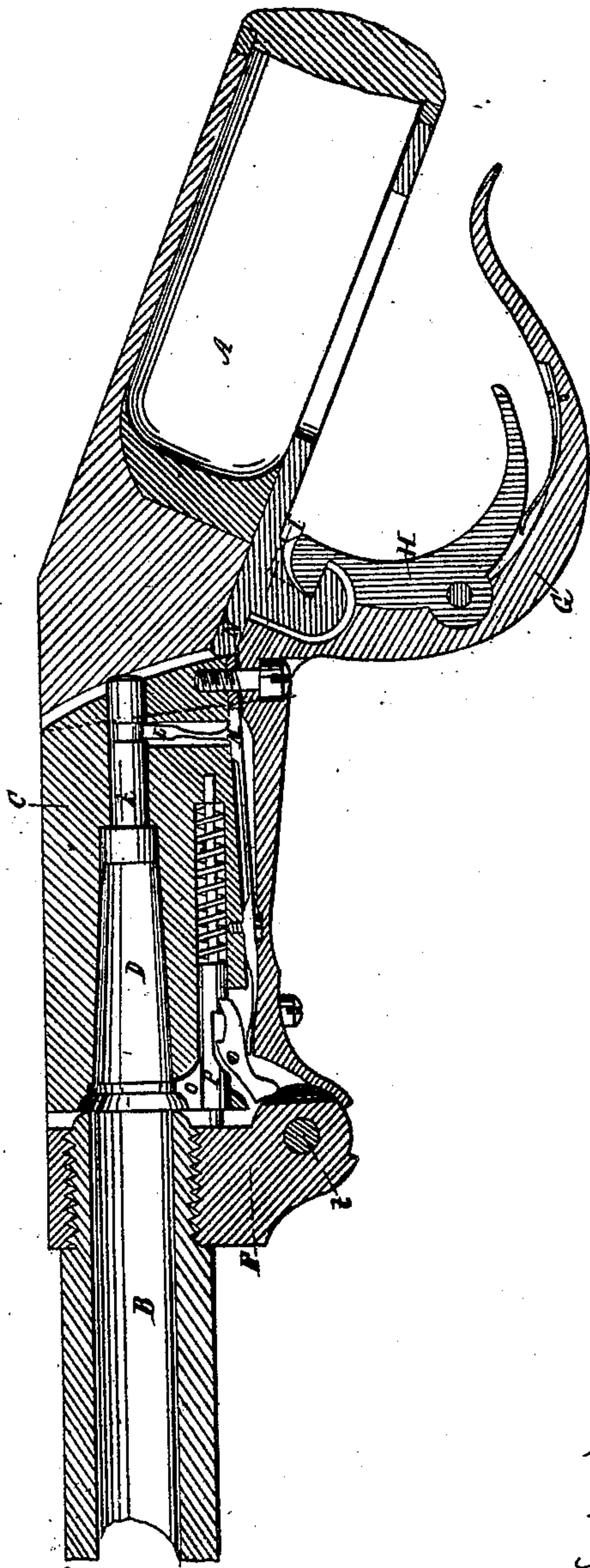


G. P. & G. F. FOSTER.  
Breech-Loading Fire-Arm.

No. 49,994.

Patented Sept. 19, 1865.

Fig. 1.



Witnesses.

*C. D. Smith*  
*W. F. Hall*

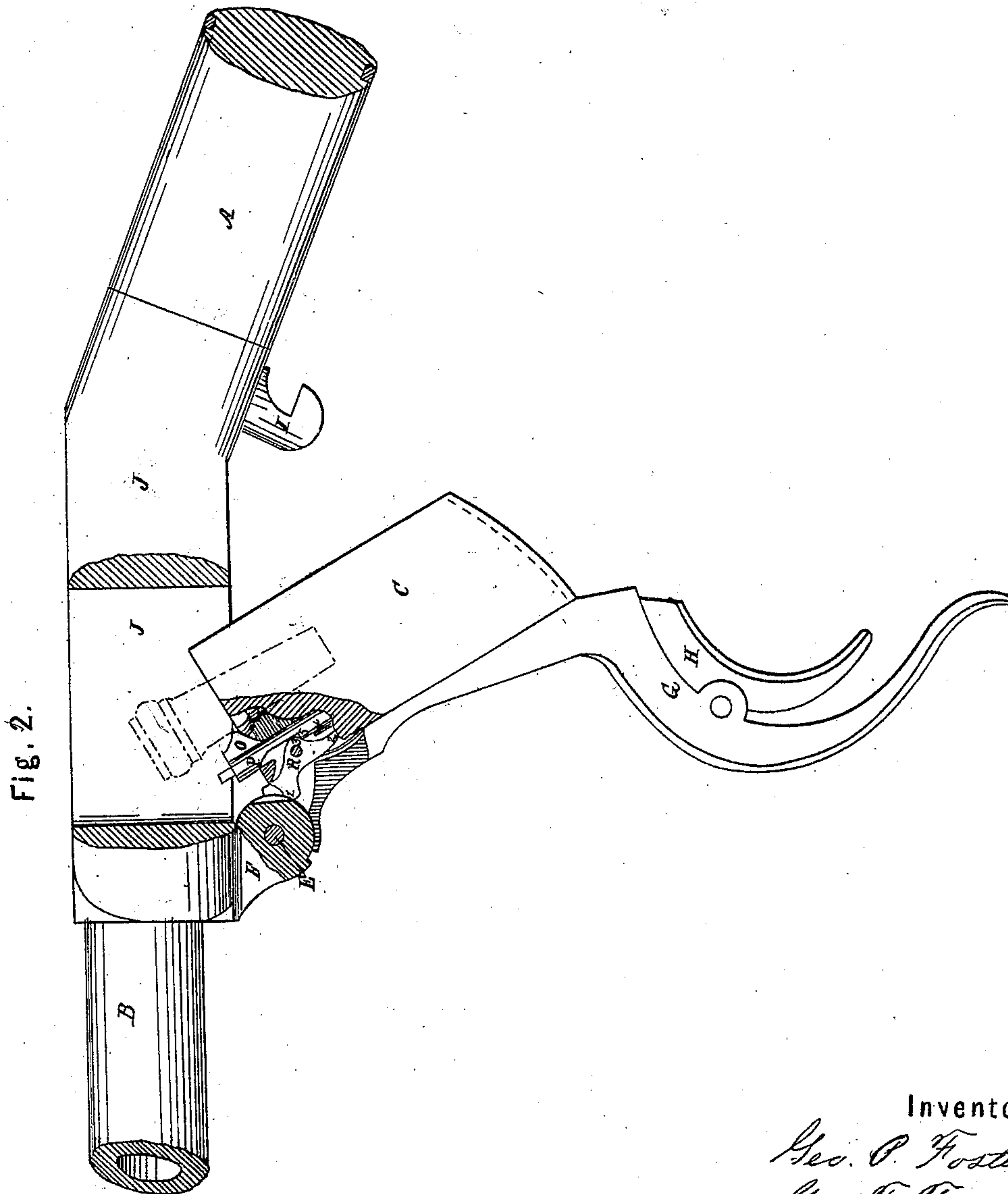
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# UNITED STATES PATENT OFFICE.

GEORGE P. FOSTER AND GEORGE F. FOSTER, OF MOHAWK, NEW YORK.

IMPROVEMENT IN CARTRIDGE-RETRACTORS FOR BREECH-LOADING FIRE-ARMS.

Specification forming part of Letters Patent No. 49,994, dated September 19, 1865.

*To all whom it may concern:*

Be it known that we, GEORGE P. FOSTER and GEORGE F. FOSTER, of Mohawk, in the county of Herkimer and State of New York, have invented certain new and useful Improvements in Fire-Arms, consisting of a device for expelling the cartridge from the chamber; and we do hereby declare the following to be a full, clear, and exact description of the nature, construction, and operation of the same, reference being had to the accompanying drawings, which are made part of this specification, and in which—

Figure 1 represents the device in section; and Fig. 2 represents it principally in elevation, a portion being broken away to show the construction more perfectly.

Similar letters in each figure refer to like parts.

This invention consists of a device for forcibly ejecting the "cartridge-case," or "spent capsule," as it is variously called, from the chamber in which its charge has been exploded.

It consists of an expelling-pin which is projected by a spring retracted by impingement on the inside of the mortise containing the breech-block, and retained by a sear until its action on the cartridge-case is called for.

To enable others skilled in the art to which our invention refers to construct and use the same, we will proceed to describe it.

A is a portion of the stock, and B a portion of the barrel, of a fire-arm in which the breech-block C, with its cartridge-chamber D, swings downwardly to load and upwardly to close for firing, moving upon the pintle E in the lug F, which projects downwardly beneath the barrel.

This fire-arm is one of that class which is adapted for fixed metallic cartridges, which are to be inserted at the forward end of a breech-block which swings downwardly on a pivot so as to expose its forward face and the opening of the cartridge-chamber. The pivotal point has been mentioned, and the handle by which the swinging is effected is shown at G, while the spring-catch H and hook I retain the chamber in its upward position. The other details of construction may be considered in the course of a description which shall trace the consecutive motions and operations.

The handle being vibrated downwardly to

the full extent, which is limited by the points *a b*, the chambered breech-block, which is attached to the handle, the latter being hinged at E, is thereby withdrawn from the mortise or chamber J and its forward end exposed, so that the cartridge may be introduced by hand. The handle G is then vibrated upwardly, and as soon as the forward end of the cartridge presses upon the rear of the barrel B the cartridge is so forced to the rear as to push back the pin K, thereby deflecting the spring L, whose end enters an annular slot in the pin K. The spring L projects from the flat spring M, which is made fast to the lower side of the breech-block C.

The firing device is not shown, but consists of a hammer or needle which impinges upon that part of the cartridge-case where it can deal effectively with the inclosed fulminate. After the discharge the trigger H is pressed downwardly, which releases it from the catch I, and the handle being drawn down the rear end of the pin K, coming in contact with the projection N by being pushed forward, loosens the cartridge from its bed, and the spring L then sustains it until, by the further vibration of the breech-block, the tang 1 of the sear R is brought in contact with the point T of the lug F, which, pressing on the sear, raises the point 2 of the sear from contact with the notch 3 of the hammer and abandons the latter to the influence of the spring Q, which drives the flange O forcibly against the bead of the cartridge-case and knocks it clear of the gun with considerable force, and, if the spring be sufficient, to a considerable distance—sufficient to rid the soldier of any further concern in regard to it.

The expelling-pin consists of a rod, P, with a flange, O, and occupies a bore or chamber in the breech-block, having a spiral spring upon it which is compressed by the action of inserting the said pin into its position, in which it is retained by the sear R, which has a tang, 1, whose purpose has been explained, and two points, 2 and 3. The sear is retained by an axial pin which fastens it to the block, and is acted upon by a flat spring, M, which has been spoken of as being attached to the under side of the breech-block.

There are upon the expelling-pin two notches,



4 and 5, which are respectively engaged by the sear-points 2 and 3. The point 2, engaging the notch 4 when the expelling-pin is retracted, and being removed from thence by the impingement of the tang 1 on the portion T of the lug F when the spring Q throws out the expelling-pin, expels the cartridge-case, and the said pin is caught by the engagement of 3 with 5 to prevent its being thrown clear out of the slot or bore which it occupies. The chamber being loaded, the block C is vibrated upwardly, and the point of the pin P, coming in contact with the breech-piece F, or its equivalent, pushes in the pin, so that the point 2 of the sear engages notch 4 of the expelling-pin, and the latter is set for another effective action when called for.

The point for tripping the sear is a matter of adjustment, and may be so located as to eject the shell at the most advantageous point.

To restate the matter in brief, the expelling-pin is forced back into position and cocked by coming in contact with a stationary stop while the chamber is moving into line with the

bore of the barrel. As the chamber opens the tang of the sear strikes a projection, which raises the point of the sear out of the notch at the proper time for the cartridge-case to be ejected from the chamber.

Having thus described our invention, what we claim therein as new, and desire to secure by Letters Patent, is—

1. The expelling-pin P, in combination with the spring Q and sear R, operating substantially in the manner described.

2. The sear R, actuated to free the expelling-pin by infringement upon a projection during the vibration of the breech-block.

3. The expelling-pin P, retracted in the upward vibration of the breech-block and reset by the spring-sear, substantially as described.

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Witnesses:

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