

No. 706,569.

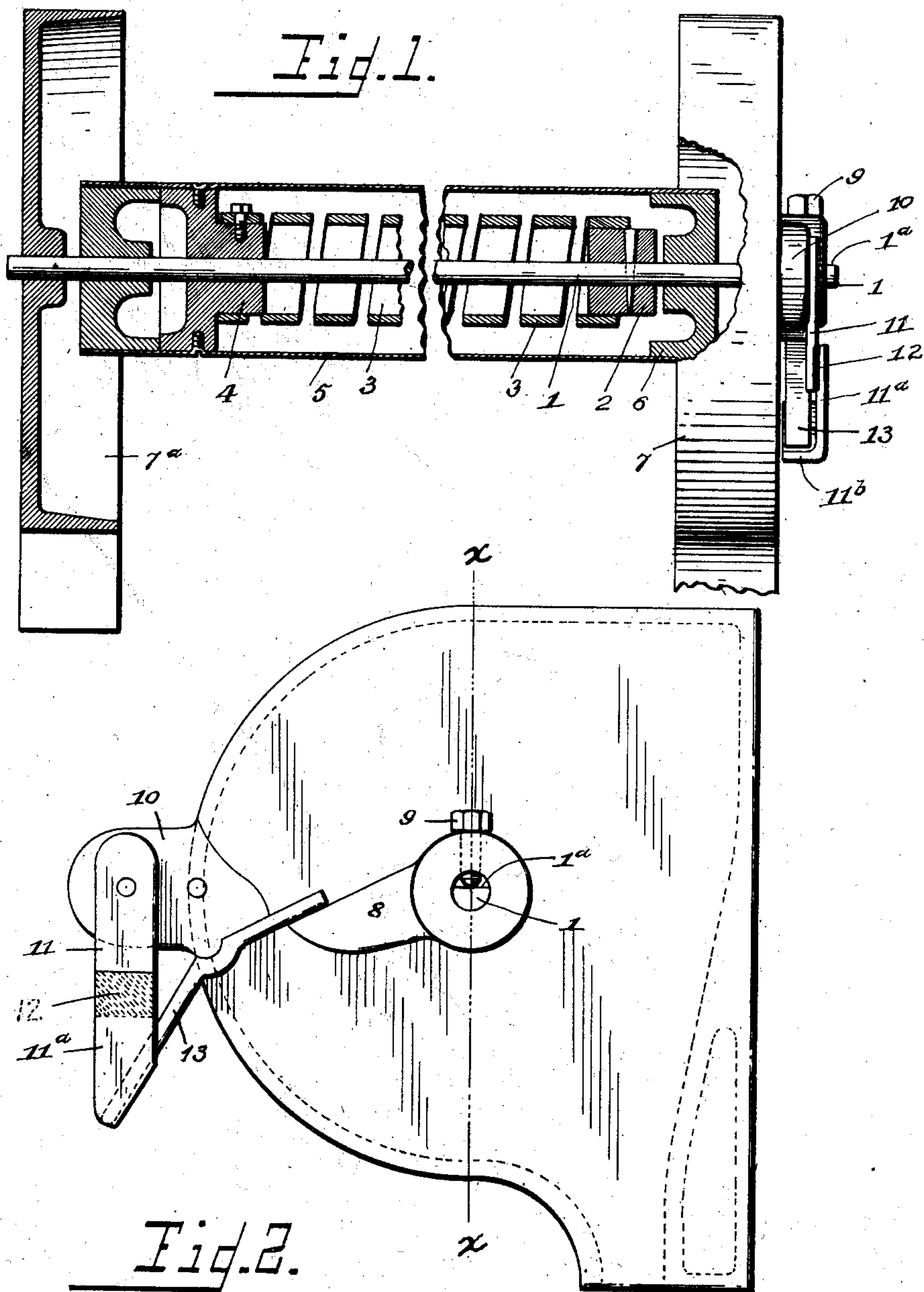
Patented Aug. 12, 1902.

W. R. KINNEAR.

SPRING ROLLER FOR FIREPROOF BLINDS, &c.

(Application filed Dec. 13, 1901.)

(No Model.)



WITNESSES:

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UNITED STATES PATENT OFFICE.

WILLIAM RAYMOND KINNEAR, OF COLUMBUS, OHIO.

SPRING-ROLLER FOR FIREPROOF BLINDS, &c.

SPECIFICATION forming part of Letters Patent No. 706,569, dated August 12, 1902.

Application filed December 13, 1901. Serial No. 85,846. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM RAYMOND KINNEAR, a citizen of the United States, residing at Columbus, in the county of Franklin and State of Ohio, have invented certain new and useful Improvements in Spring-Rollers for Fireproof Blinds; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

The object of this invention is to provide a spring-roller for fireproof curtains that shall have its tension liberated upon a dangerous rise of temperature due to imminent fire on the exterior of the building in which the curtains are used, so that under normal conditions the roller can perform its ordinary functions as a spring-roller.

The invention is embodied in easily-fusible means, in conjunction with other devices, for holding fixed the shaft to which the spring of the roller is attached until released by a dangerous rise of temperature; but the exact scope of the invention is to be gathered from the following description and claims.

One embodiment of the invention is depicted in the accompanying drawings, in which—

Figure 1 is a view partially in section and partially in elevation, the spring-roller being in section and on the line *x x*, Fig. 2. Fig. 2 is a view in elevation of the right-hand end of Fig. 1.

In the views, 1 designates the shaft of the roller, having pinned thereto a collar 2, to which one end of the spring 3 is attached. The other end of the spring is secured to a collar 4, turning loose on the shaft 1, and one end of a drum 5 is fixed to the loose collar 4. The other end of the drum can be fixed to a supporting-collar 6, or this collar can be fixed to the shaft and the drum turned loosely thereon, the drum in either case being put under tension when turned. The drum will have a metallic or other fireproof or fire-resisting curtain attached to it. This is not shown, but will be readily understood. The shaft of the roller is shown to be supported in bearings in the end casings 7 and 7^a, within and between which the curtain is rolled upon the roller. The right-hand end of the shaft 1 is

shown to protrude beyond the casing and has one side flattened, as indicated at 1^a. On the end of the shaft is secured an arm 8, held fast by a set-screw 9, passed through the collar of the arm and turned tightly against the flat side of the shaft. On the side of the said right-hand end casing and at its front portion is a boss or projection 10, to which is hung vertically a bracket composed of two parts 11 and 11^a, the part 11^a having a horizontally-extending rest 11^b. The parts 11 and 11^a are held together by a modicum of solder 12, fusible on an undue rise of temperature. Supported on the under side of the boss 10, between the rest 11^b and the end of the arm 8, is a small bar 13, constituting an abutment for the arm 8. The shaft 1 will be turned against the tension of the spring, so as to cause the arm 8 to normally press against the inner end of the bar or abutment 13, and thus the shaft will be held from rotation under normal conditions. The spring-roller can therefore in ordinary circumstances perform its ordinary functions as a spring-roller; but if the curtain be rolled up at the time of an imminent fire the solder will be melted, the bar or abutment 13 released, and the curtain liberated to drop by gravity or otherwise to close the opening in which it is located. The forms of the parts shown are such that great tension of the spring can be sustained by a comparatively small quantity of fusible solder.

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

1. In combination with a shaft, a curtain-winding drum supported to revolve thereon, a spring secured between the drum and the shaft for counterbalancing the curtain in its normal raising and lowering, means fusible on a dangerous rise of temperature for holding said shaft stationary until released by such dangerous rise of temperature without interfering with the normal raising and lowering of the curtain.

2. In combination with a shaft, a curtain-winding drum supported to revolve thereon, a spring between the drum and the shaft to counterbalance the curtain in its normal raising and lowering, and fusible means for automatically liberating said drum upon a dangerous rise of temperature, said fusible means

when in place not interfering with the normal raising and lowering of the curtain.

3. In combination with the shaft of a spring-roller for fire-resisting curtains, an arm fixed
5 to said shaft, a movable abutment for said arm and means fusible on a dangerous rise of temperature to liberate said abutment.

4. In combination with the shaft of a spring-roller for fire-resisting curtains, an arm fixed
10 to said shaft, a movable abutment for said arm, a support for said abutment and fusible means for liberating said support upon a dangerous rise of temperature.

5. In combination with the shaft of a spring-roller for fire-resisting curtains, an arm fixed 15
to said shaft, a movable abutment for said arm, a fixed support for said abutment, a supplementary support for said abutment held by means fusible on a dangerous rise of temperature. 20

In testimony whereof I affix my signature in presence of two witnesses.

WILLIAM RAYMOND KINNEAR.

Witnesses:

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