

(No Model.)

A. SWEETLAND.

CURTAIN ROLLER.

No. 399,448.

Patented Mar. 12, 1889.

Fig. 1.

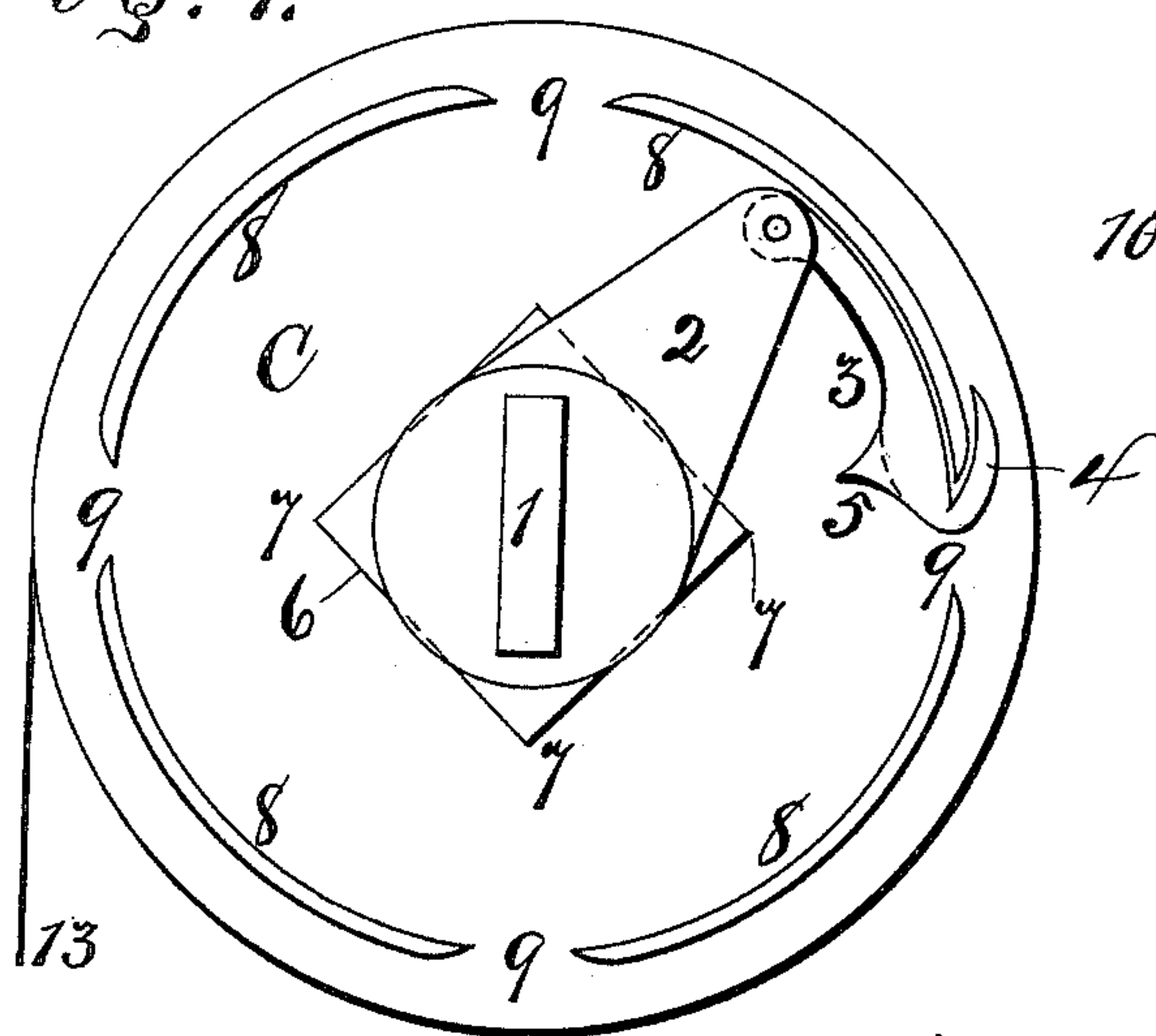


Fig. 3.

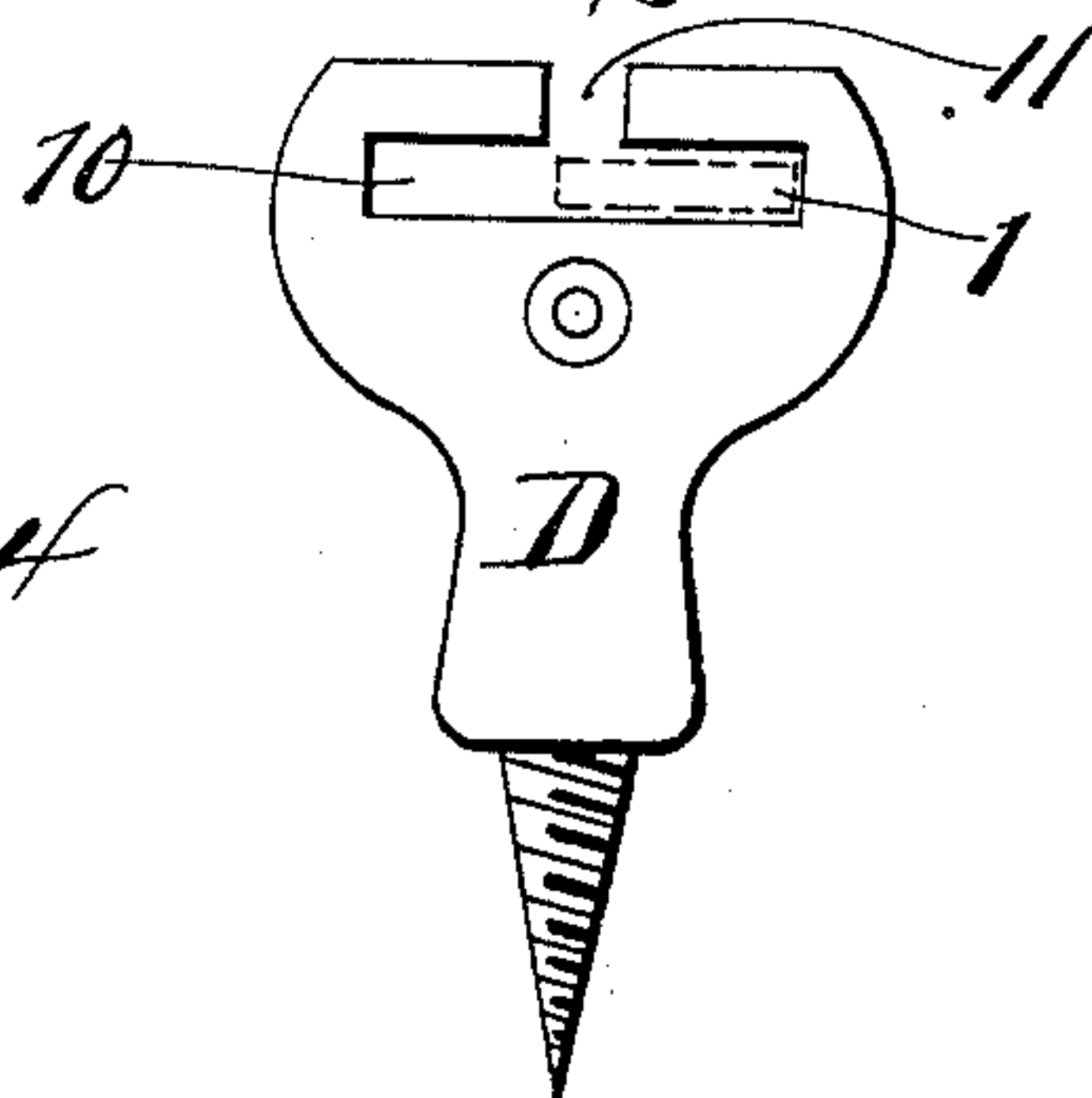


Fig. 5.

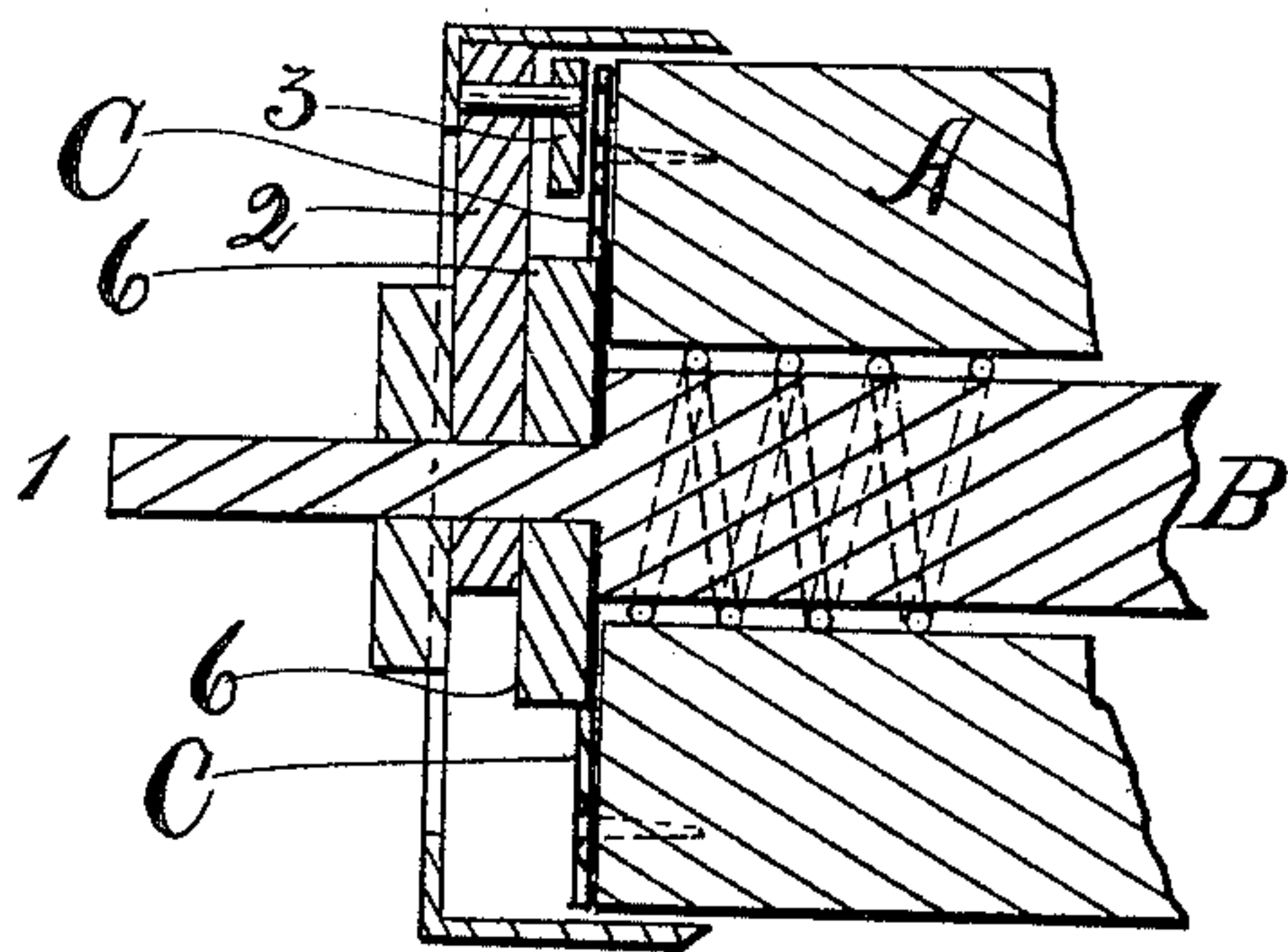
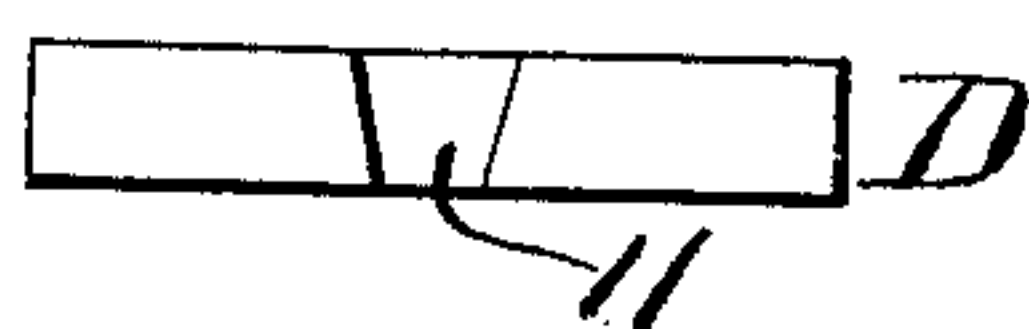
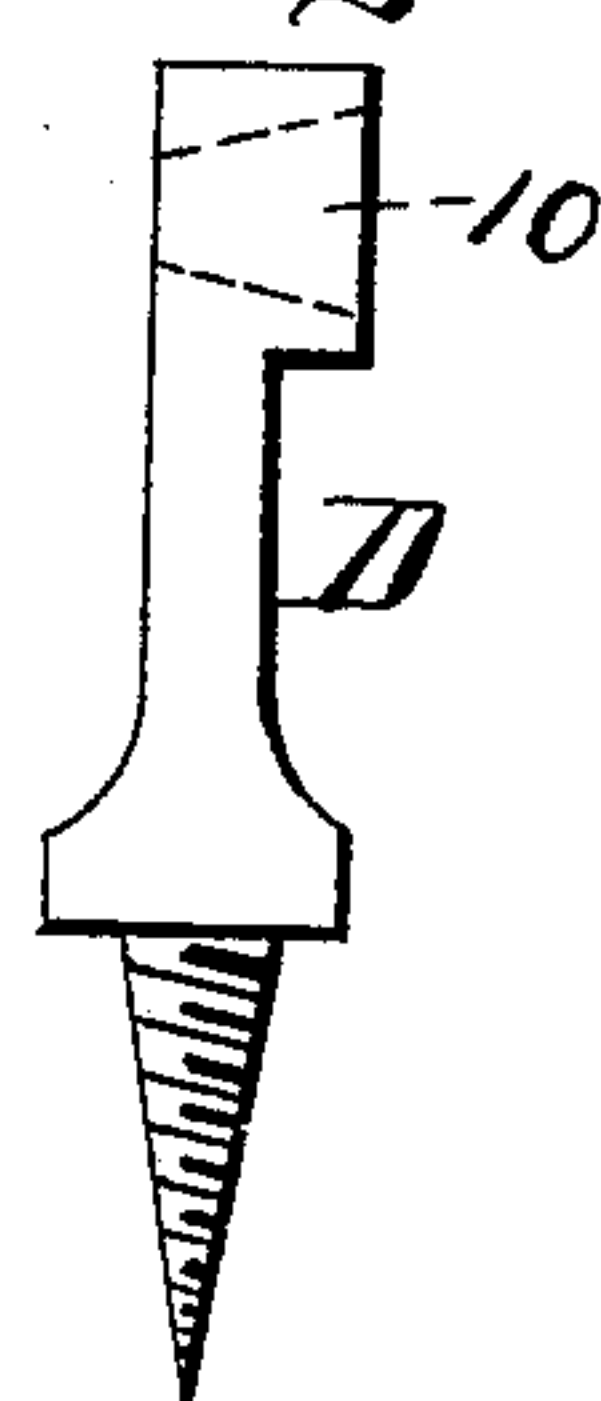
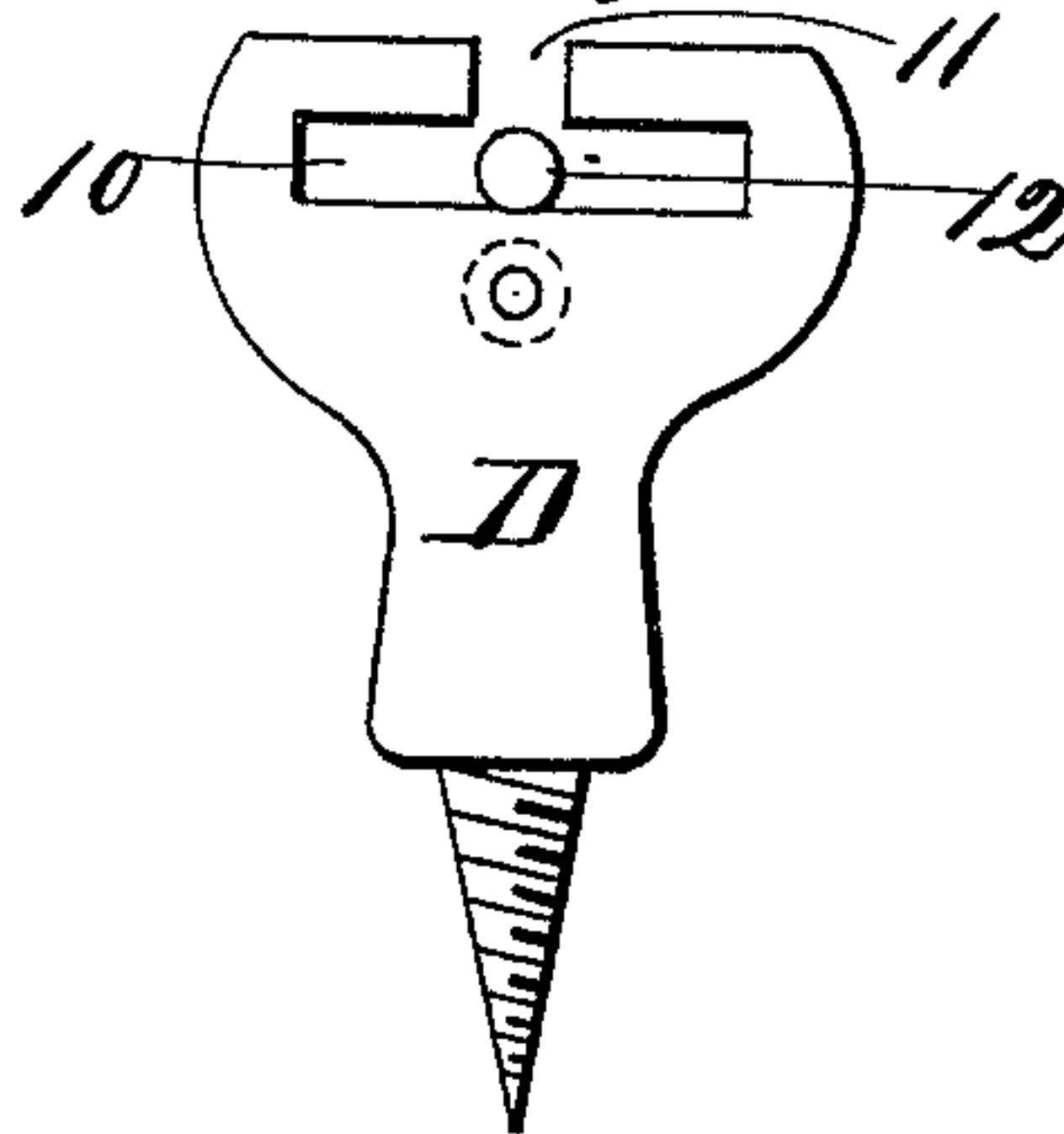


Fig. 2.

Fig. 4. Fig. 6.



Witnesses.

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# UNITED STATES PATENT OFFICE.

ALVAH SWEETLAND, OF SYRACUSE, NEW YORK.

## CURTAIN-ROLLER.

SPECIFICATION forming part of Letters Patent No. 399,448, dated March 12, 1889.

Application filed August 13, 1888. Serial No. 282,529. (No model.)

*To all whom it may concern:*

Be it known that I, ALVAH SWEETLAND, of Syracuse, county of Onondaga, in the State of New York, a citizen of the United States, have  
5 invented certain new and useful Improvements in Curtain-Rollers, of which the following is a specification, reference being had to the accompanying drawings, in which—

Figure 1 is an end elevation with the cap  
10 removed; Fig. 2, a vertical section central to the spindle; Fig. 3, a plan view of the front of bracket; Fig. 4, a like view of its back; Fig. 5, an end view of same; Fig. 6, a side elevation thereof.

15 My invention relates to spring-actuated curtain-rollers and to the locking devices to catch the roller at any desired point and hold it against rotation, and especially to locking devices which are actuated by the quick up-  
20 ward rotation of the roller, as contradistinguished from those rollers in which the locking device operates by the slow rotation of the roller, and, further, to those which lock by means of a pawl thrown outward from the  
25 center by contact with a hub upon the end of the roller and locked into a rim of substantially the same diameter as the roller, and lock by means of a hook drawn into notches in the rim, as contradistinguished from those  
30 which employ a gravity-pawl engaging with a ratchet upon the hub; and my invention also relates to the brackets for supporting the roller.

35 The object of my invention is to produce a spring shade-roller which shall be locked against rotation by the quick upward movement of the curtain.

My invention consists in the several novel features of construction and operation here-  
40 inafter described, and which are specifically set forth in the claim hereunto annexed.

It is constructed as follows:

A is a spring shade-roller, of ordinary construction as to the roll, spring, and spindle  
45 within the roll.

B is the spindle, having a flattened head, 1, and 2 is an arm secured to the spindle and having hooked pawl 3 pivotally connected to its outer end, 4 being the hook, and 5 being a  
50 lug or stud upon the back side of the pawl substantially opposite the hook.

C is a plate secured to the end of the roller

and provided with a central rectangular boss, 6, having angular corners 7, and further provided with the multiple-curved flanges 8, the  
55 ends of which are beveled, as shown, creating the openings 9 between the flange-sections. It will be observed that each corner or shoulder 7 has an opening, 9, opposite.

D is my bracket, consisting of a body, a  
60 base, and a head, which head is provided with a vertical slotway, 10, and a horizontal slotway, 11, opening into the slotway 10. Both of these slotways are beveled, substantially as shown, and backward from the outer face  
65 of the bracket, in order to reduce the bearing-surface and prevent the gudgeon 12 of the roller from binding. When this gudgeon is introduced into the bracket, it has a triangular bearing, two of the bearing-points  
70 being the corners at the intersection of the slotways, these corners being beveled or rounded, if desired.

It is operated as follows: The rotation of the roll to wind up the curtain carries with  
75 it the annular notched rim, the spindle and the arm upon the spindle remaining stationary with the pawl dependent and resting upon the periphery of the hub, or contiguous thereto, so that the quick rotation of the roll  
80 throws the shoulder upon the hub against the shoulder upon the pawl, and when the rotation is quick enough the pawl is thrown upward, so that the point of the hook will catch upon a beveled point or edge of one of  
85 the rim-notches, and the movement of the roll will carry the edge of this notch clear into the hook, thus giving a positive lock in such a manner that the pawl-hook cannot be disengaged from the edge of the notch by any  
90 jumping or recoil of the roll on account of its quick stoppage. I bevel the edges of the notches, first, in order that the hook may the more readily engage with the thin edge, and, secondly, in order that the edge of the notch  
95 may fit within the cavity of the hook closely and tightly by frictional contact.

It will be observed that the flanges 8 together constitute an annular rim, and the spaces between form beveled notches, with  
100 which the hook engages; and that if from any cause the pawl is disengaged from a notch the roll cannot wind up so as to carry the curtain to the top of the window, as the



lug 5 will be engaged by one of the corners or shoulders 7, which will then be in motion, and will throw the pawl into one of said notches and prevent further movement of the roller.

It will also be seen that the hook of the pawl operates as a positive lock to hold the roll against rebound and until it is released by drawing down the curtain.

I am aware that gravity-pawls engaging with notches in an annular rim have heretofore been used; but I am not aware that a hooked pawl thrown outward by a knocker secured to the roller, so as to hook into a beveled notch in an annular rim, has ever been used.

What I claim, and desire to secure by Letters Patent, is—

In a curtain-roller, the combination, with the roll proper, a plate provided with a rectangular central hub the corners of which constitute shoulders, and multiple-curved

flanges opposite the straight sides of the hub with spaces or openings between them opposite and equal in number to the corners or shoulders of said rectangular hub, of a stationary spindle, a stationary arm upon the spindle, a pawl, 3, having a hooked end, 4, providing a deep notch for the effectual engagement with the ends of said flanges, said pawl being pivoted to the arm, and an inclined-face lug, 5, at the back of the pawl opposite the hook 4, whereby with the rotation of the roll said lug is engaged by any one of said shoulders and the hook of the pawl thrown into engagement with one of said flanges, substantially as shown and described.

In witness whereof I have hereunto set my hand this 25th day of July, 1888.

ALVAH SWEETLAND.

In presence of—

C. W. SMITH,  
SAM. H. WANDELL.