

No. 848,539.

PATENTED MAR. 26, 1907.

E. S. DINKEL.
WINDOW SHADE ROLLER,
APPLICATION FILED NOV. 7, 1906.

Fig. 1.

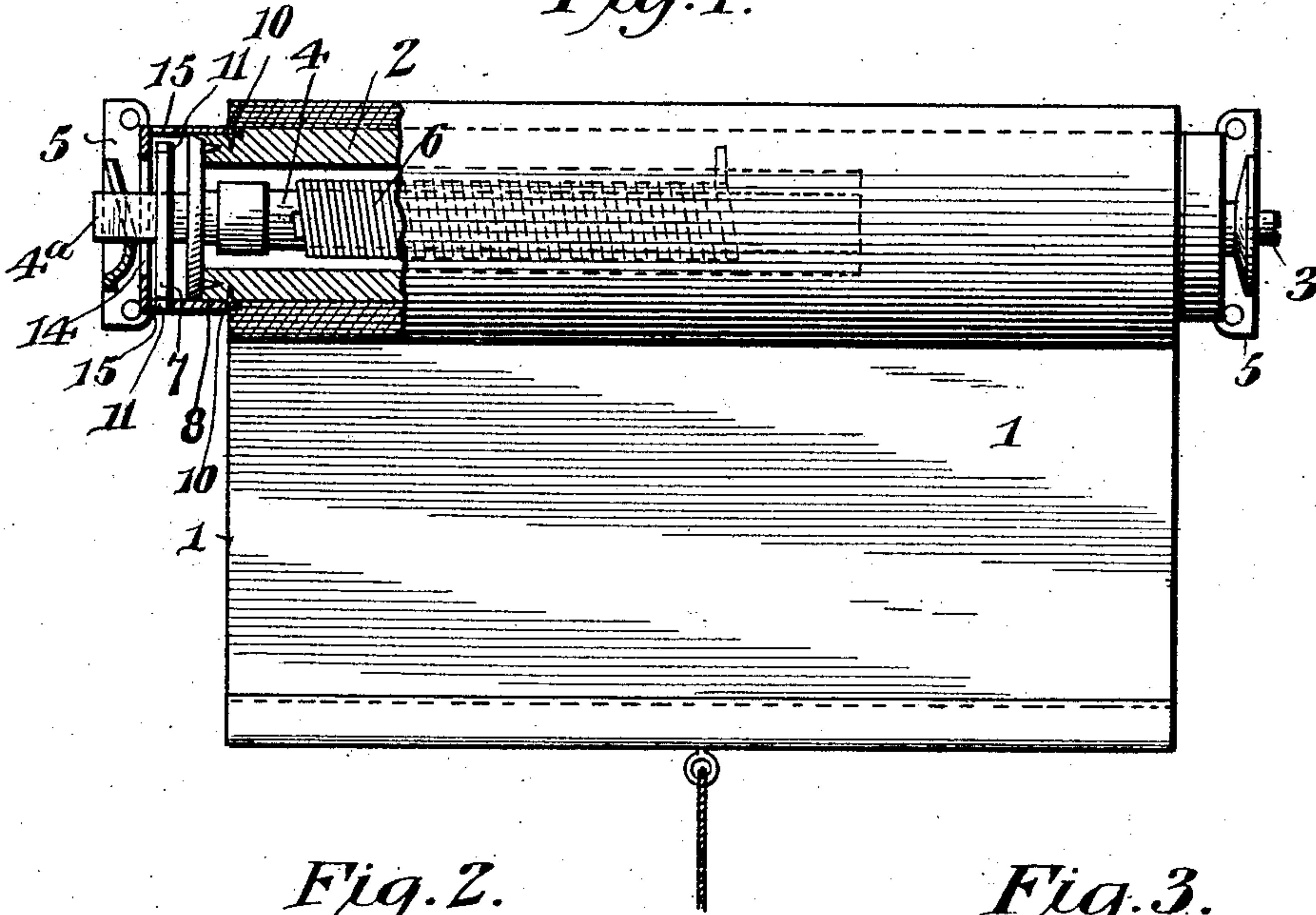


Fig. 2.

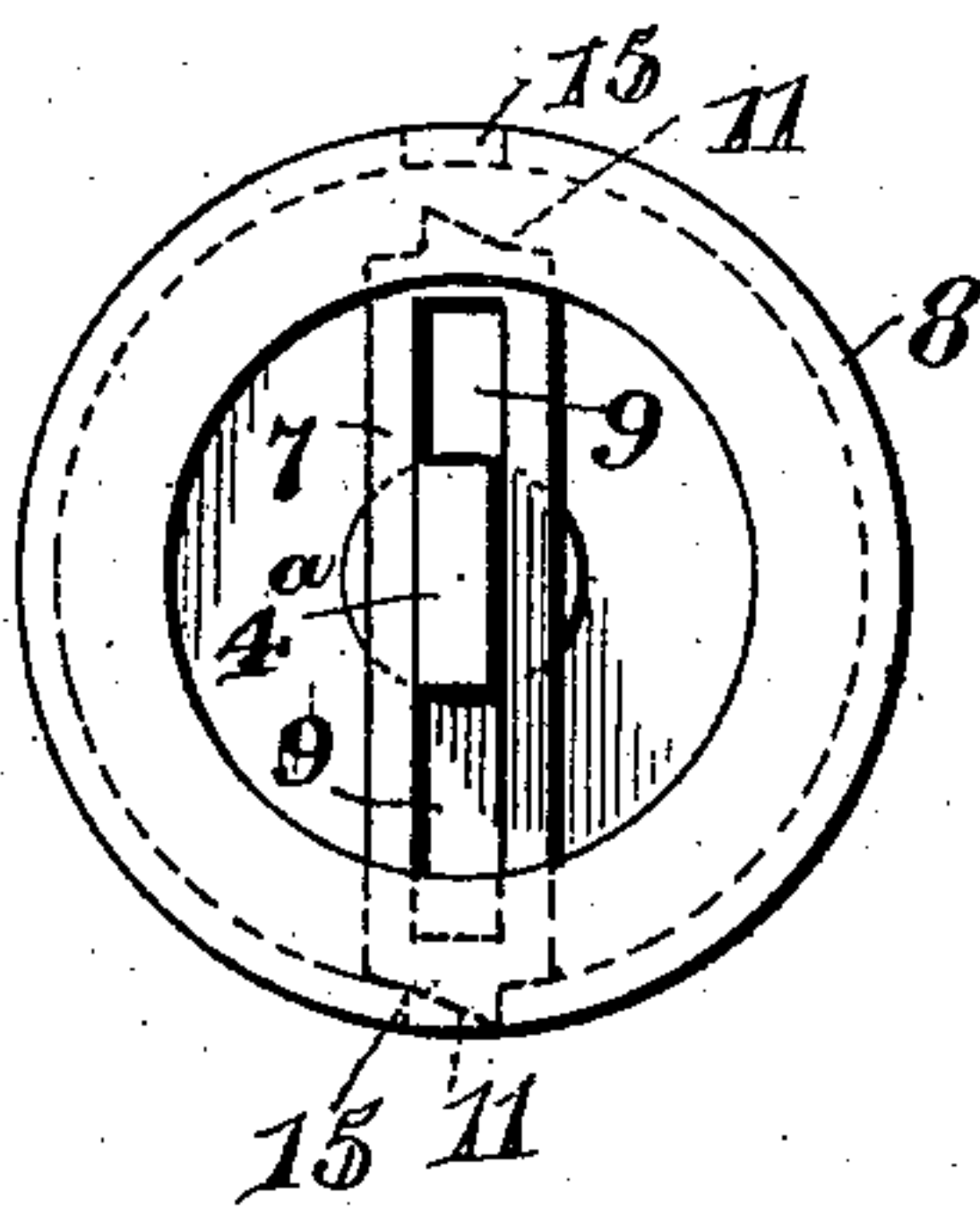


Fig. 3.

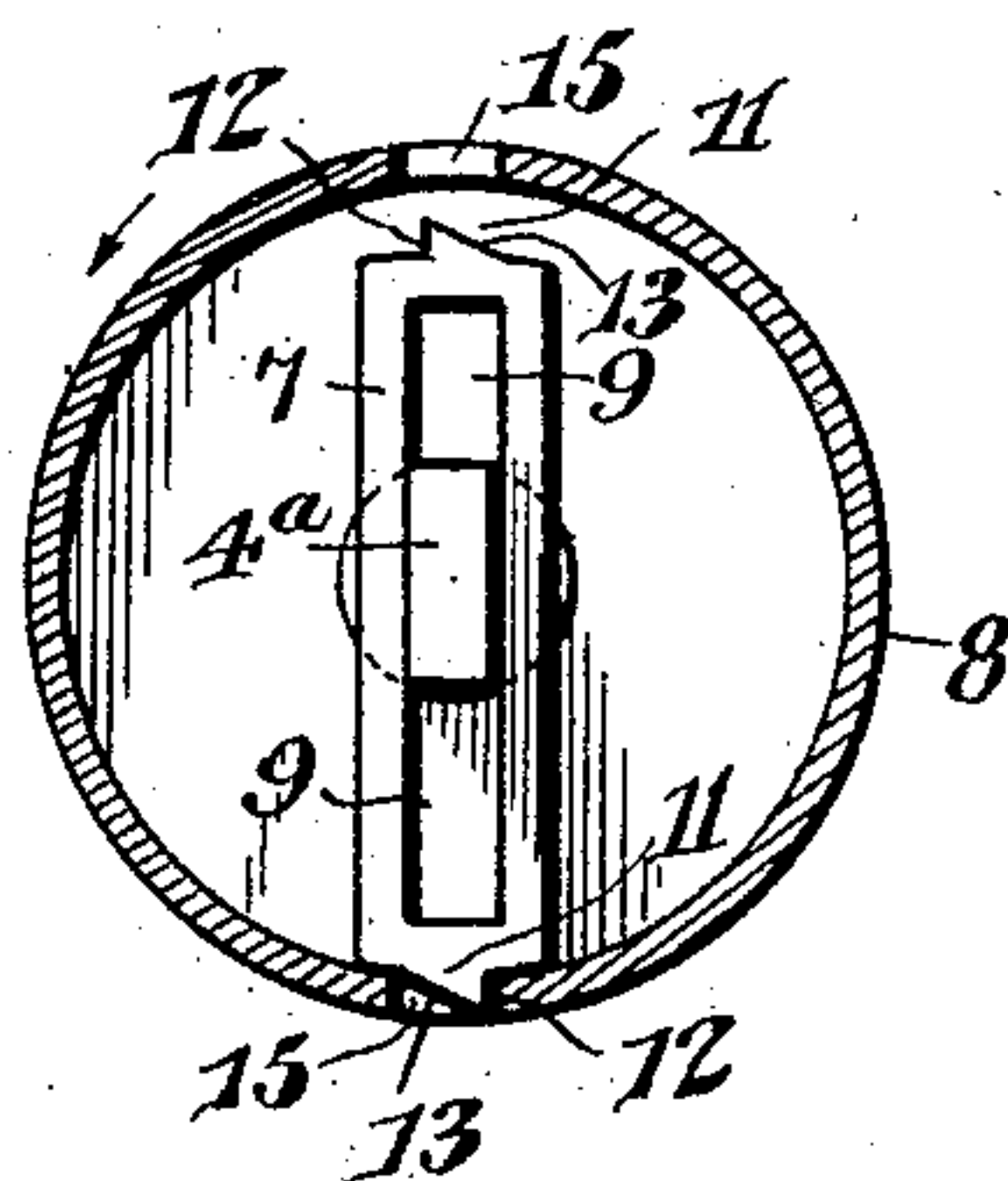
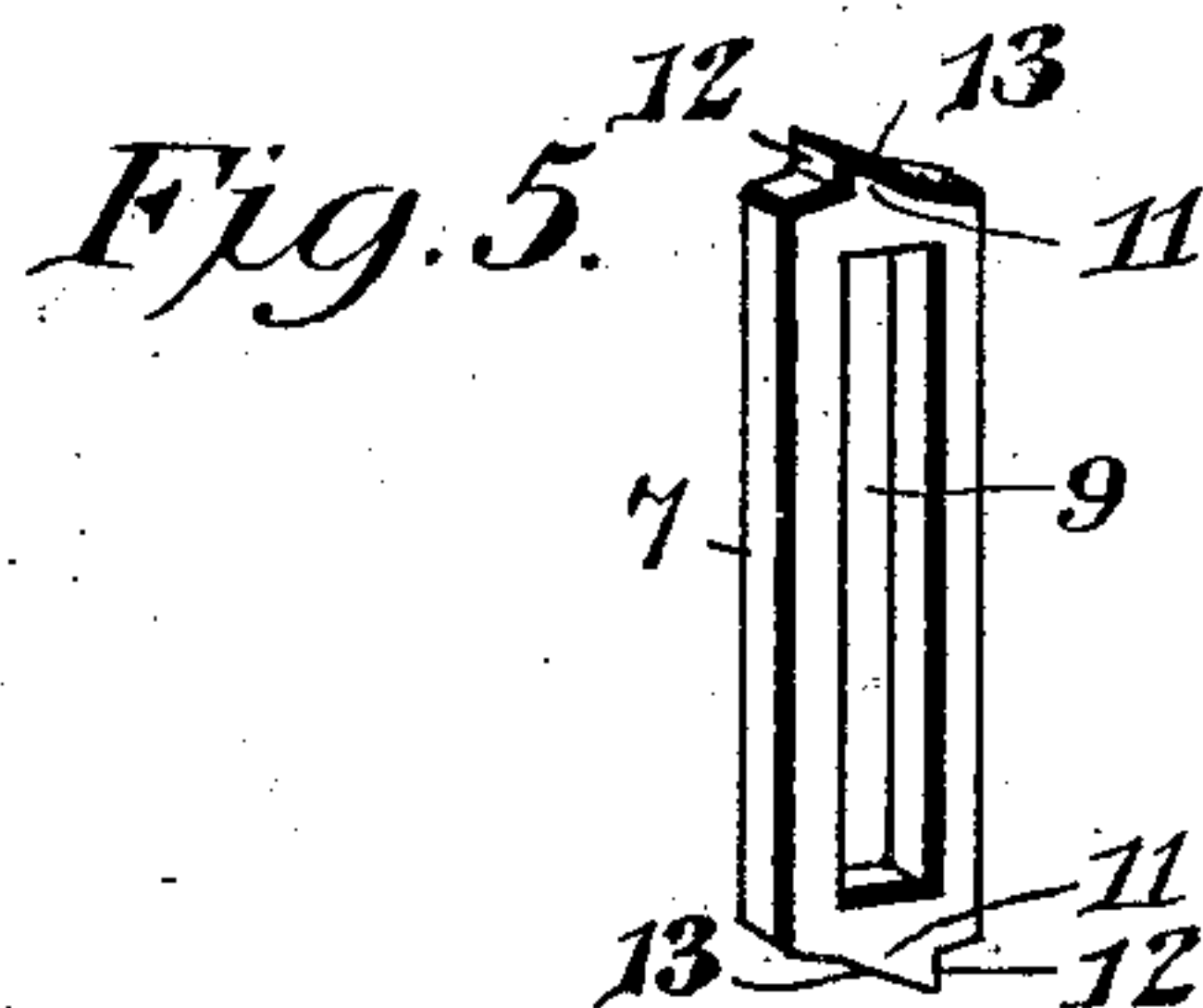
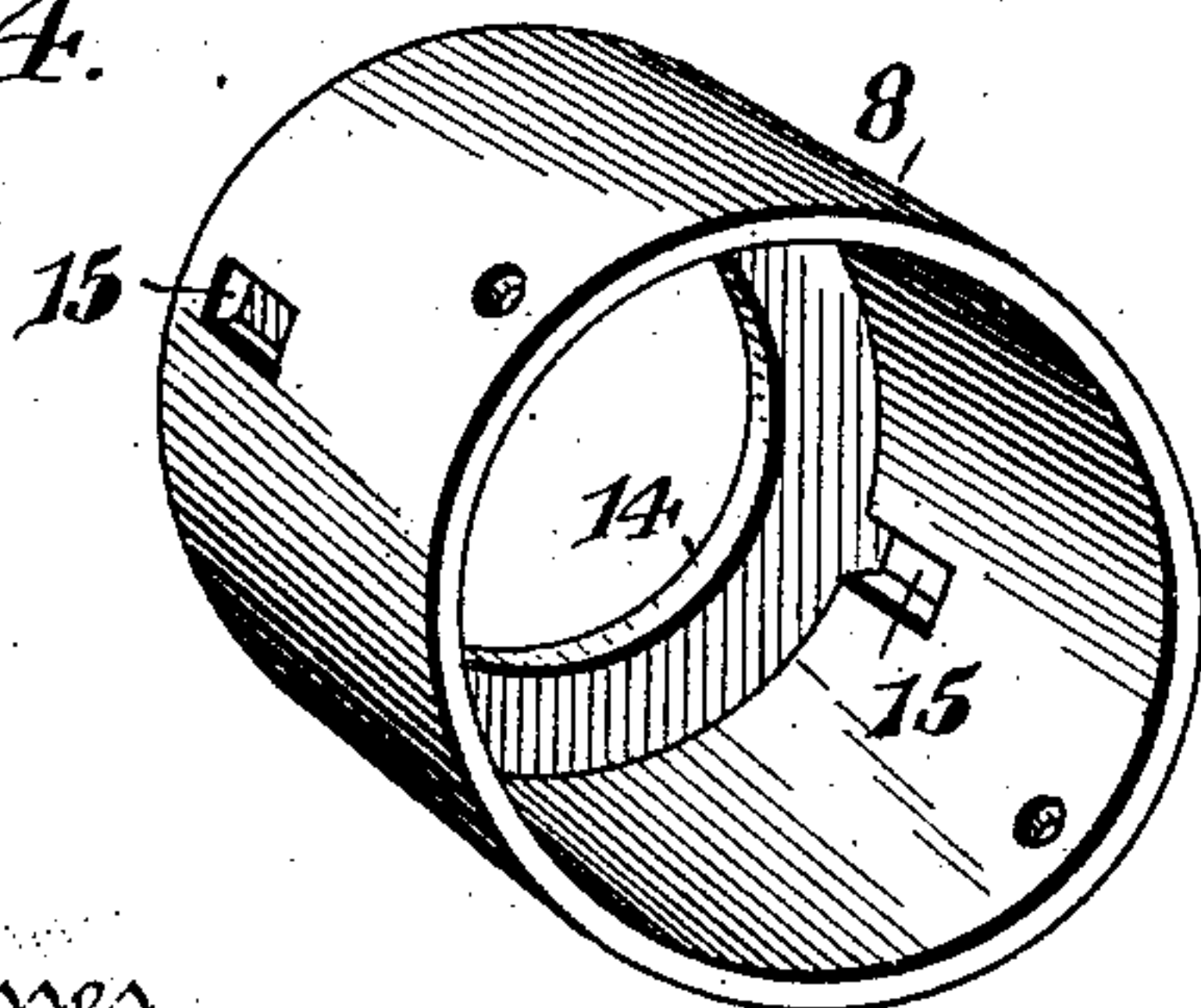


Fig. 4.



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UNITED STATES PATENT OFFICE.

EDWARD SMITH DINKEL, OF BRIDGEWATER, VIRGINIA.

WINDOW-SHADE ROLLER.

No. 848,539.

Specification of Letters Patent.

Patented March 26, 1907.

Application filed November 7, 1906. Serial No. 342,396.

To all whom it may concern:

Be it known that I, EDWARD SMITH DINKEL, a citizen of the United States, residing at Bridgewater, in the county of Rockingham and State of Virginia, have invented a new and useful Window-Shade Roller, of which the following is a specification.

The invention relates to improvements in window-shade rollers.

10 The object of the present invention is to improve the construction of window-shade rollers, more especially the means for holding the spring-actuated roller against rotary movement to secure a window-shade in its
15 adjustment and to provide a simple, inexpensive, and efficient ratchet mechanism of great strength and durability capable of readily engaging and of securely holding the spring-actuated roller and adapted to be readily dis-
20 engaged from the roller by a downward pull on the window-shade. The invention also has for its object to enable the parts of the device to be readily assembled and to protect the parts and prevent the same from becom-
25 ing injured or displaced.

30 With these and other objects in view the invention consists in the construction and novel combination of parts hereinafter fully described, illustrated in the accompanying drawings, and pointed out in the claims hereto appended, it being understood that various changes in the form, proportion, size, and minor details of construction within the scope of the claims may be resorted to with-
35 out departing from the spirit or sacrificing any of the advantages of the invention.

In the drawings, Figure 1 is an elevation, partly in section, of a window-shade provided with a roller constructed in accordance with
40 this invention. Fig. 2 is an end elevation of the shade-roller. Fig. 3 is a similar view, the cap or casing being in section. Fig. 4 is a detail perspective view of the cap or casing. Fig. 5 is a similar view of the gravity pawl or
45 dog.

Like numerals of reference designate corresponding parts in all the figures of the drawings.

1 designates a window shade or curtain
50 provided with a spring-actuated roller 2, having a journal 3 of the ordinary construction at one end for engaging one of the brackets for supporting the roller of the window-shade. The roller is provided at the other end with a
55 spindle 4, having a flattened outer portion 4^a for engaging the recess of the other bracket 5

of the curtain-fixture. The spindle, which has its inner portion connected with a spring 6 of the roller, receives on its flattened portion a double pointed or toothed gravity
60 pawl or dog 7, arranged in substantially a vertical position within a cylindrical cap or casing 8 and provided with a longitudinal slot 9, through which the flattened outer portion of the spindle extends. The cylindrical
65 cap or casing, which is fitted on the bored spring-receiving end of the shade-roller, is secured to the latter by means of suitable fastening devices 10, and it projects beyond the end of the roller to form a casing or hous-
70 ing for the pawl or dog 7. The pawl or dog 7, which is oblong, is provided at each end with a projecting tooth 11, located at a point between and spaced from the side edges of the
75 pawl or dog and provided with a shoulder 12 for engaging the casing or cap 8 and having a beveled or inclined face 13 and adapted to lift the pawl or dog out of engagement with the cap or casing when the curtain or shade is
80 pulled downward.

The cylindrical cap or casing, which has an open outer end to permit the flattened portion of the spindle of the shade-roller to engage the bracket 5, is provided at its outer
85 open end with an inwardly-extending annular flange 14, which confines the pawl or dog on the flattened portion of the spindle. The cap or casing is also provided adjacent to the annular flange with one or more peripheral
90 slots or openings 15, a plurality being preferable, these slots or openings being adapted to receive the lower tooth of the sliding gravity pawl or dog 7, which drops upon the bottom of the cap or casing when the window
95 shade or curtain is held to prevent the spring-actuated roller from rotating. A plurality of slots or openings are preferable, as one of the slots or openings will always be near the bottom of the casing for engagement with the
100 pawl or dog. The end portions of the end edges of the pawl or dog are adapted to rest upon the cap or casing, as clearly illustrated in Fig. 3 of the drawings, and a downward
105 pull on the window-shade will rotate the curtain in the direction of the arrow in Fig. 3, whereby the gravity pawl or dog will be readily lifted out of engagement with the lower slot or opening. The gravity pawl or dog in practice is arranged in substantially a vertical position, and as soon as the shade-roller is
110 stopped it will drop into engagement with the cap or casing, and a slight rotary movement

of the roller will carry one of the peripheral openings beneath the bottom pawl or dog, which will lock the roller against further rotary movement by dropping into engagement with such slot. The roller is provided at its bored end with a bearing-plate 16, having a central opening to receive the spindle 4.

It will be seen that the ratchet device, which is exceedingly simple and inexpensive in construction, possesses great strength and durability and may be easily and quickly applied to the spring-actuated roller and that when the parts are assembled the cap or casing protects the slidable gravity pawl or dog, so that the parts are not liable to become injured or get out of place, and thereby affect the operativeness of the spring-actuated roller.

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

The combination with a spring-actuated shade-roller provided with a spindle having a flattened outer portion, of a cylindrical cap or casing rigidly fitted on the roller and having an end opening through which the spindle projects, said cap or casing being also provided with a peripheral opening, and a slidable

gravity pawl or dog arranged within the cap or casing in substantially a vertical position and having a longitudinal slot receiving the flattened portion of the spindle, said pawl or dog being slidable on the spindle and provided at each end at an intermediate point between its side edges with a single tooth, the end portions of each end edge being arranged to rest upon the inside of the casing at opposite sides of the opening to limit the downward or outward movement of the dog and the tooth at either end being adapted to enter the peripheral opening of the casing but not projecting from the latter, and each tooth having a shoulder for engaging one of the walls of the said peripheral opening and provided with an inclined edge adapted to be engaged by the opposite wall of the peripheral opening to lift the pawl or dog out of engagement with the cap or casing.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

EDWARD SMITH DINKEL.

Witnesses:

W. A. BYERLY,
S. G. DINKEL.