(No Model.)

G. C. GARDNER.

SASH BALANCE.

No. 456,949. Patented Aug. 4, 1891.

Fig. 1.

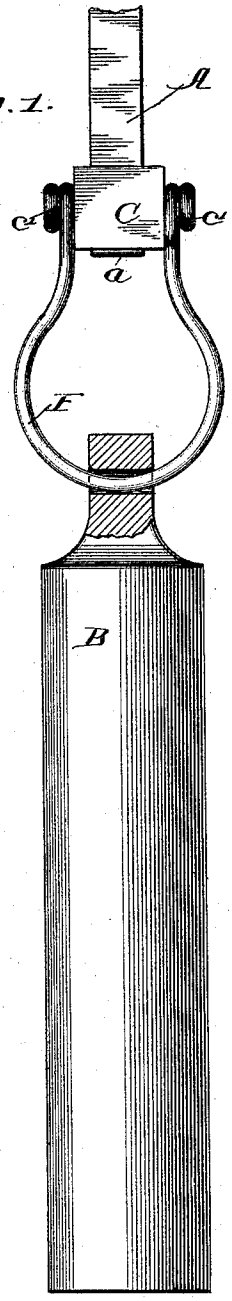


Fig. 2.

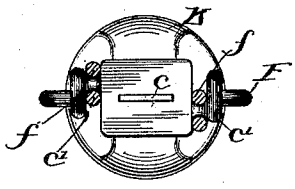
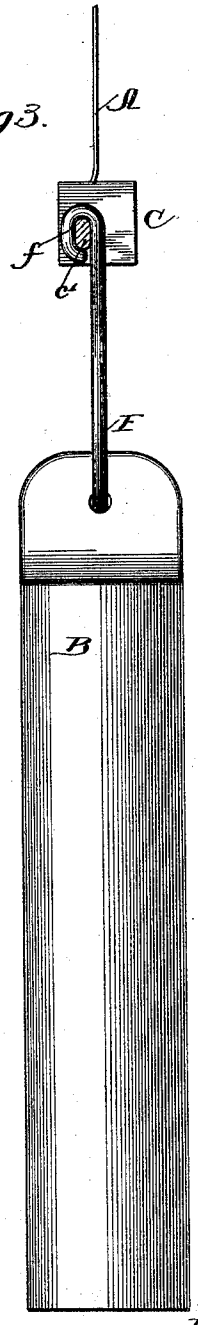


Fig. 3.



Witnesses:
Chas. C. Thorney.
C. P. Smith.

Inventor:
George C. Gardner
By Wilcox, Greene & Bitner
Attys.

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

GEORGE C. GARDNER, OF HINSDALE, ILLINOIS.

SASH-BALANCE.

SPECIFICATION forming part of Letters Patent No. 456,949, dated August 4, 1891.

Application filed September 22, 1890. Serial No. 365,736. (No model.)

To all whom it may concern:

Be it known that I, GEORGE C. GARDNER, a citizen of the United States of America, residing at Hinsdale, in the county of Du Page and State of Illinois, have invented certain new and useful Improvements in Sash-Balances, of which the following is a specification.

The ordinary workmen employed to hang window-sashes are frequently unskilled and cannot be relied upon to do good work, unless the devices which they are given to apply are of the simplest possible nature, and incapable of having their successful operation prevented by carelessness or haste in putting them together.

My invention relates particularly to certain improved means for attaching a metallic ribbon to a balancing-weight, and the purpose of said invention is to furnish such means as shall be efficient in service, cheap in manufacture, and at the same time shall call for the least possible skill and care in applying them, so that they may operate in the best possible manner.

In the drawings furnished herewith, Figure 1 is a side view of my improved device in its preferred form, showing the lower portion of the metallic ribbon. Fig. 2 is a top view of said device, partially in section and with the ribbon removed; and Fig. 3 is a side view, also partially in section, showing the same portions as in Fig. 1.

Referring to the different parts by means of reference-letters, A is the metallic ribbon, which is suitably secured to a metallic clip C, preferably by means of a central slot in said clip. This clip bears at its ends projecting ears c', and a wire bail F, preferably of spring metal, is looped about these ears, so as to hang securely therefrom. The weight is suspended in any suitable way from the bail F, and to bring the strain of said weight squarely upon the flat ribbon and in the plane of its thinnest dimension the necks of the ears c' are offset from the plane of the flat ribbon, so that all portions of the bail F from the point which carries the weight to the points which support it upon the ears c' lie in said plane.

In use, the above-described device is a decided improvement over a combined clip and bail cast together in a single piece. In the first place the use of the wire bail enables the fastening to be made more cheaply and of less weight without detracting from its strength. The elasticity of the wire also reduces the strain upon the ribbon in case of a sudden jar and thus often avoids a breaking down of the balance.

I claim as new and desire to secure by Letters Patent—

1. The combination of a metallic ribbon, a metal clip secured thereto having oppositely-arranged lugs projecting from the exterior thereof, and a wire bail adapted for attachment to the weight and to said lugs, substantially as described.

2. The combination of the metal ribbon A, the clip C, attached thereto by means of a central slot in said clip and having the ears c' offset from the plane of the ribbon, and the bail F, adapted for attachment to the weight and to the ears c', substantially as described.

GEORGE C. GARDNER.

Witnesses:
JAMES P. GARDNER,
R. H. GARDNER.