

# A. Wheelock. Bridge Pier.

N<sup>o</sup> 99,989.

Patented Feb. 15, 1870.

Fig. 1.

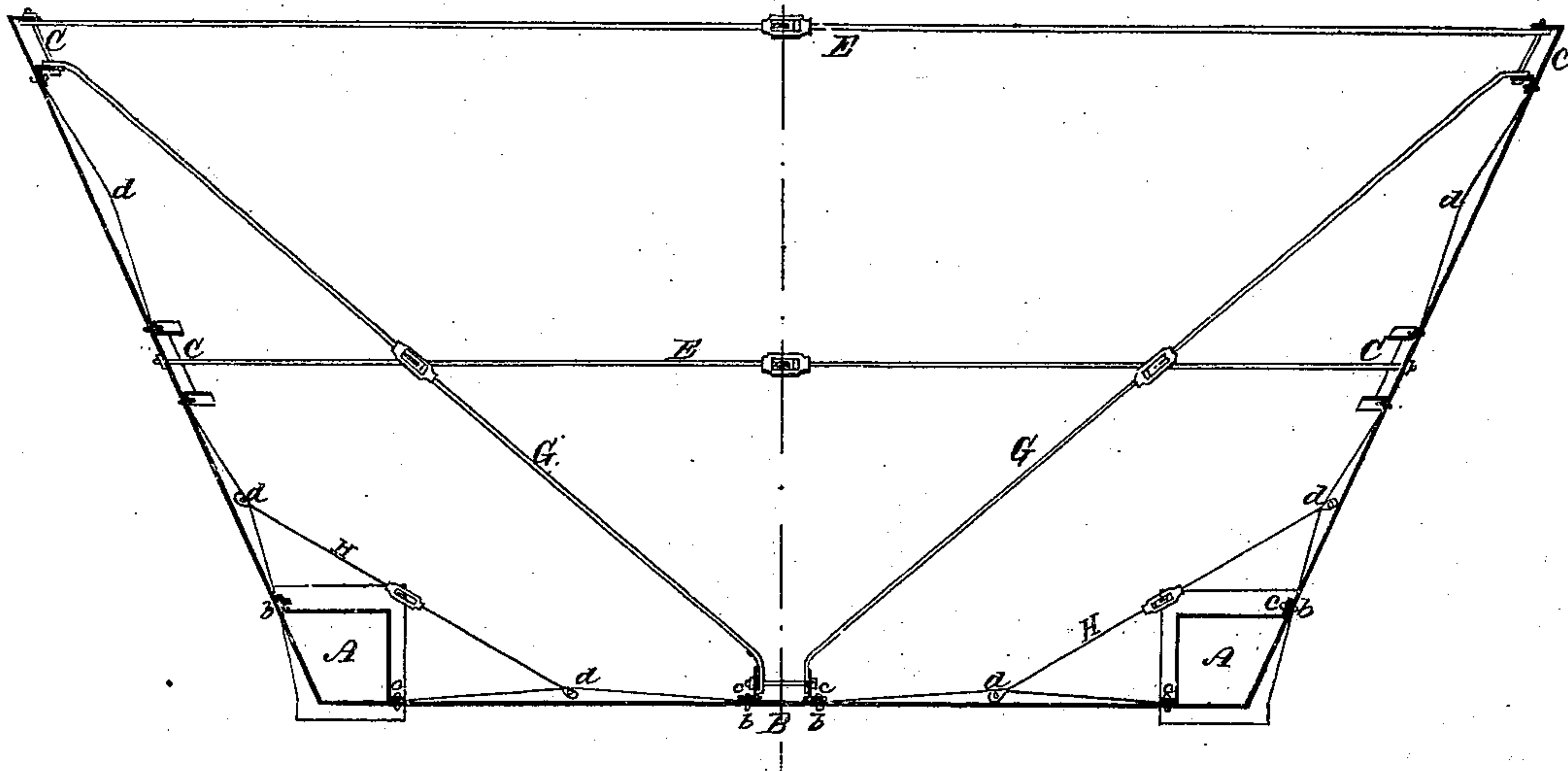
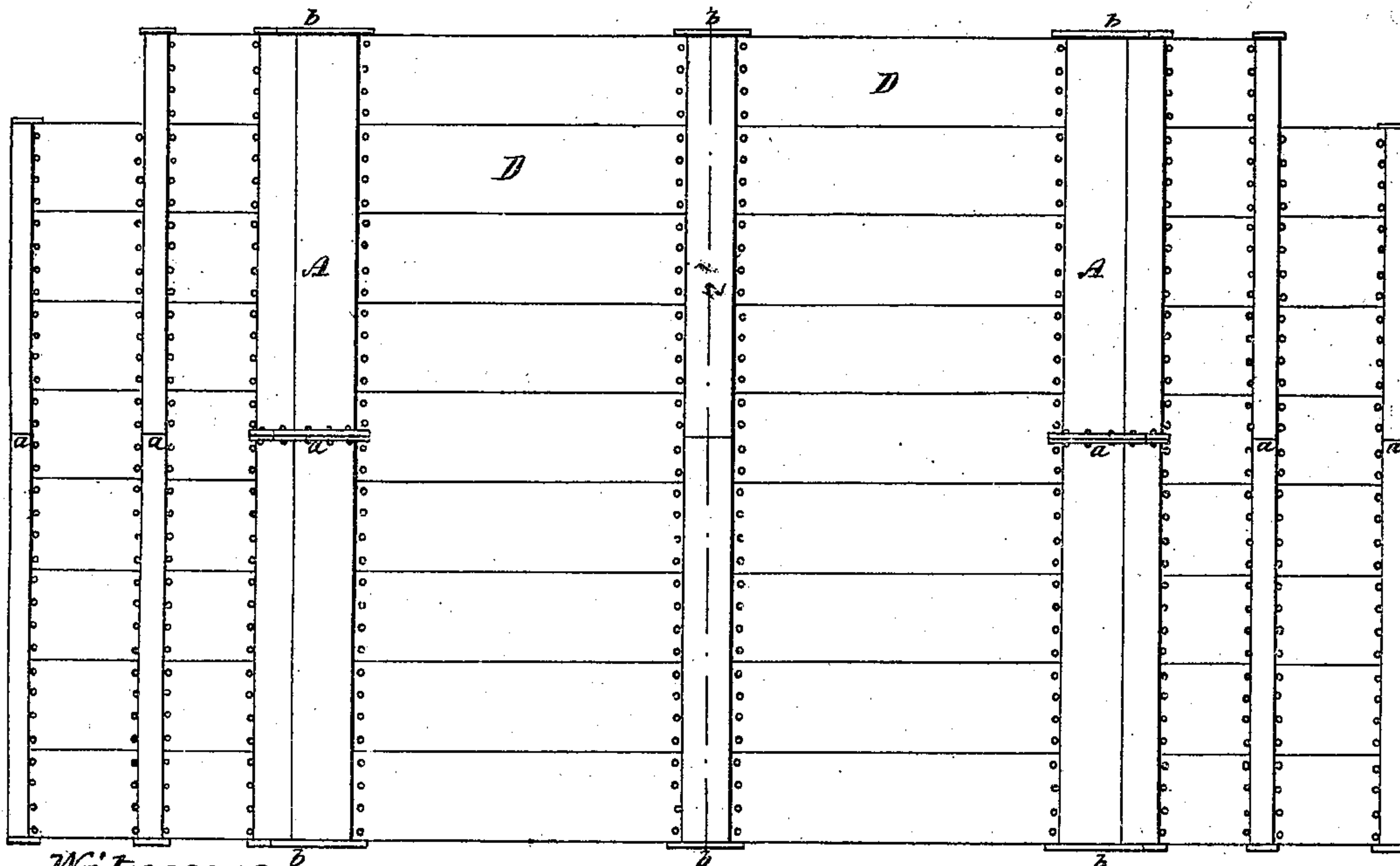


Fig. 2.



Witnesses.  
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Letters Patent No. 99,989, dated February 15, 1870.

## IMPROVEMENT IN METALLIC ABUTMENTS FOR BRIDGES.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern :

Be it known that I, ALPHEUS WHEELLOCK, of Fort Wayne, in the county of Allen, and State of Indiana, have invented a new and useful Improvement in Metallic Abutments for Bridges; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the accompanying drawings making a part of this specification, in which—

Figure 1 represents a plan view.

Figure 2 represents a front elevation.

This invention relates to a metallic abutment for bridges, constructed in a novel and improved manner, as will hereinafter more fully appear.

In the drawings—

A A represent upright metallic columns, cast of solid metal, in the form seen in fig. 1, and secured together in sections of a suitable length, as seen at *a*, by means of flanges and bolts. The outer sides of the columns stand in the same vertical planes with the adjacent sides of the abutment.

The tops and bottoms of the columns are provided with suitable flanges, *b b'*, for the purpose of forming a suitable bed for the reception of the bridge, and a suitable base upon which the abutment may rest.

B represents another column, which is connected in the form seen in fig. 1, and is placed equidistant between the columns A A.

O O O O represent other columns, which are placed as seen in the drawings, and are provided with flanges *c*.

D D represent metallic plates, which are constructed oblong in form, and are each provided with two ribs, *d*, which extend nearly the entire length of the plates. These ribs are for the purpose of giving strength and solidity to the plates. Said plates are to be cast about one inch in thickness generally.

E represents a brace, which connects the inner corners of the abutment.

F is a brace, which connects the intermediate set of side columns O O, for the same purpose.

G G represent braces, which extend from the inner corners of the abutment to the column marked B, where they are secured, as seen in fig. 1. These rods or braces are all provided with swivels, for the purpose of tightening them.

H H represent other braces, which connect the centers of the plates D, for the purpose of supporting them against outward pressure.

The plates D are rabbeted, so that the lower edge of one may shut over the upper edge of the next one below it, and thus break joints and prevent cracks or openings in the wall. These plates are securely fastened to the columns, the braces are securely tightened, and then the cavity formed by the outer case is tamped full of earth, the abutment having first been firmly secured in the desired position. A complete, strong, light, and durable metallic abutment is thus produced, which may be constructed at any point where stone or other material can be used. The columns A A are to be filled with concrete, which is to be extended above their tops, and thus form a resting place for the chords of the bridge.

Having thus described my invention,

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

The construction herein described, consisting of the hollow corner columns A, to be filled with cement, the side column C, braces E G, and ribbed plates D, all forming a hollow abutment, which may be filled with suitable material, as and for the object specified.

ALPHEUS WHEELLOCK.

Witnesses:

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