

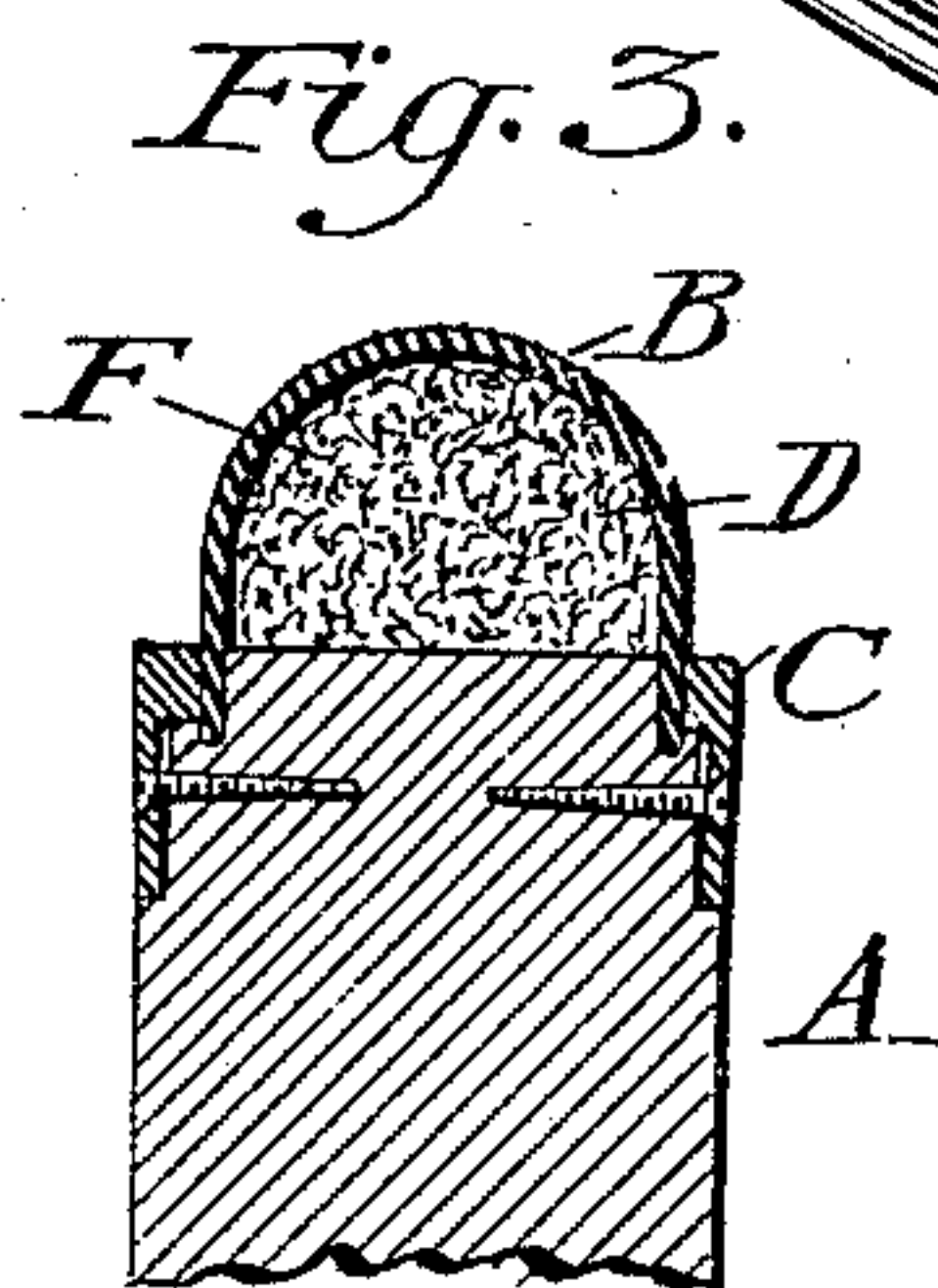
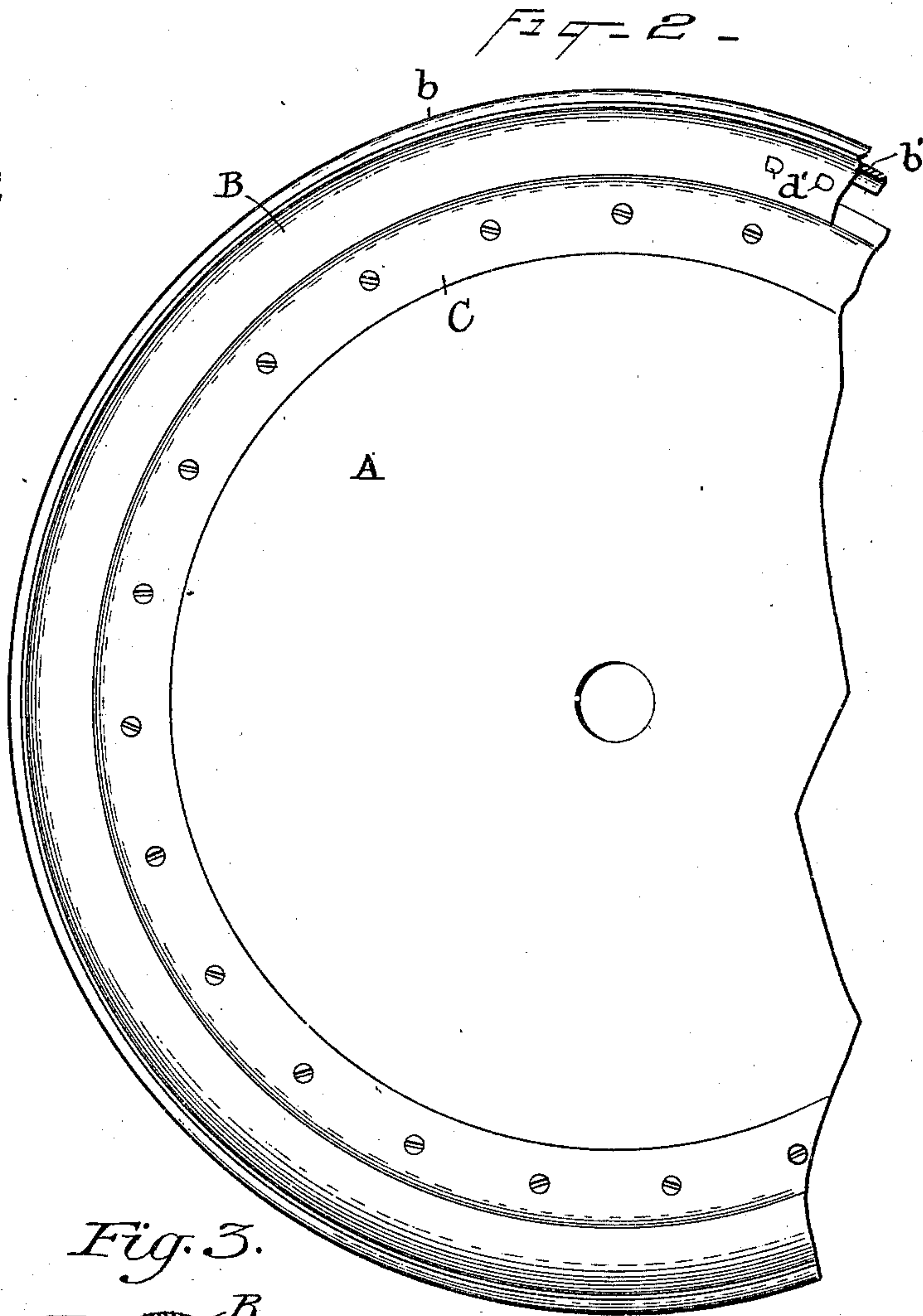
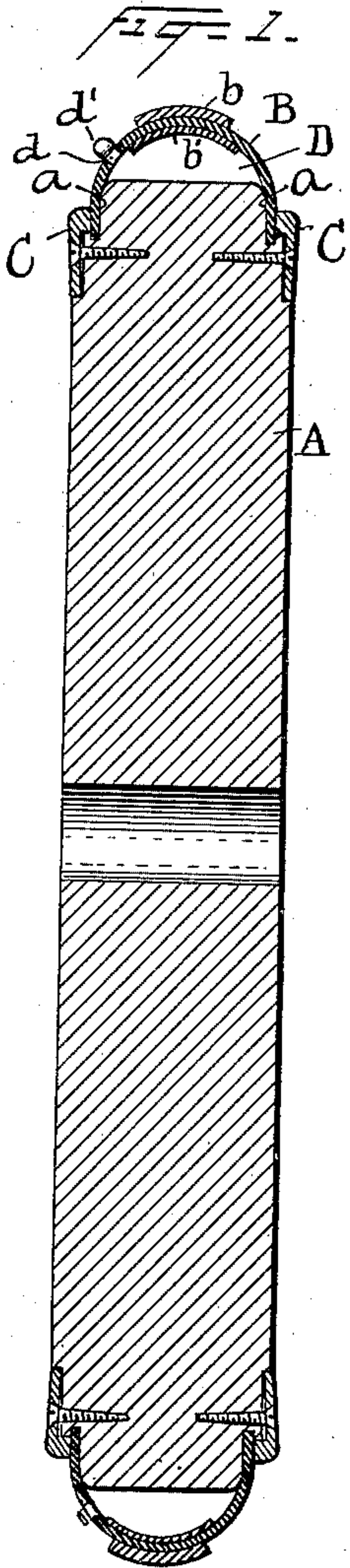
No. 663,839.

Patented Dec. 11, 1900.

E. D. WOODS.
POLISHING WHEEL.

(Application filed Apr. 4, 1898.)

(No Model.)



WITNESSES:

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UNITED STATES PATENT OFFICE.

EDWARD D. WOODS, OF GRANVILLE, NEW YORK, ASSIGNOR TO THE WOODS SPECIALTY COMPANY, OF NEW YORK.

POLISHING-WHEEL.

SPECIFICATION forming part of Letters Patent No. 663,839, dated December 11, 1900.

Application filed April 4, 1898. Serial No. 676,330. (No model.)

To all whom it may concern:

Be it known that I, EDWARD D. WOODS, a citizen of the United States, and a resident of Granville, in the county of Washington, State of New York, have invented a certain new and useful Improvement in Polishing-Wheels, of which the following is a specification.

My invention relates to polishing-wheels for polishing knives or other cutlery or similar metallic substances in which a belt of leather is employed as the polishing agent. Its objects are to provide a cushion-tire upon a rotary wheel adapted to act as a polishing agent or as a support for the polishing agent, to securely fasten the cushion-tire to the wheel, and to provide means for preventing the tire from collapsing laterally.

It consists of the devices herein shown and described, and pointed out in the claims at the end of this specification.

I have shown the preferred form of my improved apparatus in the drawings accompanying this specification, in which drawings similar reference characters in the different figures refer to corresponding parts.

Figure 1 is a transverse vertical section through the center of a wheel containing my improved device. Fig. 2 is a side view of the wheel, and Fig. 3 is a vertical transverse section through the outer part of a modified form of my improved wheel.

Referring to the form shown in the drawings, A is a hub and web of a rotary wheel. This wheel has at its periphery vertical sides *a*.

B is a belt, preferably of leather, the edges of which are turned down over the vertical sides *a* of the wheel, so as to form an arch, within which is the air-space D. The edges of the belt B can be secured to the wheel A in any suitable manner. As shown in the drawings, they are secured by means of clamps C, fastened to the wheel by screws and pressing the edges of the belt B against the vertical sides *a*. Preferably small grooves are left in the wheel, into which the ends of the edges of belt B project, as shown in Figs. 1 and 3.

If desired, means for inflating the air-space D may be used of any suitable character. In the drawings I show openings *d*, provided

with flaps *d'*, between the air-chamber D and the atmosphere. The more rapid the rotation of the wheel the greater will be the amount of air that will pass into the space D and the more rigid will the polished surface become. By varying the rapidity of the rotation of the wheel the degree of rigidity of the leather belt may be regulated. One or more openings may be employed, as desired. The flaps *d'* should, of course, point in the direction of the rotation of the wheel.

The belt B may itself be used as the polishing means, emery, glue, or other suitable substance being placed upon it for polishing purposes, or an additional leather belt *b* may be cemented upon it, as shown in Fig. 1. I also preferably employ a reinforce *b'* on the inner side of belt B.

In Fig. 3 the space D is filled with sponge rubber or other suitable cushioning material.

My improved polishing-surface retains the glue and emery for a long time, is durable, and gives a fine polishing-surface. The polishing-belt, moreover, is securely held to the wheel, and by means of the vertical sides *a*, which project upward a considerable distance near to the apex of the arch of the belt, the stiffness of the leather belt *b* itself, and the arched formation of the belt, the polishing cushion-tire cannot collapse laterally—a most serious objection when used in polishing cutlery.

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

1. In a polishing-machine the combination of a rotary wheel having vertical sides near its periphery and a cushion-tire composed of a belt of suitable material having both of its edges turned down over the vertical sides of the wheel a considerable distance and secured to the wheel to form an arch, a reinforce upon the inner side of the tire, whereby the walls of the tire or arch will be prevented from collapsing laterally when the wheel is rapidly rotated, and a leather belt cemented or otherwise secured along the arch substantially as set forth.

2. In a polishing-machine the combination of a rotary wheel having vertical sides near its periphery and a cushion-tire composed of

a leather belt having both of its edges turned
down over the vertical sides of the wheel, so
as to form an arch, clamping devices for se-
curing the edges of the belt to the wheel, an
5 opening through the belt provided with a flap
whereby the walls of the tire or arch will be
prevented from collapsing laterally when the
wheel is rapidly rotated and whereby the
polishing-surface will vary in rigidity with

the varying speed of the rotation of the wheel, to
substantially as set forth.

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

EDWARD D. WOODS.

Witnesses:

H. T. SEYMOUR,
C. B. PATTERSON.