

W. S. SANBORN.
SECTIONAL SASH WEIGHT.
APPLICATION FILED FEB. 9, 1905.

915,223.

Patented Mar. 16, 1909.

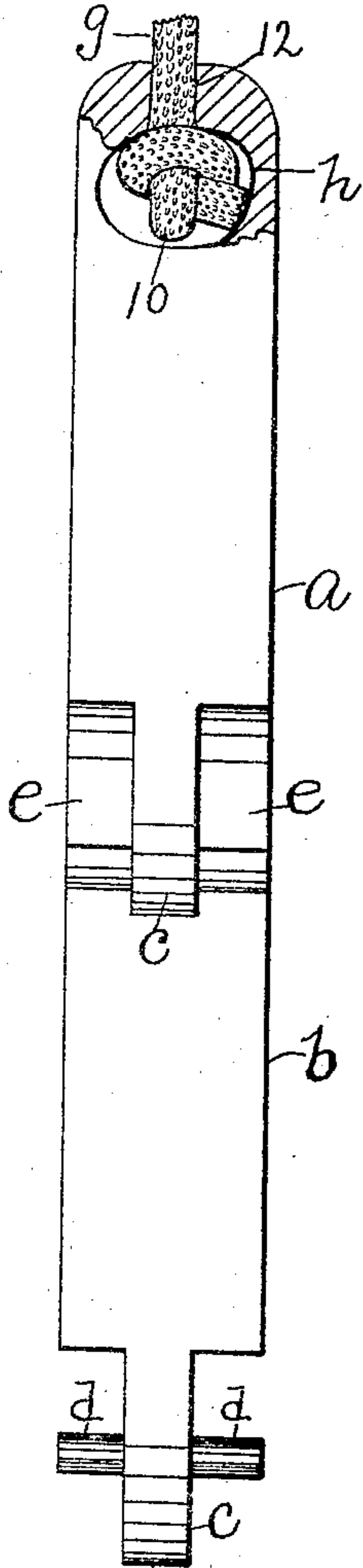


Fig. 1.

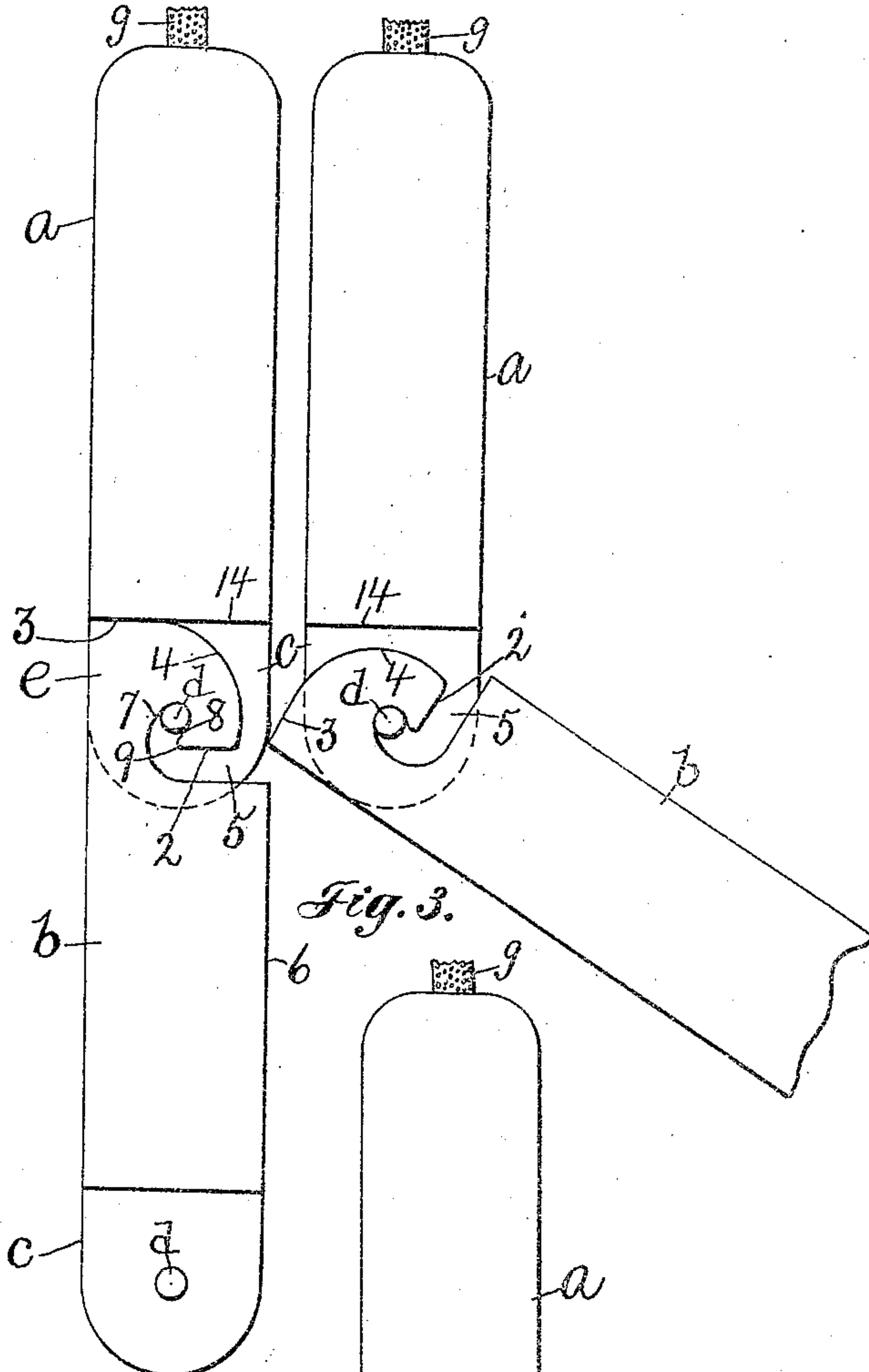


Fig. 2.

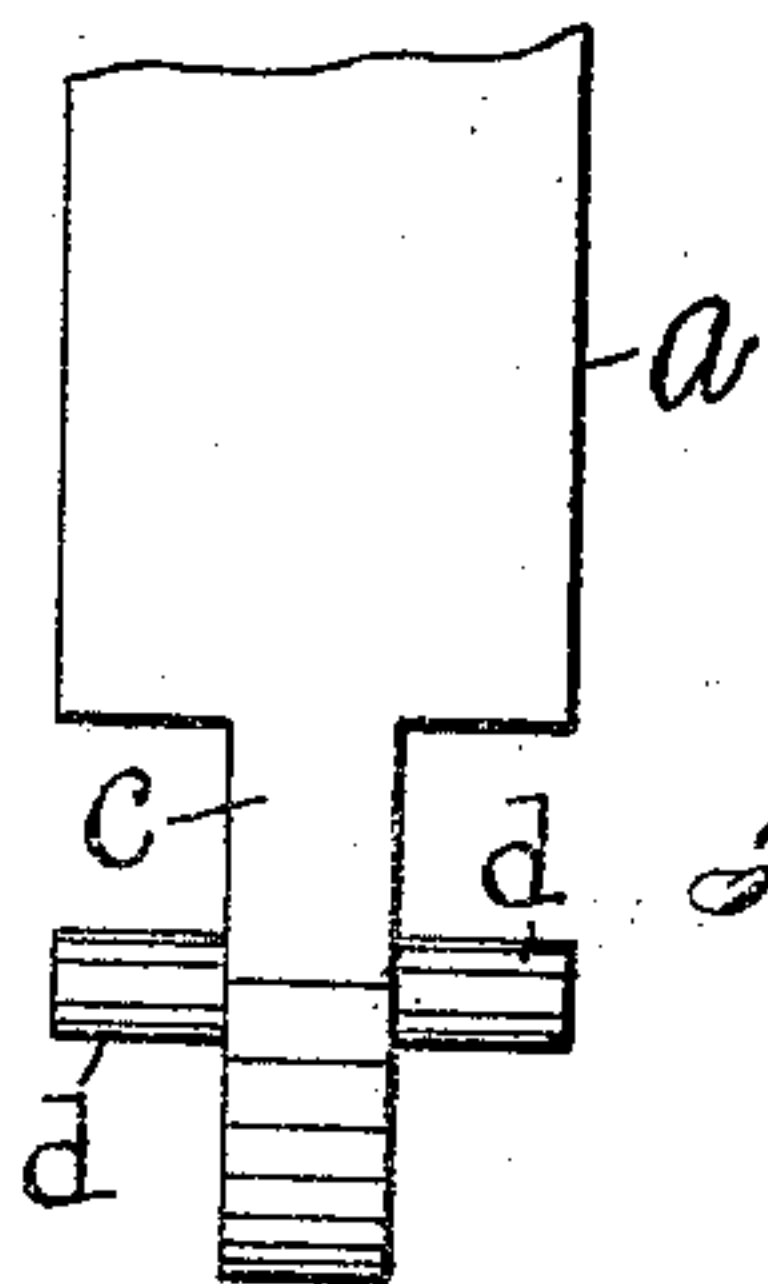


Fig. 5.

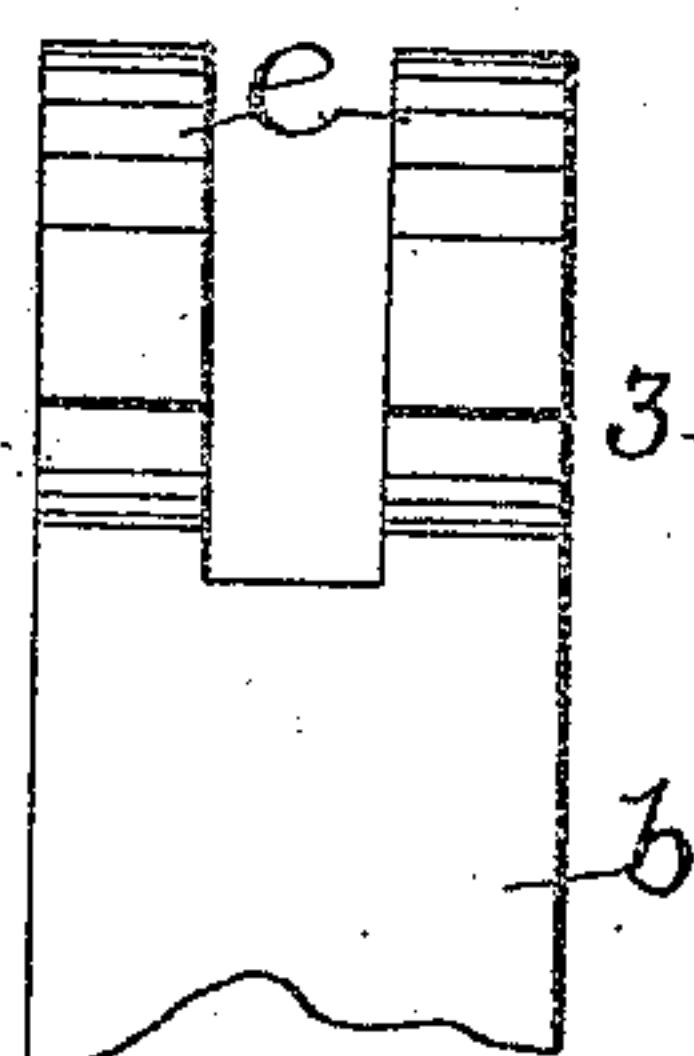


Fig. 6.

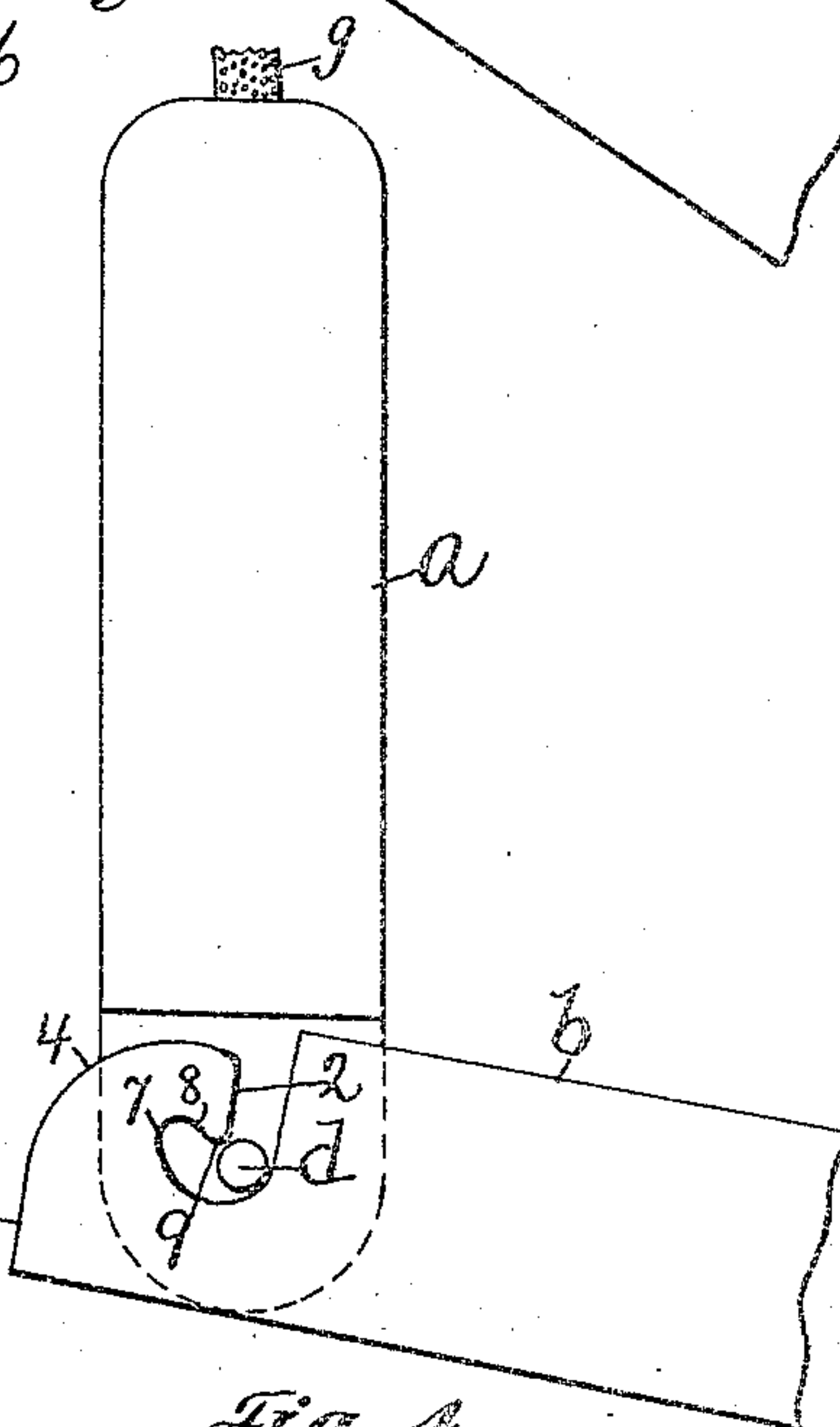


Fig. 4.

Witnesses.
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SECTIONAL SASH-WEIGHT.

No. 915,223.

Specification of Letters Patent.

Patented March 16, 1909.

Application filed February 9, 1905. Serial No. 244,848.

To all whom it may concern:

Be it known that I, WILLIAM S. SANBORN, a citizen of the United States, residing in Belmont, in the county of Middlesex and State of Massachusetts, have invented an Improvement in Sectional Sash-Weights, of which the following description, in connection with the accompanying drawings, is a specification, like characters on the drawings representing like parts.

This invention relates to a sectional weight and is herein shown as embodied in a sectional window weight.

The invention has for its object to provide a sectional weight of the class described, in which the sections are locked together against accidental disengagement, thereby enabling the sections to be assembled together more quickly and without liability of accidents due to the sections becoming uncoupled especially in the act of lifting the connected weights into a vertical position preparatory to hanging the same in their operative position. For this purpose, a weight section is provided at one end with a hook which engages a pin or projection on the lower end of a cooperating section, the said hook having a locking projection as will be described, which projects under the pin when two sections are coupled together and occupy a substantially vertical position, the said locking projection cooperating with said pin so as to prevent disengagement of the weight sections until one is positively moved by hand as will be described. These and other features of this invention will be pointed out in the claims at the end of this specification.

Figure 1 is a front elevation of a sectional weight embodying this invention. Fig. 2, a side elevation of the weight shown in Fig. 1. Fig. 3, a side elevation of the weight shown in Fig. 1, with the lower section turned at an angle to the upper section. Fig. 4, a side elevation of the weight showing the position of the sections when about to be disengaged, and Figs. 5 and 6, details to be referred to.

In the present instance, the invention is shown in a sectional window weight comprising two sections *a*, *b*, but it is evident any desired number of sections may be coupled together. The upper section *a* is provided at its lower end with a tongue or extension *c* having lugs or projections *d* extended lat-

erally from its opposite sides (see Fig. 5). The lower section *b* is provided at its upper end with two hooks *e* separated from each other by a space substantially equal to the thickness of the tongue *c* on the section *a*. The hooks *e* are of like construction, and each is provided with a substantially straight bottom outer surface 2, extended transversely of the weight section, a substantially straight outer top upper surface 3, and an intermediate connecting outer curved surface 4. The bottom surface 2 of the hook *e* forms the upper wall of a slot 5 extended transversely of the weight section from the front side 6 thereof and communicating with a reentrant slot 7, which extends upward and toward the front side 6 of the weight section. One wall of the reentrant slot 7 is formed by the inclined or curved inner surface 8 of the hook *e*, and this surface 8 cooperates with the bottom surface 2 of the hook to form a locking projection 9, which extends under the lug or pin *d* when the weight sections are in their vertical position represented in Fig. 1, which position may be designated their operative or normal position, and when in this position, the locking projection 9 on the inner end of the hook extends preferably to a vertical line through the center of the lug or pin *d*.

The section *b* is provided at its lower end with a tongue *c* having the laterally extended lugs or pins *d*, which are adapted to be engaged by the hooks *e* of another weight section of like construction to the section *b*. The tongue *c* is preferably made circular at its lower end and of a thickness substantially equal to one-third the thickness or width of the weight sections, and the hooks *e* are made of equal width or thickness, so that when the sections are coupled together a compact structure is made with a minimum amount of lost space as clearly shown in Figs. 1 and 2.

The upper weight section *a* may be provided at its upper end with a hook *e*, to which the hanging cord *g* may be secured, but if desired, the said section may be provided with a socket *h* for the reception of a knot 10 in the cord *g*, which is passed through a suitable hole 12 in the top of the weight section *a*.

The locking projection 9 on the hook *e* serves to prevent accidental disengagement of the weight sections, which is especially advantageous as it enables the weight sections

to be coupled together with less care on the part of the workman, who is thereby enabled to work faster and thus effect a saving in time, but more particularly the locking projection safeguards against accidents caused by the unhooking of sections of the weight when an upper weight section is lifted to a vertical position substantially at right angles to a lower weight section as frequently occurs when the weight sections are assembled and lifted to hang them in the usual box or pocket in the window.

In practice, the weight sections are frequently assembled and laid in a horizontal position on the window sill, and when assembled, the workman lifts the assembled weight by the head section *a*. As the uppermost sections are lifted, each assumes a vertical position substantially at right angles to the next contiguous section, and the lower sections in this manner have become detached, and in some instances, have dropped to the ground. It is evident that serious accidents might happen in this manner, and it is one of the objects of this invention to construct a sectional weight, with which such accidents could be avoided. This result is accomplished by providing the hook *e* with the locking projection which requires positive engagement and disengagement by hand of the weight sections. In Fig. 2, the sections *a*, *b*, are shown in their operative position. In Fig. 3, the section *b* is represented as being lifted by the section *a*. In this figure it will be observed, that while the section *a* is in a vertical position and the section *b* is partially lifted and in an inclined position, both sections are positively locked and cannot be unlocked while occupying this position, for the reason, that in order to clear the pin *d*, the section *b* would have to be moved upward, but said upward movement is limited to the distance between the curved surface 4 and the bottom 14 of the weight section *a*, which distance is not sufficient to have the hook clear the pin *d*. It is therefore necessary, in order to disengage the section *b*, for it to assume a position more nearly at right angles to the section *a*, and then to be moved bodily in a direction at an angle to a vertical line through the pin *d* so as to bring the said pin into the slot 5 (see Fig. 4), after which the section is moved in a different direction at an angle to the first mentioned direction in order to disengage the weight. The engagement of the section *b* with the section *a* is effected by two distinct movements in different directions at an angle to each other, but the reverse of the movement employed to disen-

gage the same as above described. It will thus be seen that in order to engage one section as *b* with another section as *a*, or to disengage the same, requires bodily movement of one section with relation to the other section, in two different directions at an angle to each other, and as a result, accidental disengagement of said sections, especially in hanging the weight is prevented. It will also be observed that the tongue *c* on one section is centrally located and when coupled to the hooks *e* of a cooperating section, both sections are locked against substantial lateral movement, one with relation to the other, thereby preventing said sections from becoming out of alinement and causing the weight to hang plumb. The feature is useful in sectional weights in which the locking projections on the hooks are omitted, and therefore, while I may prefer to use the locking projections on the hooks, I do not desire to limit my invention in this respect.

It will be noticed from an inspection of Fig. 2, that the upper surface of the hook on a lower section cooperates with the lower surface 14 of an upper weight section, and that this engagement prevents substantially longitudinal movement of one section with relation to the other, while said sections are substantially in line with each other.

Claims.

1. In a weight of the character described, in combination, a weight section provided at its lower end with a tongue having laterally extended pins or projections, and a cooperating weight section provided with hooks separated from each other for the reception between them of said tongue said hooks having reëntrant slots for the reception of the pins or projections on said tongue, substantially as described.

2. In a weight of the character described, in combination, a weight section provided at one end with a laterally extended pin or projection, and a cooperating weight section provided with a hook having a slot extended transversely of the weight section and a second slot extended at a substantially acute angle to the first mentioned slot to form a locking projection on said hook, substantially as described.

In testimony whereof, I have signed my name to this specification in the presence of two subscribing witnesses.

WILLIAM S. SANBORN.

Witnesses:

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