BALANCE.

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914,319.

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UNITED STATES PATENT OFFICE.

CHARLES MORGAN SMITH, OF LOS ANGELES, CALIFORNIA.

SASH-BALANCE.

No. 914,319.

Specification of Letters Patent.

Patented March 2, 1909.

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To all whom it may concern:

Be it known that I, CHARLES MORGAN SMITH, a citizen of the United States, residing at Los Angeles, in the county of Los Angeles and State of California, have invented a new and useful Improvement in Sash-Balances, of which the following is a specification.

This invention relates to sash balances for supporting sashes in window-frames, the object being to provide a sash balance so constructed that the sashes will be held in a perfectly horizontal position at all times, so that all liability of the sash jamming is prevented.

Another object of my invention is to provide very novel means for regulating the weights so that both of the weights will travel at the same rate of speed, thereby causing the sash to move smoothly in the frame at all times.

With these and other objects in view, the invention consists in the novel features of construction, combination and arrangement of parts, hereinafter fully described and pointed out in the claim.

In the drawing forming a part of this specification:—Figure 1 is a vertical sectional view through the window frame showing my improved sash balance arranged therein. Fig. 2 is a section taken on the line 2—2 of Fig. 1. Fig. 3 is a side view of one of the locking members carried by the sash chain. Fig. 4 is a vertical sectional view through the same, showing the pin carried by the shaft in elevation. Fig. 5 is a side view of a modified form of sash balance.

In the drawing A indicates a window-frame provided with rabbeted and grooved stiles, in which are mounted sashes B and C provided with outwardly projecting pins B', C' which extend into the groove. Mounted on top of the frame at each end, is a shaft D on which are loosely mounted a pair of double-sprocket wheels formed of sprockets E, E' and F, F'. The sprocket-wheels E and F being connected together by chains G so as to cause the sprockets to rotate together. The chains passing over anti-

frictional rollers H, arranged centrally on top of the frame, so that the chains will be held apart and all liability of the chains becoming entangled is prevented.

Mounted on the sprockets E', F' are chains I and J carrying weights I', J' at one of their ends and locking plates K and L at their other ends, which extend down into the grooves formed in the stiles of the frame, and are provided with openings K', L' having slots K² L² extending therefrom adapted to fit in the grooves formed in the pins B', C' and support the upper and lower sashes, so that they can be readily raised and lowered.

It will be seen that the pulleys carrying the sash-chains are so connected together that one cannot rotate faster than the other.

In the modification shown in Fig. 5, I provide a pair of sprockets M, over which the sash-chains travel, which are provided with beveled gears M' adapted to be engaged by beveled gears P' carried by a shaft P journaled on a suitable support between the sprockets, (not shown) for connecting the sprockets so as to prevent one sprocket rotating faster than another.

From the foregoing description it will be readily seen that I have provided a very novel and efficient means for preventing the sash-chains from rotating faster than the adjacent chain, so that the sash will travel up and down in the frame in a perfectly horizontal position.

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

The combination with a window-frame, of sashes mounted in said frame, shafts arranged over said frame at each end, two pairs of sprockets loosely mounted on said shafts, a sprocket-chain connecting one of each pair of said sprockets, and sprocket-chains mounted on the other sprocket having a weight connected to one end, and a sash connected to the other end.

CHARLES MORGAN SMITH.

Witnesses:

JOHN T. HINSON,
J. F. CUNNINGHAM.