

(No Model.)

G. P. STEINBACH.  
WHEEL SECURING DEVICE.

No. 330,748.

Patented Nov. 17, 1885.

Fig. 1.

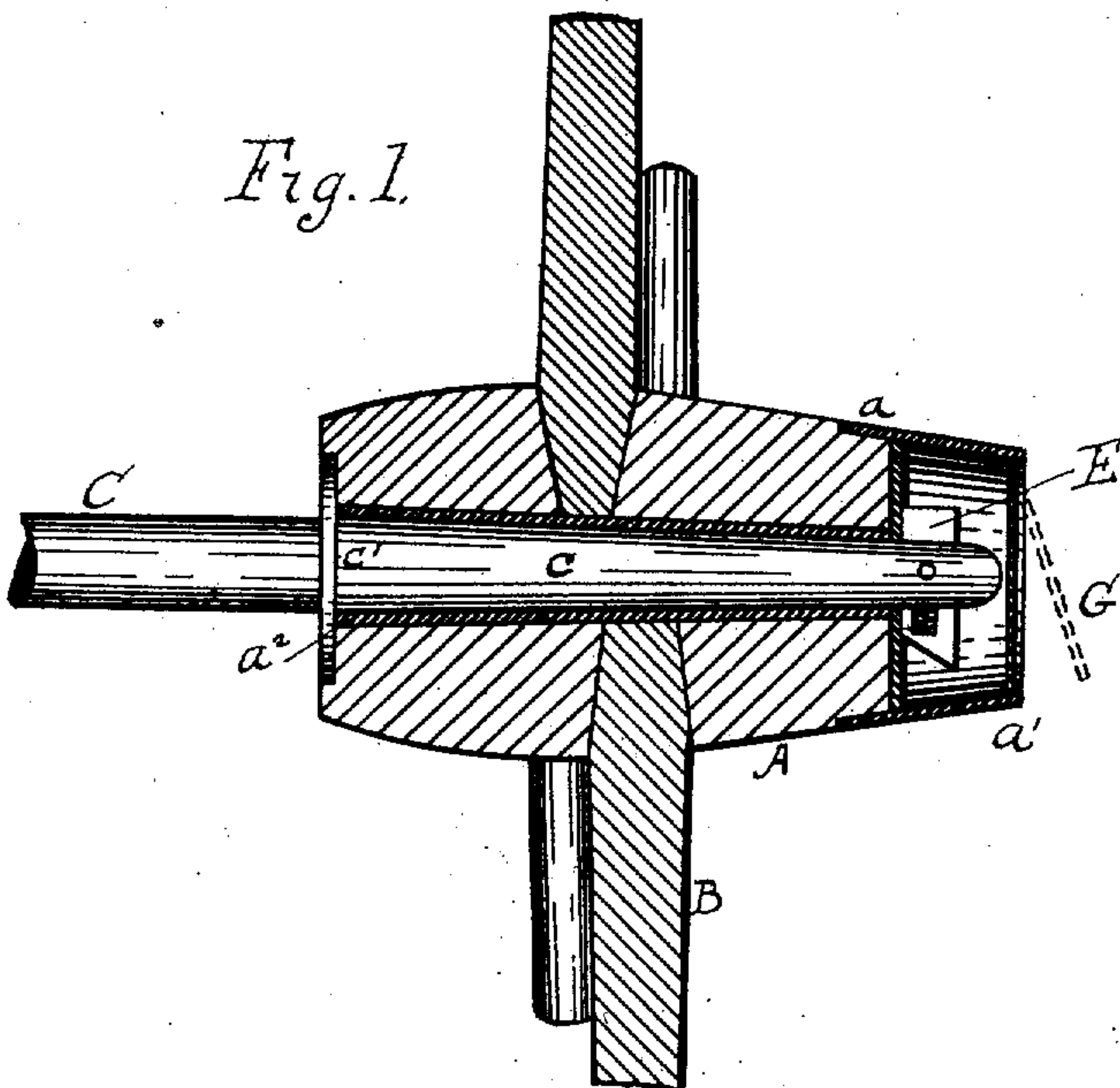


Fig. 2.



Fig. 3.

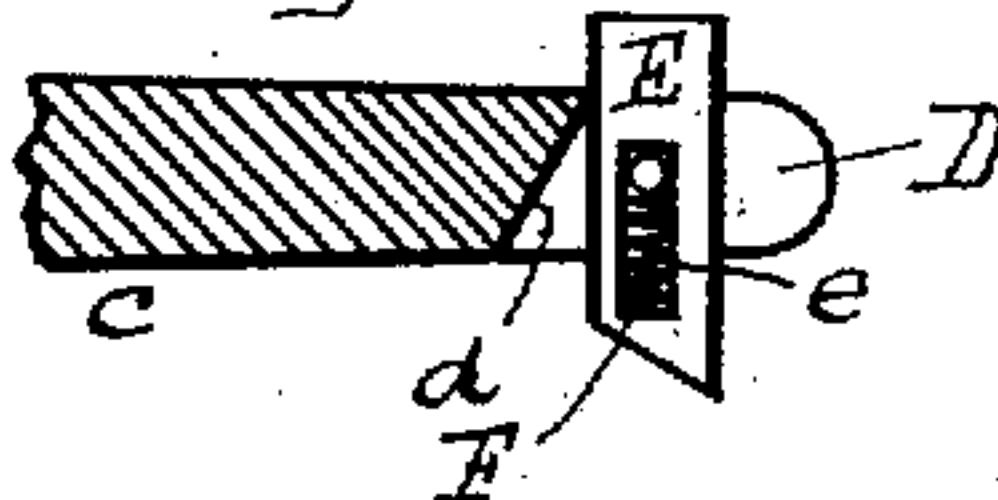


Fig. 4.

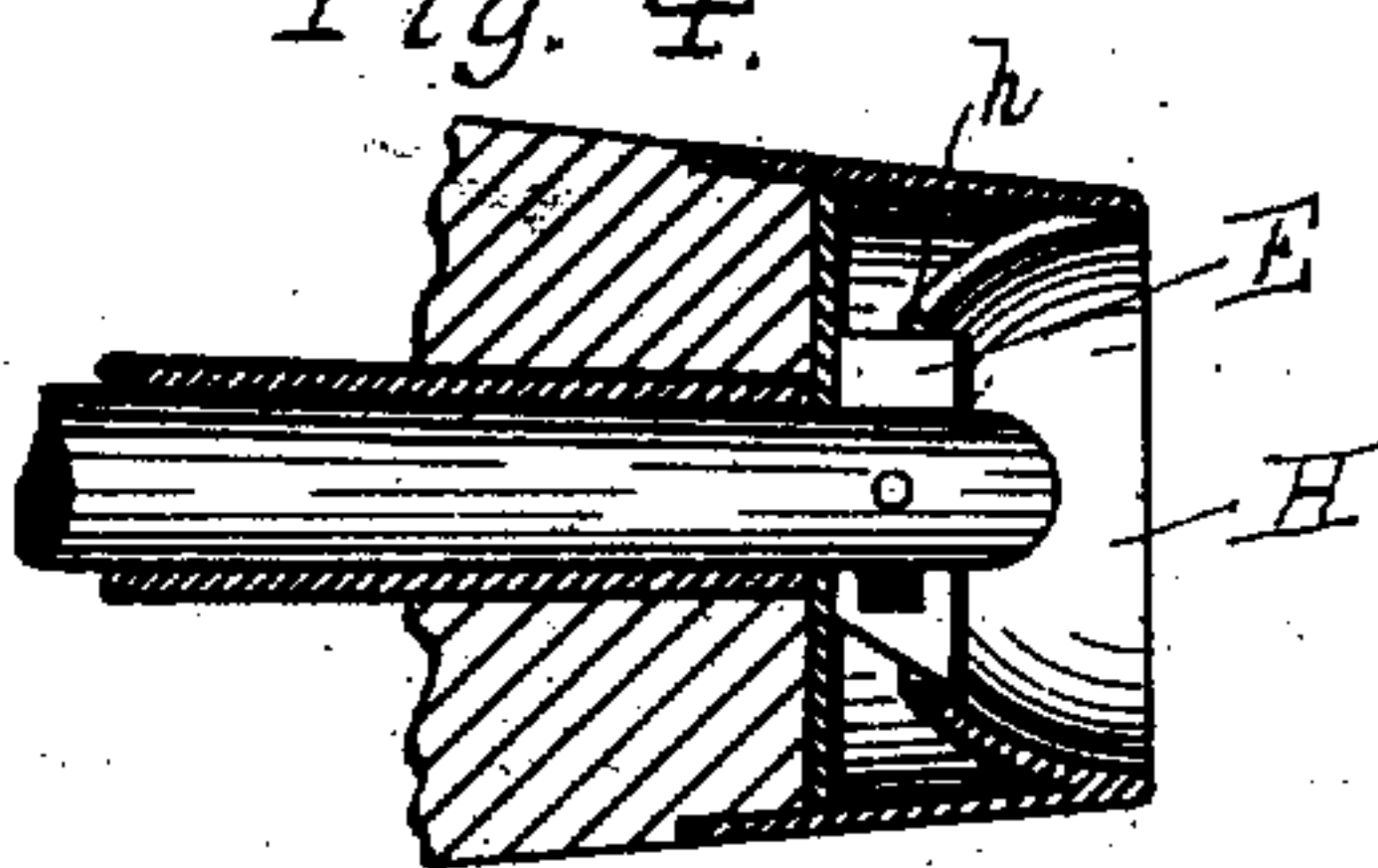
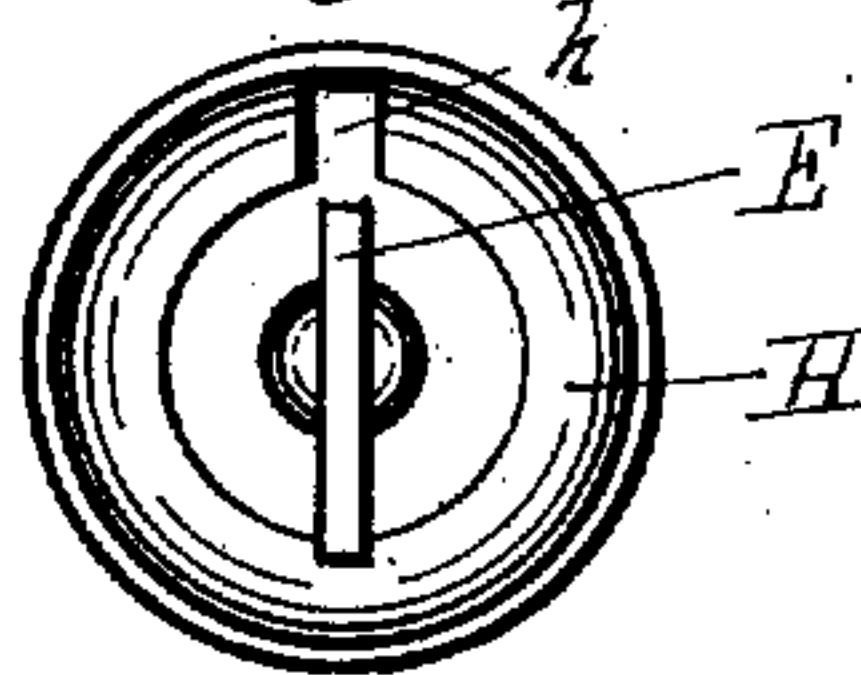


Fig. 5.



Witnesses

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pr  
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# UNITED STATES PATENT OFFICE.

GEORGE P. STEINBACH, OF BALTIMORE, MARYLAND.

## WHEEL-SECURING DEVICE.

SPECIFICATION forming part of Letters Patent No. 330,748, dated November 17, 1885.

Application filed February 20, 1885. Serial No. 156,537. (No model.)

*To all whom it may concern:*

Be it known that I, GEORGE P. STEINBACH, of Baltimore city, Maryland, have invented certain new and useful Improvements in Wheel-Securing Devices, of which the following is a specification, reference being had to the accompanying drawings, forming part hereof, in which—

Figure 1 is a longitudinal section through a hub and part of a wheel, the part of the axle shown being in full side elevation. Fig. 2 is a view in section of part of an axle with my improved linchpin in its position parallel to the axle. Fig. 3 is a similar view of the same parts, the pin being in its vertical position. Fig. 4 is a section showing a cap without the hinged lid, and Fig. 5 is a front elevation thereof.

Like letters refer to the same parts in all the figures.

My invention relates to devices for securing wheels to axles, applicable to all classes of wheels and axles, but designed especially to be applied to carriages, and particularly to children's carriages, the object being to simplify and cheapen such devices and to render them easy of operation and not liable to misplacement by accident or by meddling therewith, especially by children.

To these ends my invention consists in the construction, arrangement, and combination of devices, which will be now fully described, and afterward specifically pointed out in the claims.

Referring to the drawings by letter, A is the hub, B the spokes, and C the axle, of any ordinary wheel. The hub A has a band, *a*, and cap *a'*, and is provided with a bushing, *a''*, as is usual. The axle has a spindle, *c*, which has its bearing in said bushing. The axle is prevented from entering the hub by means of the usual upset flange, *c'*. The outer end of the spindle is slotted vertically at D, said slot having its inner end, *d*, cut on a slant or bevel, the upper end of said bevel being nearest the outer end of the spindle.

E is a linchpin having one end beveled off parallel, when the linchpin is parallel with the spindle, with the inclined inner wall, *d*, of the slot D. This linchpin is provided with

a longitudinal slot, *e*, reaching from slightly beyond the mid-length thereof nearly to the beveled end. When the linchpin is ready for use, it is pivoted in the slot in the spindle by means of a pin, *e'*, which passes through the slot *e* in the pin, and is held normally in that end of the slot *e* which is near the center of the pin by a spring, F. The cap may be provided with a hinged lid, G, and has an inwardly-curved plate, H, provided on the side above the hub with a notch, *h*.

The operation of my devices may be described as follows, viz: The parts being in the position shown in Figs. 1 and 4, and it being desired to remove the wheel from the axle, it is only necessary to press the linchpin upward against the action of the spring F until the upper corner of the beveled end shall have reached the inner edge of one side of the bushing. The linchpin may now be turned until it reaches the position shown in Fig. 2, parallel to the spindle, when the wheel may be slipped off. The beveled end of the linchpin is in contact with the inclined wall of the spindle-slot, and the linchpin is thereby prevented from moving any further than to its parallel position, as shown in Fig. 2.

In Fig. 1 I have omitted to show the curved plate shown in Figs. 4 and 5. The use of the slot in said curved plate will now be described. When the linchpin is in a position at right angles to the spindle, (see Fig. 4,) it can only be moved upward when it exactly coincides with the notch *h* in said curved plate. Thus it is impossible to remove the wheel, except when it is in that one position—viz., with the slot *h* in a direct vertical line above the linchpin. Consequently the liability to accidental displacement is reduced to a minimum. The spring F is always pressing the linchpin downward, thus keeping it normally in the safe position, and preventing it jumping up and striking in the slot *h* when the vehicle is passing over rough surfaces.

The cap may be entirely closed up by the hinged lid, and will at the same time be readily accessible.

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



1. The combination of a wheel, an axle having its end vertically slotted, and a slotted linchpin pivoted through its slot, the rear or inner end of the axle-slot being beveled or inclined from its top downward and inward, and the linchpin being correspondingly beveled, whereby the inner end of the linchpin, when said pin is in its horizontal position coincides with the beveled end of the axle-slot, for the purpose set forth.

2. In combination, the axle having slot in end, the wheel, a slotted linchpin pivoted in said slot, and a spring in the linchpin-slot,

bearing against its pivot, for the purpose set forth.

3. The hub-cap having plate H, provided with slot *h*, in combination with slotted axle and slotted linchpin pivoted thereto, as and for the purpose set forth.

In testimony that I claim the foregoing I have hereunto set my hand in presence of two witnesses.

GEORGE P. STEINBACH.

Witnesses:

WM. B. NELSON,  
GEO. H. PISTEL.