

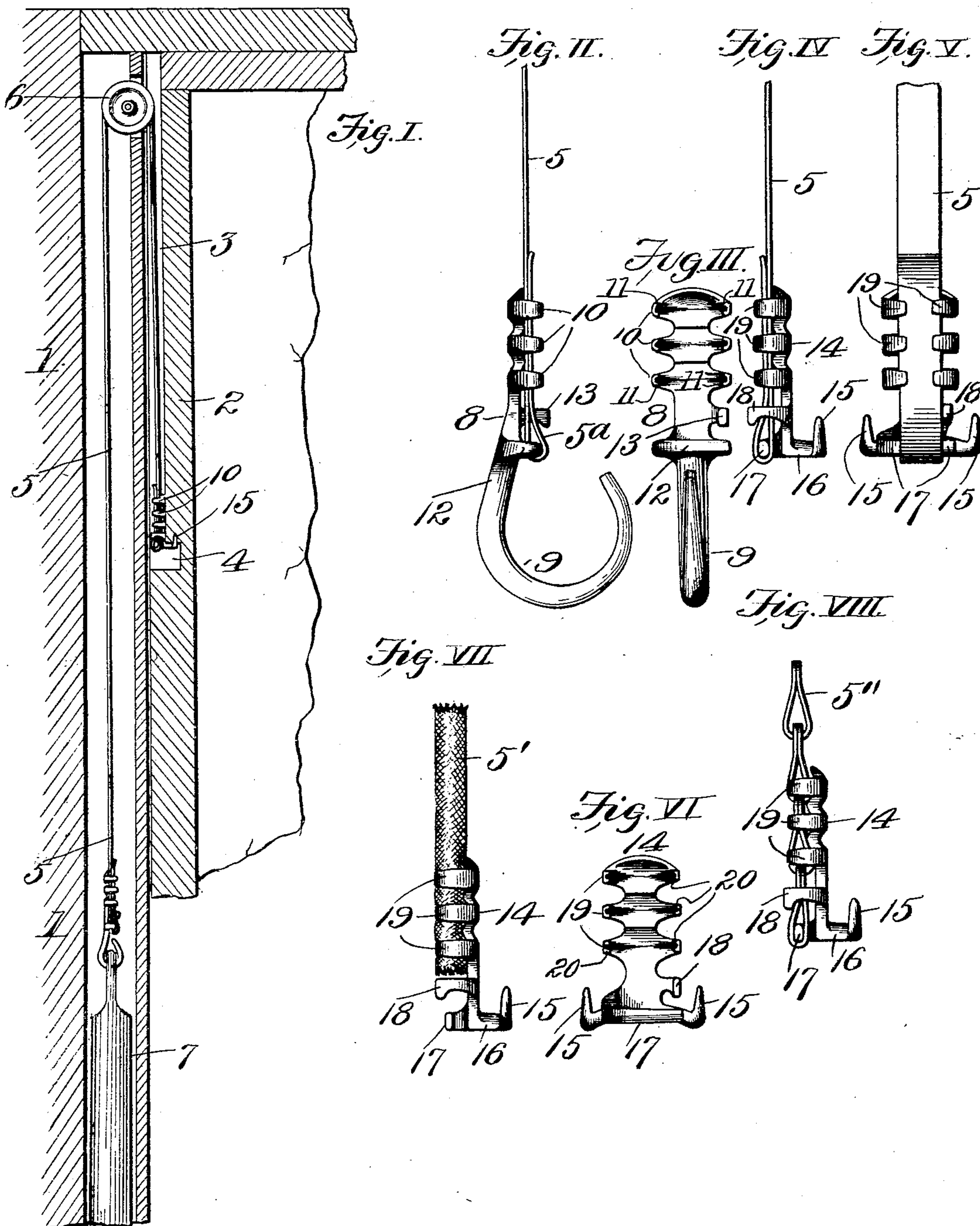
No. 704,225.

Patented July 8, 1902.

A. WEINGAERTNER.
SASH BALANCE CONNECTION.

(Application filed Sept. 9, 1901.)

(No Model.)



Attest:
E. Wright
A. V. Alexander

Inventor:
A. Weingaertner,
by Wright & Bro
Attys.

UNITED STATES PATENT OFFICE.

ALBERT WEINGAERTNER, OF ST. LOUIS, MISSOURI.

SASH-BALANCE CONNECTION.

SPECIFICATION forming part of Letters Patent No. 704,225, dated July 8, 1902.

Application filed September 9, 1901. Serial No. 74,785. (No model.)

To all whom it may concern:

Be it known that I, ALBERT WEINGAERTNER, a citizen of the United States, residing in the city of St. Louis, in the State of Missouri, have invented certain new and useful Improvements in Sash-Balance Connections, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification.

My invention relates to connections applied to the flexible strips—such as ribbons, cords, or chains—of sash-balances for attachment thereto of the sash-balance weights and the fastening thereof to the sash, the object of the invention being to provide a connection that is suitable for use with either a strip, cord, or chain.

My invention consists in features of novelty hereinafter fully described, and pointed out in the claims.

Figure I is a view showing part of a window in vertical section and a sash-balance associated therewith equipped with my improvement. Fig. II is a side view of the weight-receiving member. Fig. III is a face view of the weight-receiving member in open or spread condition. Fig. IV is a side view of the sash-attachment member. Fig. V is a rear view of the sash-attachment member. Fig. VI is a rear view of the sash-attachment member in open or spread condition. Fig. VII is a side view of the sash-attachment member, showing a cord secured therein in place of the ribbon illustrated in Figs. I, II, and IV. Fig. VIII is a side view of the sash-attachment member, showing a chain secured thereto.

1 designates a window-frame, and 2 a sash mounted therein, said sash being provided with a groove 3 and a pocket 4.

5 designates a ribbon that travels on a pulley 6, mounted in the window-frame and has attached to it my connection members for the reception of the balance-weight 7 and the attachment of the ribbon to the sash 2.

8 designates the weight-receiving member, provided with a hook 9, that receives the eye of the weight 7, of common form.

10 designates tongues integral with the body of the member 8 and projecting from the sides thereof, the points of said tongues being

adapted to extend at right angles to the body of said member when it is in open condition and to be bent into positions parallel with the member-body when in closed condition and embraces the ribbon 5. Each of the tongues are grooved lengthwise, as seen in Fig. V, to provide teeth 11.

12 designates a finger integral with the body 8 and extending across said body immediately above the hook 9, and 13 is an arm integral with the member and projecting at a right angle to said finger above it.

In joining the member 8 to the ribbon 5 the end of the ribbon is bent back onto the body thereof to form a loop 5^a, through which the finger 12 is passed and on which it is retained by the arm 13, the tongues 10 being at this time in the spread condition shown in Fig. III. The ribbon is laid between the tongues 10, and the tongues are then bent inwardly over the ribbon and flattened down, so as to confine it within the tongues and prevent its withdrawal.

14 designates the sash-attachment member, provided with a pair of prongs 15, that extend upwardly from a lip 16, which projects at an angle from the lower end of said member.

17 is a finger integral with the member 14 and extending thereacross at the lower end of said member, said finger being adapted to receive the loop 5^a of the ribbon 5, as seen in Figs. IV and V.

18 is an arm extending from the member 14 at a right angle to the finger 17 and adapted to hold the loop 5^a from escape from the finger.

19 is a series of tongues integral with the member 14 and provided with teeth 20, produced by grooves extending lengthwise of the tongues.

The ribbon is applied to the member 14 in a similar manner to that in which it is applied to the member 8 when the tongues 19 are in spread condition, and said tongues are then bent over onto the ribbon to confine it and hold the loop of the ribbon firmly within the member.

The member 14 is attached to the window-sash 2 by placing it within the groove 3 in said sash, so that the lip 16 and prongs 15 will occupy a position within the pocket 4 at the terminus of said groove. The prongs 15 are then embedded in the sash, as seen in Fig. I,

and when so embedded hold the member firmly to the sash, while the weight 7 exerts a pull upon the ribbon or strip 5. Whenever, however, it is desired to disconnect the member 14 from the sash, it may be readily disconnected by downward movement to remove the prongs 15 from their seats.

In Fig. VII, I have shown a cord 5', confined in the member 14. In the use of the strip of this character the tongues 19 are depended upon to hold the strip within the member, the said tongues firmly gripping the strip by reason of the teeth 20 biting thereinto, and as the strip is not looped the finger 17 and arm 18 do not receive the attachment of the strip.

In Fig. VIII, I have shown the member 14 attached to a chain 5'', the attachment in this instance being the same as that described in connection with the ribbon 5, with the only distinction of the end link of the chain receiving the tongue 12 instead of the chain being looped.

The member 8, as well as the member 14, is designed to receive other forms of strips, such as a cord or chain, similarly to the member 14, the said member being attached to such other form or strip similarly to that described in referring to Figs. VII and VIII.

I claim as my invention—

1. An article of the class described com-

prising a body having a corrugated surface, and tongues located upon two opposite sides of the body and adapted to clamp a flexible connection thereon.

2. An article of the class described comprising a body having a corrugated surface and tongues located upon two opposite sides of the body at each depression in the surface and adapted to clamp a flexible connection thereon.

3. An article of the class described comprising a body, and tongues upon two opposite sides of the body; each of said tongues being grooved.

4. An article of the class described comprising a body having grooves, and tongues located upon opposite sides of the body and provided with grooves; the grooves in the tongues being continuations of the grooves in the body.

5. An article of the class described comprising a body having corrugations, tongues located upon two opposite sides of the body at each depression in the same, a finger secured to the body and extending transversely thereover, an arm located adjacent to the free end of the finger, and a hook.

ALBERT WEINGAERTNER.

In presence of—

E. S. KNIGHT,

N. V. ALEXANDER.