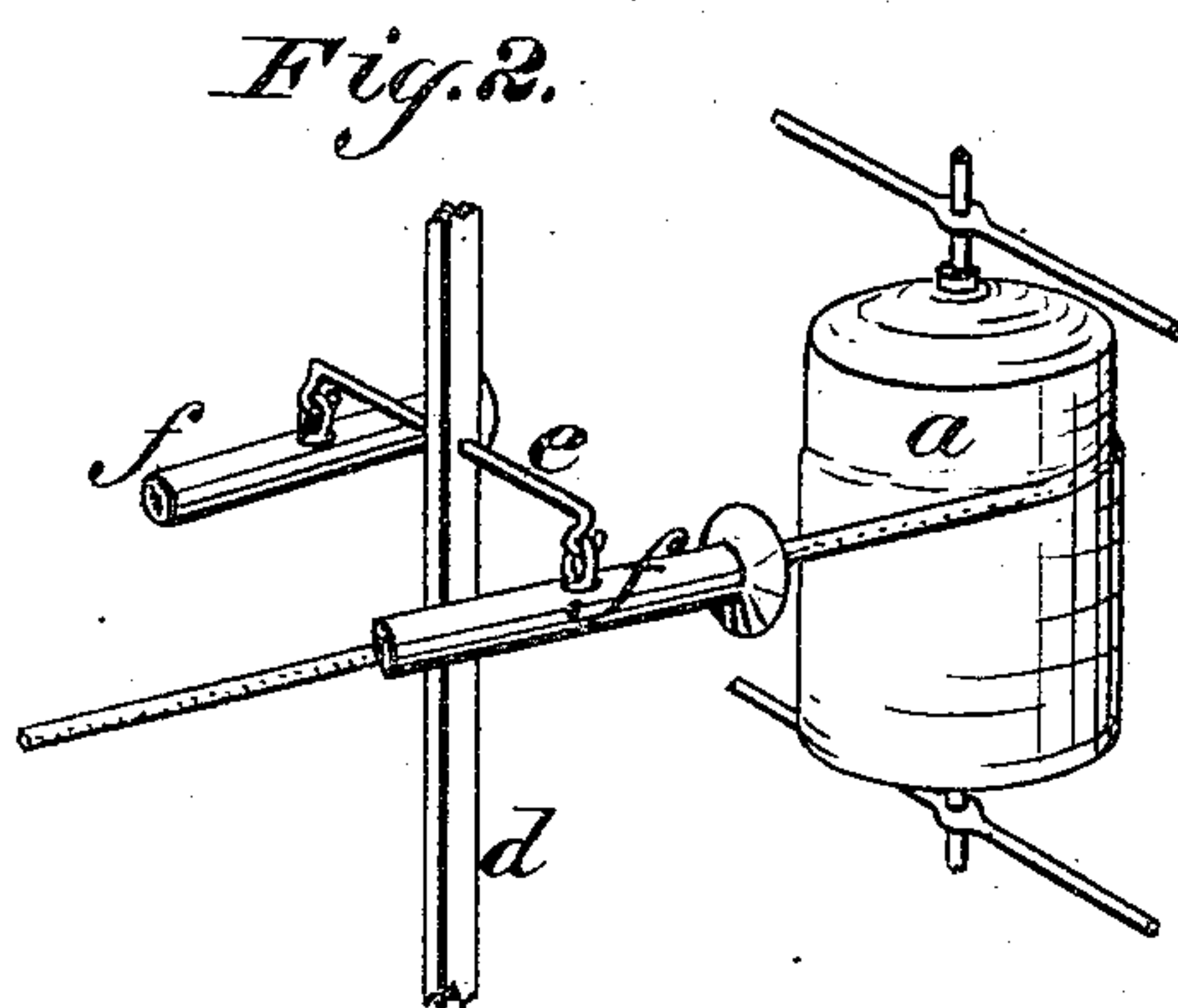
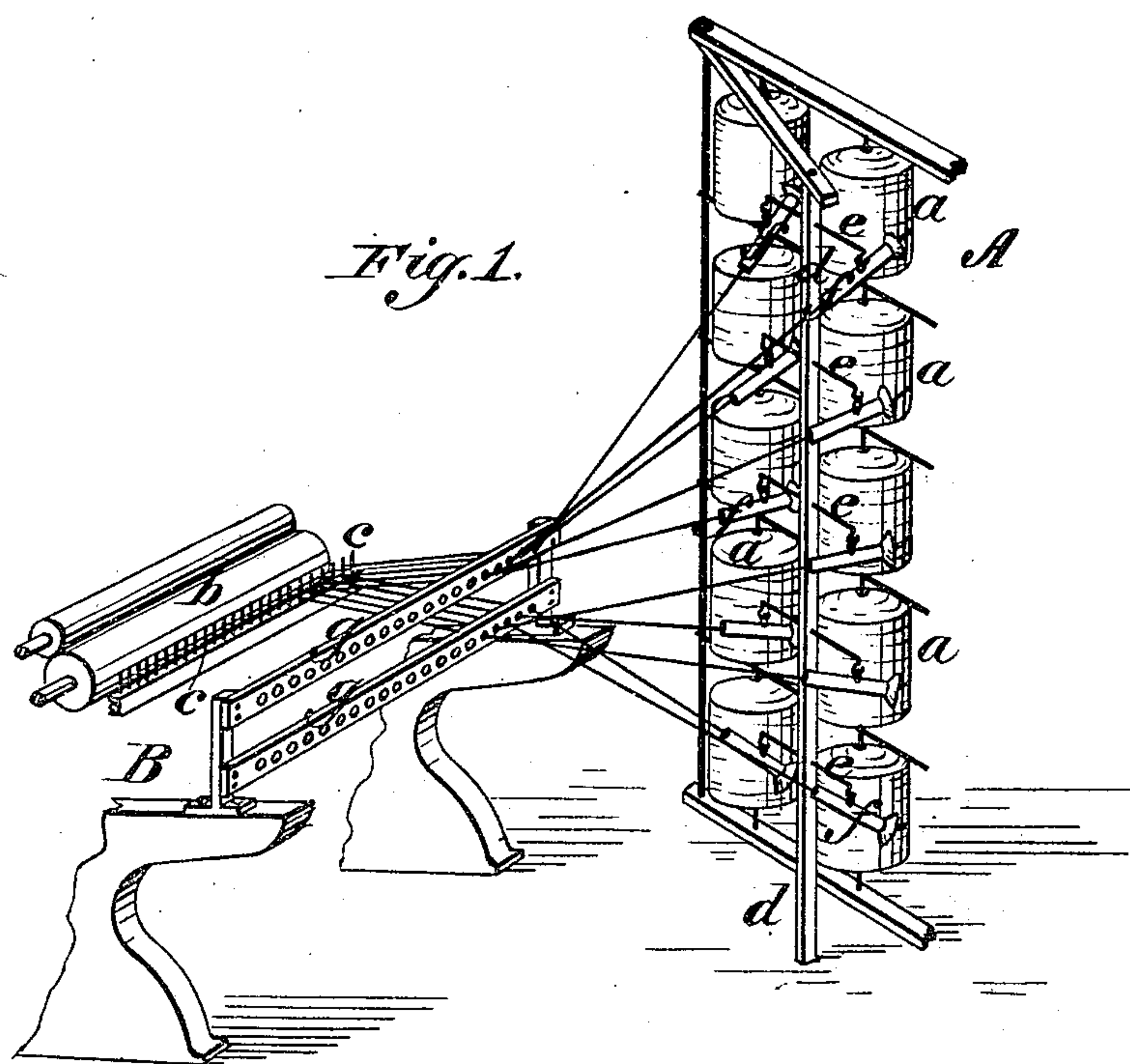


(No Model.)

W. E. & H. W. BOSWORTH.  
Wool Carding Machine.

No. 238,559.

Patented March 8, 1881.



WITNESSES:

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# UNITED STATES PATENT OFFICE.

WILLIAM E. BOSWORTH AND H. WALLACE BOSWORTH, OF LEXINGTON,  
KENTUCKY.

## WOOL-CARDING MACHINE.

SPECIFICATION forming part of Letters Patent No. 238,559, dated March 8, 1881.

Application filed September 8, 1880. (No model.)

*To all whom it may concern:*

Be it known that we, WILLIAM E. BOSWORTH and H. WALLACE BOSWORTH, of Lexington, in the county of Fayette and State of Kentucky, have invented a new and useful Improvement in Wool-Carding Machines, of which the following is a specification.

The objects of our improvements are to obviate the trouble experienced in carding-machines from the wool getting under the creel-spools and thereby becoming tangled, stretched, and broken; also, to prevent accumulation of wool on the guides of the carding-machine where the rolls enter, so that free passage of the rolls shall not be hindered.

The construction and operation will be described in detail with reference to the accompanying drawings, wherein—

Figure 1 is a perspective view, showing our improvements as applied in connection with a creel-frame and parts of a carding-machine; and Fig. 2 is a perspective view, showing the guide-tubes and their relative arrangement with respect to other parts.

Similar letters of reference indicate corresponding parts.

A is the creel-frame, adapted to carry spools *a*, as usual; and B is the carding-machine, of which *b* is the entering-roller, and *c* the usual guides for the wool passing to the cards.

Attached to the creel-frame, or fitted in front of the same at the side toward the carding-machine, are vertical bars *d*, which are placed a suitable distance apart, there being one bar for every two vertical rows of spools. In the bars *d* are fitted short wires *e*, which wires extend horizontally and parallel with the creel-frame. There will be as many wires *e* as required—generally five in each bar *d*—so that each wire serves two spools *a*. The ends of wires *e* are formed with hooks, on which are hung tubes or funnels *f*, by a ring attached to the funnels, so that they hang loosely and can move freely on the hooks. The tubes are made of tin or other suitable material, and are hung at their center of gravity to insure movement with equal freedom in any direction. This arrangement furnishes a funnel or tube, *f*, for the

roll of wool from each spool, and as the rolls pass to the carding-machine through the tubes the latter adapt themselves to the direction. The tubes are hung just at the distance in front of the spool required for preventing the rolls from sagging or running down by their own weight and becoming wrapped around the lower part of the spool-rest, as is frequently the case with the usual mechanism. The wool, by passing through the funnel, has the friction required to insure a steady constant motion, by which it is prevented from becoming tangled and mixed. The ends of the tubes *f*, from which the wool runs, will be in direct line with the point at which the roll enters the cards. Usually the rolls pass directly to the iron guides *c*, and enter side by side, so that there is more or less chafing and accumulation of wool on the guides. To prevent this we use the guide board or boards *g*, fixed in front of the iron guides *c*. The guide *g* consists of a single board with two rows of holes, one above the other, or two boards, each with a single row of holes fixed in place, as shown. One-half the rolls from tubes *f* pass through the perforations in the upper guide, and one-half through the lower, so that the rolls are separated and pass through the guide *c* in the same relative position—that is, with every other one raised instead of all being side by side, as usual.

The guides *g* are set to direct the rolls straight through the cards to the doffer-rings on the other side.

By the use of these devices the waste and trouble from broken and tangled rolls are avoided, and the advantages obtained over the usual mechanism are less waste and better work.

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

1. In carding-machines, the combination, with the creel-frame, of the swiveled tubes or funnels *f*, hung in front of the creel-frame to receive the rolls of wool from the creel-spools, as described.

2. In carding-machines, the combination,



with the tubes *f*, of the wires *e* and vertical bars *d*, as shown and described.

3. In carding-machines, the combination, with the bars *d* and tubes *f*, of the guide-board  
5 *g*, having two rows of holes, one above the other, and the iron guides C, the board being fixed in front of said iron guide, whereby the

rolls pass alternately through an upper and lower hole, as described.

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Witnesses:

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