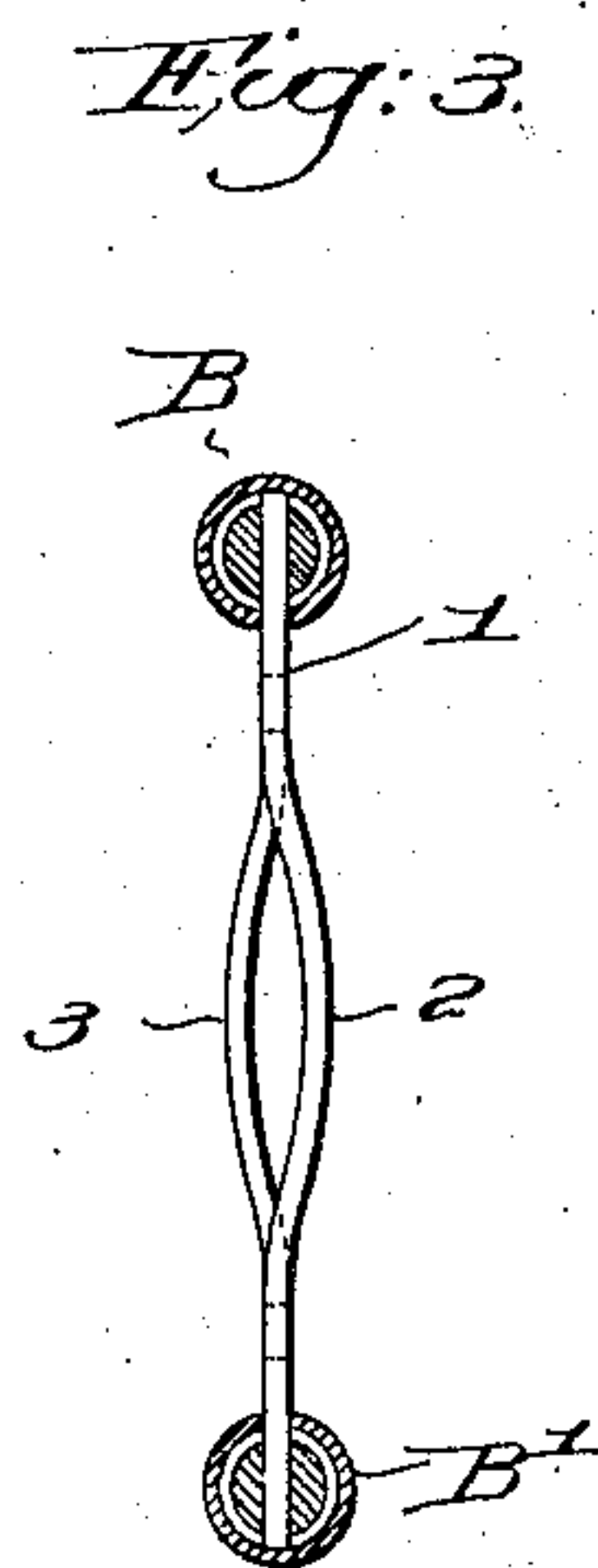
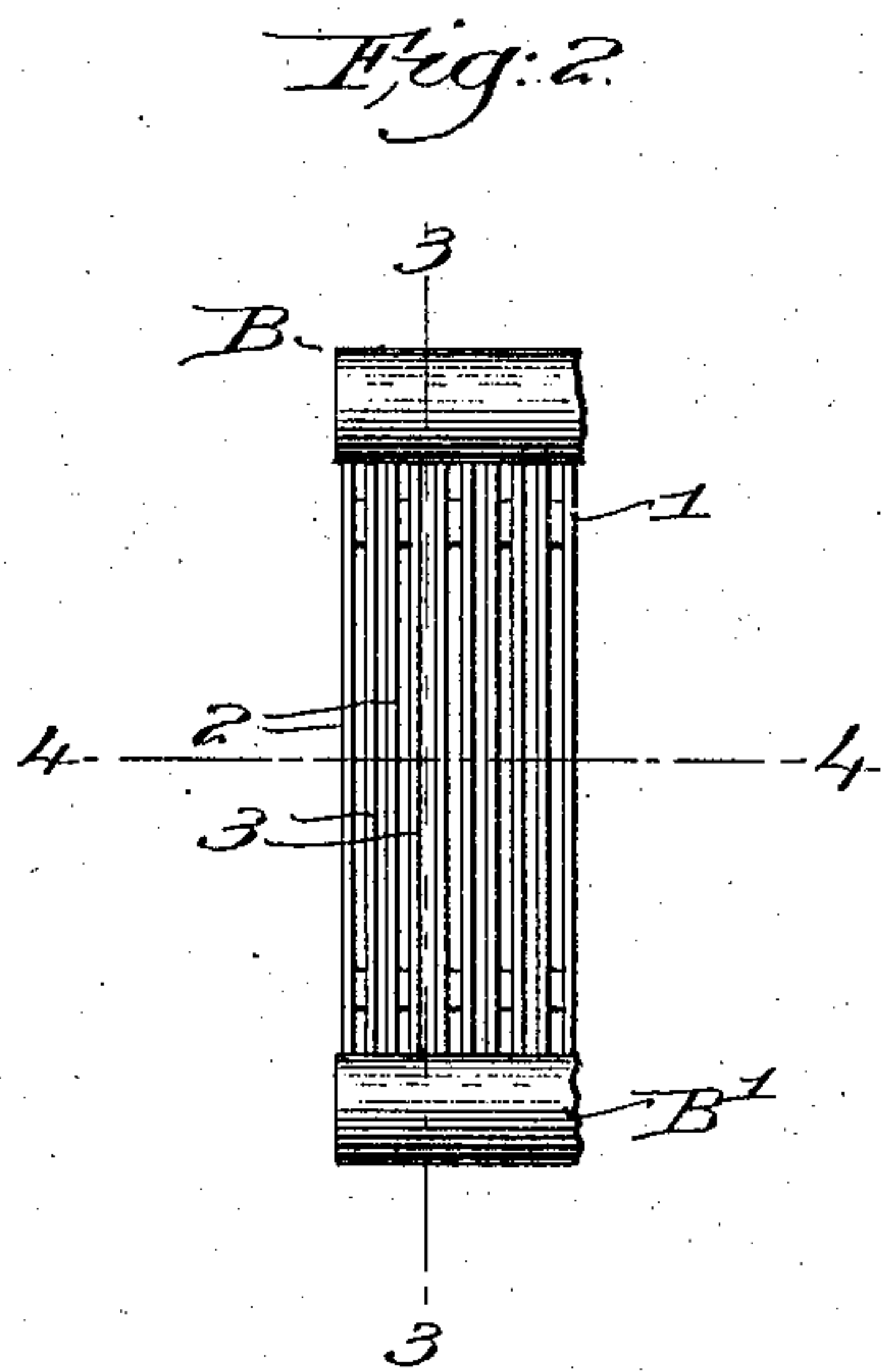
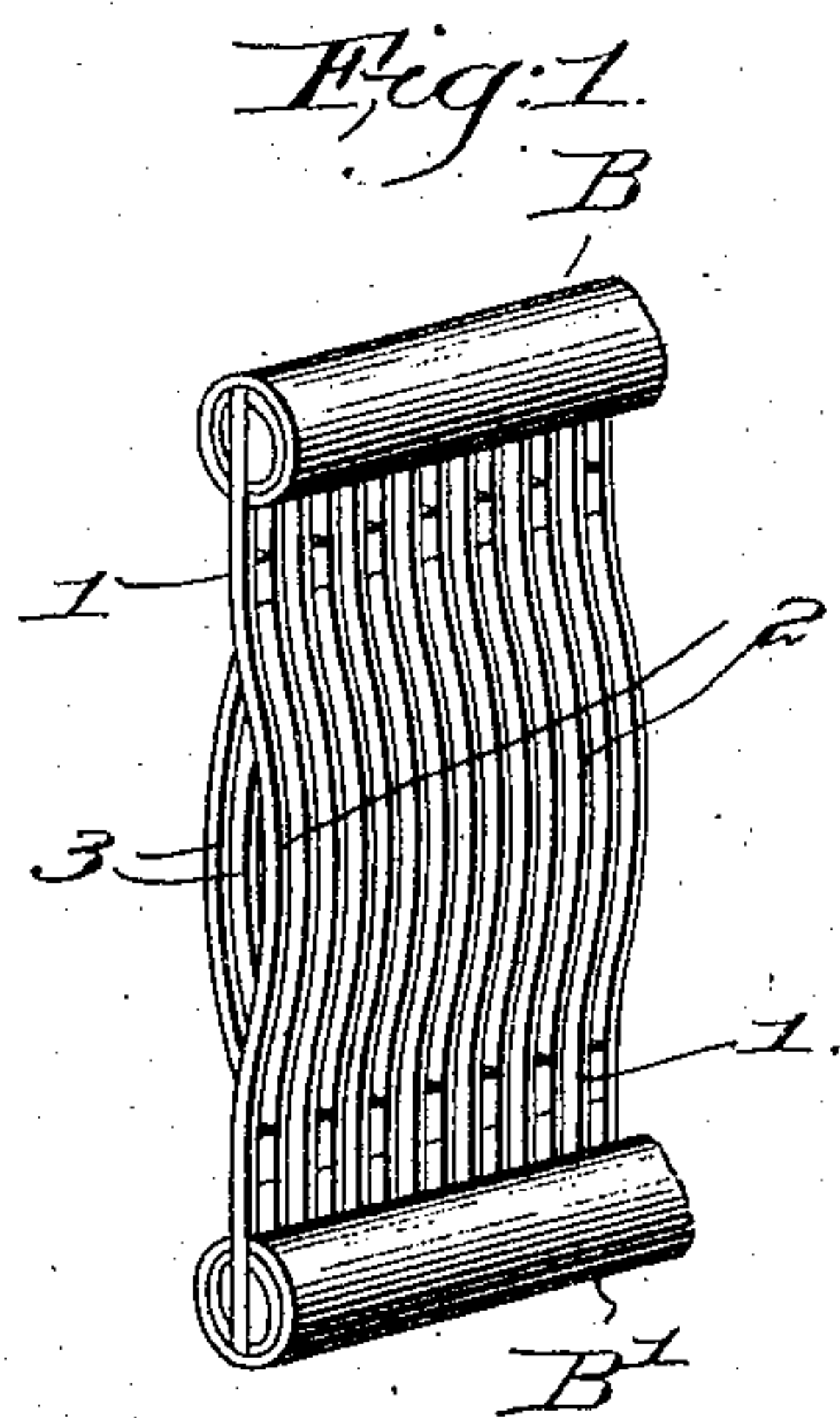


No. 790,077.

PATENTED MAY 16, 1905.

A. E. RHOADES.
WARPER COMB FOR COARSE YARNS.
APPLICATION FILED MAR. 6, 1905.



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Inwitness:
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attys.

UNITED STATES PATENT OFFICE.

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WARPER-COMB FOR COARSE YARNS.

SPECIFICATION forming part of Letters Patent No. 790,077, dated May 16, 1905.

Application filed March 6, 1905. Serial No. 248,417.

To all whom it may concern:

Be it known that I, ALONZO E. RHOADES, a citizen of the United States, and a resident of Hopedale, county of Worcester, State of Massachusetts, have invented an Improvement in Warper-Combs for Coarse Yarns, of which the following description, in connection with the accompanying drawings, is a specification, like characters on the drawings representing like parts.

This invention has for its object the production of a novel comb for warpers, slashers, and similar apparatus, particularly adapted for use with large or coarse yarns, whereby a clearer and wider passage for the yarn is provided between the dents or guides of the comb without increasing the length thereof.

The novel features of my invention will be fully described in the subjoined specification, and particularly pointed out in the following claims.

Figure 1 is a perspective detail of a sufficient portion of a warper-comb to be understood with one form of my invention embodied therein. Fig. 2 is a front elevation thereof. Fig. 3 is a transverse section of the comb on the line 3 3, Fig. 2; and Fig. 4 is a transverse section on the line 4 4, Fig. 2, looking down.

I have shown herein the opposite ends of the dents or guides as mounted in holding-bars B B' of any suitable construction and forming no part *per se* of my present invention, the dents being made of thin flat metallic strips 1, set in the holders with their flat faces parallel. As best shown in Figs. 1 and 3, the dents are straight at their end portions, and their central portions are curved outward or longitudinally convexed, such portions of adjacent dents being oppositely turned—that is, one set or series of dents have their curved portions 2 turned to the right, Fig. 3, and the other and alternating series have their curved portions 3 turned to the left. By this arrangement the yarn space or passage be-

tween the adjacent dents of either series at the curved portions thereof will be greatly increased in width, affording a much easier passage for coarse yarns, while not increasing the length of the comb as a whole or the distance between the ends of the dents. The warp-yarns can also be much more readily drawn in with the construction herein shown than in combs where the dents are closer together at the portions through which the yarns pass.

My invention is not restricted to the precise construction herein shown nor to any particular form of holding means for the dents.

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

1. In a warper-comb, a series of dents or guides outwardly curved between their ends, the curved portions of adjacent dents being oppositely turned.

2. In a warper-comb, a series of dents curved outward at their central portions, the curved portions of adjacent dents being oppositely turned.

3. In a warper-comb, a series of thin, flat dents arranged in parallelism and outwardly curved at their central portions, the said portions of adjacent dents being oppositely turned.

4. In a warper-comb, two series of thin, flat dents arranged in alternation and with their flat faces parallel, one series of dents being longitudinally convexed and the alternating series similarly curved in the opposite direction.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

ALONZO E. RHOADES.

Witnesses:

GEORGE OTIS DRAPER,
ERNEST W. WOOD.