No. 742,155. PATENTED OCT. 27, 1903.

W. M. BRUNST.

ROLLER FOR FIREPROOF BLINDS.

APPLICATION FILED APR. 24, 1903.

NO MODEL.

Fig. 1.

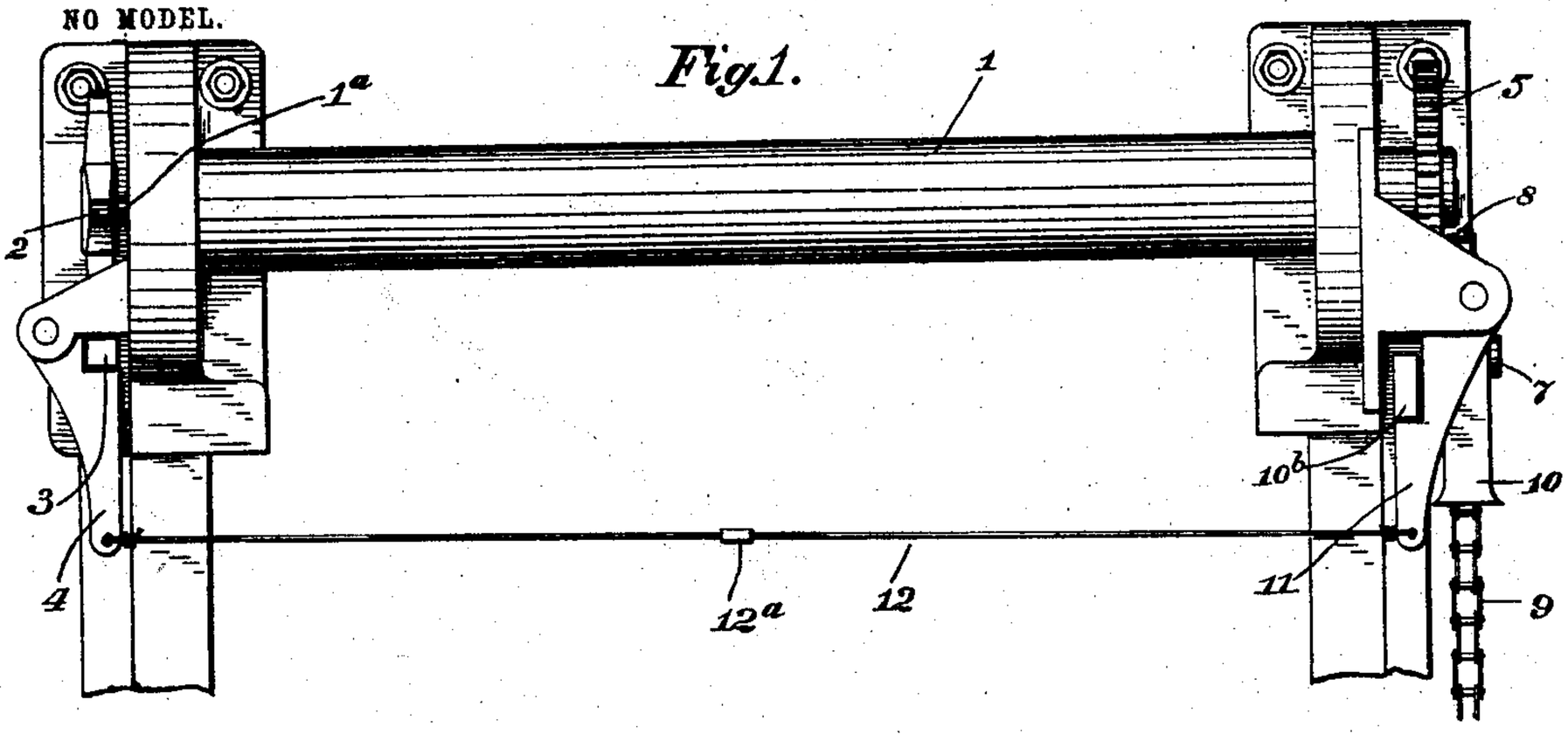


Fig. 2.

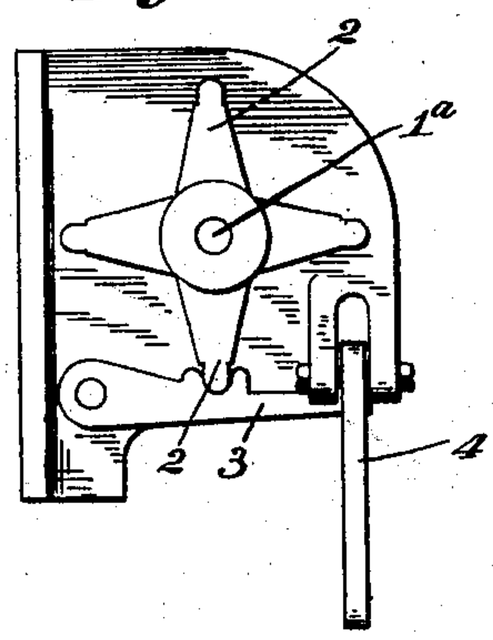


Fig. 3.

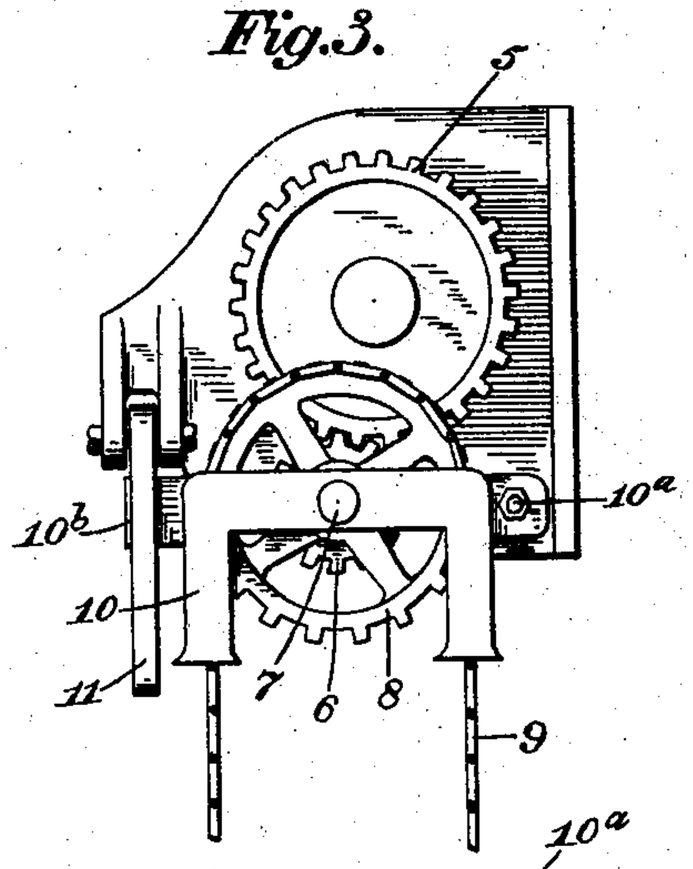
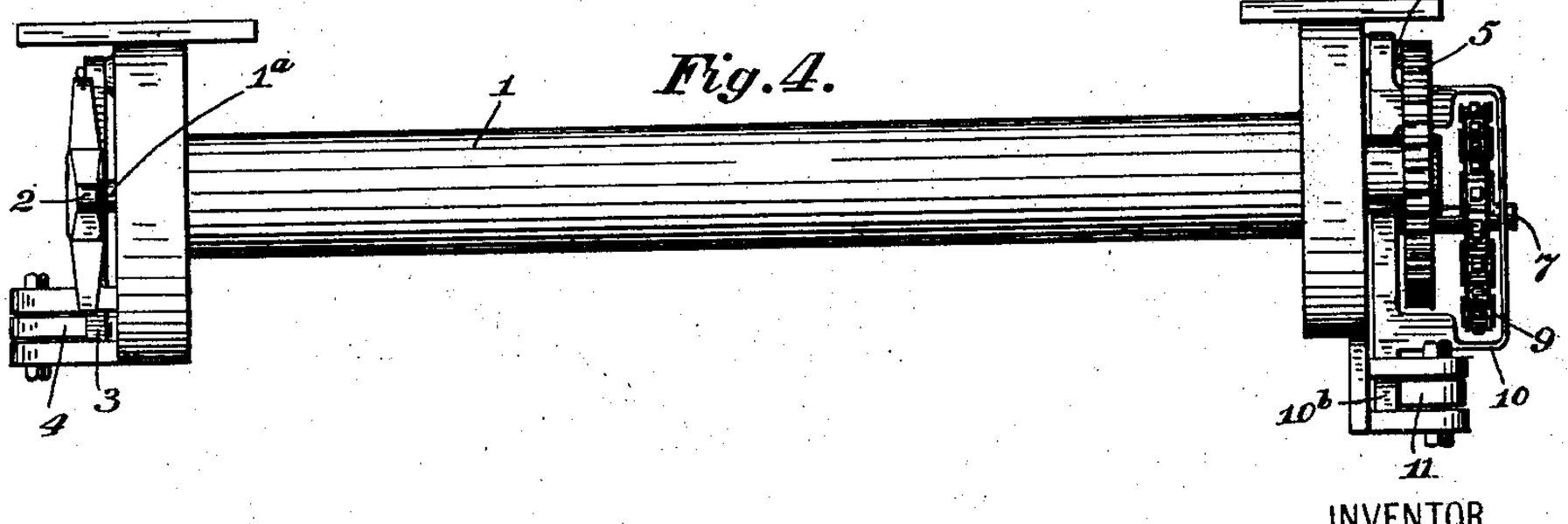


Fig. 4.



WITNESSES:
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UNITED STATES PATENT OFFICE.

WILLIAM M. BRUNST, OF COLUMBUS, OHIO, ASSIGNOR TO THE KINNEAR MANUFACTURING COMPANY, OF COLUMBUS, OHIO, A CORPORATION OF WEST VIRGINIA.

ROLLER FOR FIREPROOF BLINDS.

SPECIFICATION forming part of Letters Patent No. 742,155, dated October 27, 1903.

Application filed April 24, 1903. Serial No. 154,101. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM M. BRUNST, 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 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.

This invention relates more particularly to the kind of roller that is used in connection with fire-resisting metallic curtains that are dropped automatically upon a dangerous rise of temperature. Because such curtains are oftentimes quite large and heavy they are partially counterbalanced by a spring in the roller, said spring being placed under tension by the lowering of the curtain, and the roller itself is operated by means of gearing and a sprocket-chain. When the curtain is released upon a dangerous rise of temperature to close the opening in which it is installed, it is important that there be as little friction as possible to impede the descent of the curtain.

Therefore the special object of the present invention is to provide means whereby the curtain-hoisting chain and roller-operating pinion shall be disengaged from the gear on the roller at the same time the curtain is released by the undue rise of temperature; and the invention consists in the construction hereinafter described and claimed.

In the accompanying drawings, illustrating one embodiment of the invention, Figure 1 is a front view of a curtain-roller and its attachments, the curtain itself being omitted. Fig. 2 is an elevational view of the left-hand end of what is shown in Fig. 1. Fig. 3 is a similar view of the right-hand end of what is shown in Fig. 1, and Fig. 4 is a top plan view of Fig. 1.

In the several views, 1 designates the roller. This roller will preferably be of any approved spring-roller type, but preferably so that the tension in the roller can be relieved by releasing the rotary portion of the divided shaft 1^a. When so constructed, the shaft 1^a can be held normally stationary by means of an arm 2, fixed on the shaft 1^a, the end of which is engaged by a notch in a lever 3, held up in position to effect this result by means of a gravity-latch 4, as seen in Fig. 2. This construction is shown at the left-hand end of the roller, Figs. 1 and 4, but is not of my invention, except so far as it may constitute an element of my combination. At the opposite end of the roller is shown the hoisting gear and chain. This comprises a large gear 5, fixed on the end of the shaft, said gear to be engaged and driven by a pinion 6. On the shaft 7 of the pinion 6 is a sprocket-wheel 8, over which runs a sprocket-chain 9 and by means of which the roller is operated to wind or unwind the curtain under ordinary circumstances.

10 designates a frame in which the shaft 7 is journaled. This frame is hinged at its inner end, as indicated at 10^a, and is provided at its outer end with a projection 10^b. Hinged to an ear on the outer side of the end casing is a gravity-latch 11, similar to the latch 4, adapted to engage the projection 10^b and support the frame in such position that the pinion 6 shall engage the gear 5 operatively. The two gravity-latches 4 and 11 are shown to be connected by a sectional wire 12, containing a fusible connection or link 12^a, adapted to melt on a dangerous rise of temperature. This wire is made short enough to hold the latches under the lever 3 and projection 10^b, and therefore to sustain the parts in the position shown. When the wire is secured by the fusing of the link 12^a, both latches 4 and 11 are liberated and the frame 10, together with the lever 3, drops, and the curtain is free to run down without the impediment of the hoisting gear and chain.

The pinion and chain supporting frame can be used with advantage independently of a spring-roller, and the form of all the parts can be modified without departing from the gist of the invention.

The frame 10 is shaped around the sprocket in the manner shown to guide and retain the chain on the sprocket.

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

1. In combination with a roller for fire-re-

sisting blinds, a hoisting-gearing comprising a gear on the roller, and a driving-pinion to engage said gear, a frame carrying said driving-pinion, means whereby said pinion is held in engagement with the gear and means to disengage said pinion on a dangerous rise of temperature.

2. In combination with a spring-roller for fire-resisting blinds devices for holding and releasing the spring of the roller, a hoisting-gearing comprising a gear on the roller and a driving-pinion to engage said gear, means to hold said pinion in engagement with the gear, and means for simultaneously releasing the spring of the roller and the pinion from engagement with the gear on a dangerous rise of temperature.

3. In combination with a roller for fire-resisting blinds, a hoisting-gearing comprising a gear on the roller and a driving-pinion to engage the gear, a sprocket wheel and chain, a movable frame for supporting the driving-pinion and sprocket wheel and chain, said frame being also adapted to guide said chain, means for holding said frame in position where the pinion will engage the gear, and means whereby said frame is moved from said position on a dangerous rise of temperature.

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

WILLIAM M. BRUNST.

Witnesses:
WALTER HAMILTON,
GEORGE M. FINCKEL.