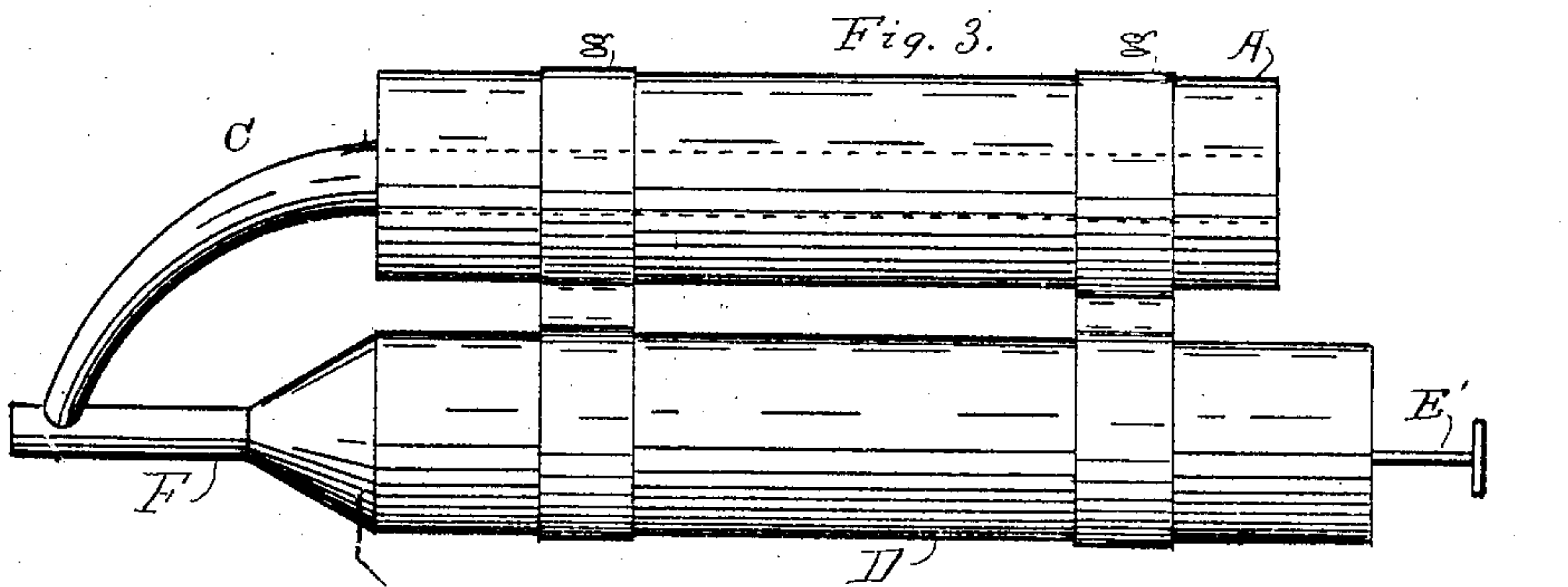
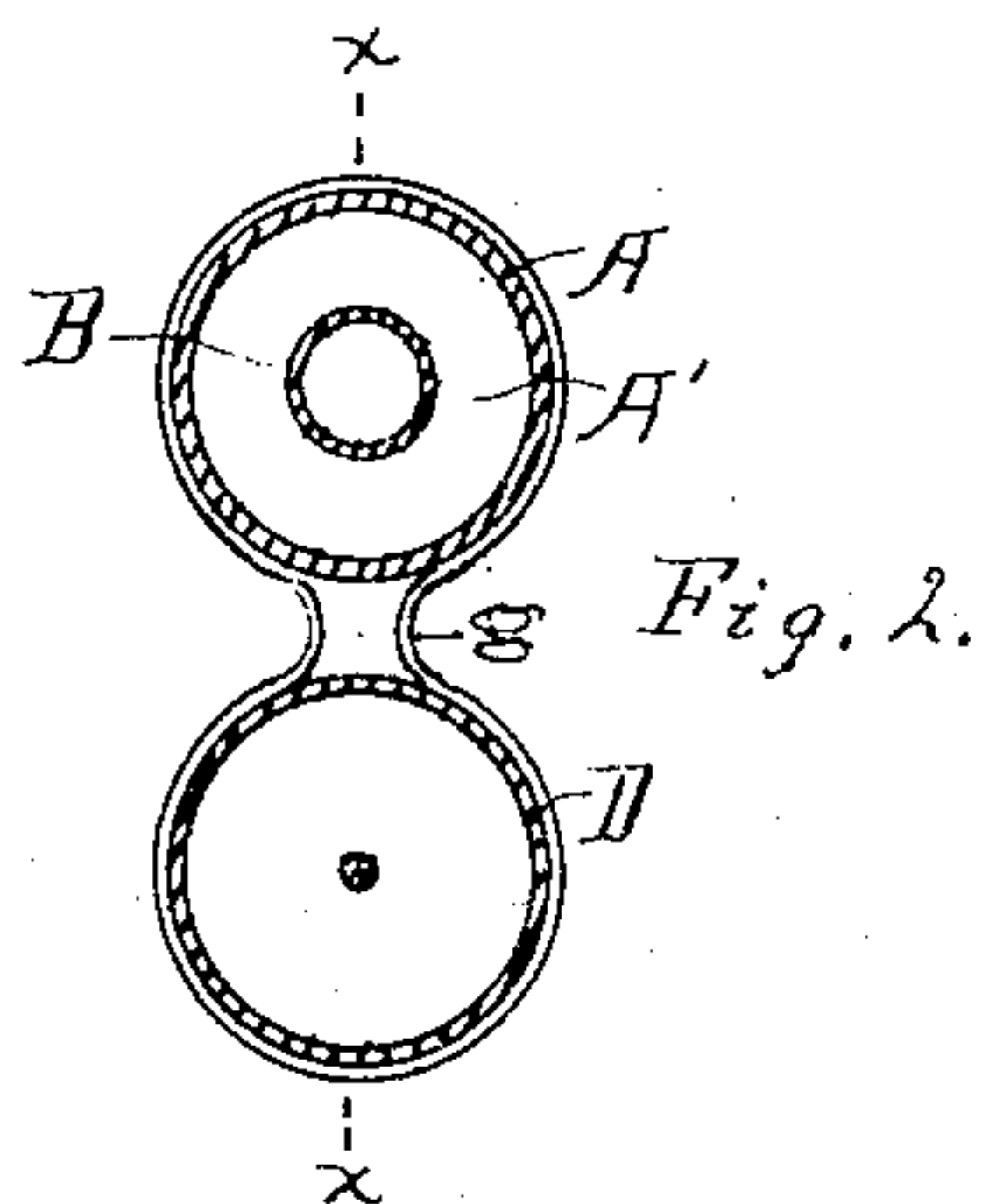
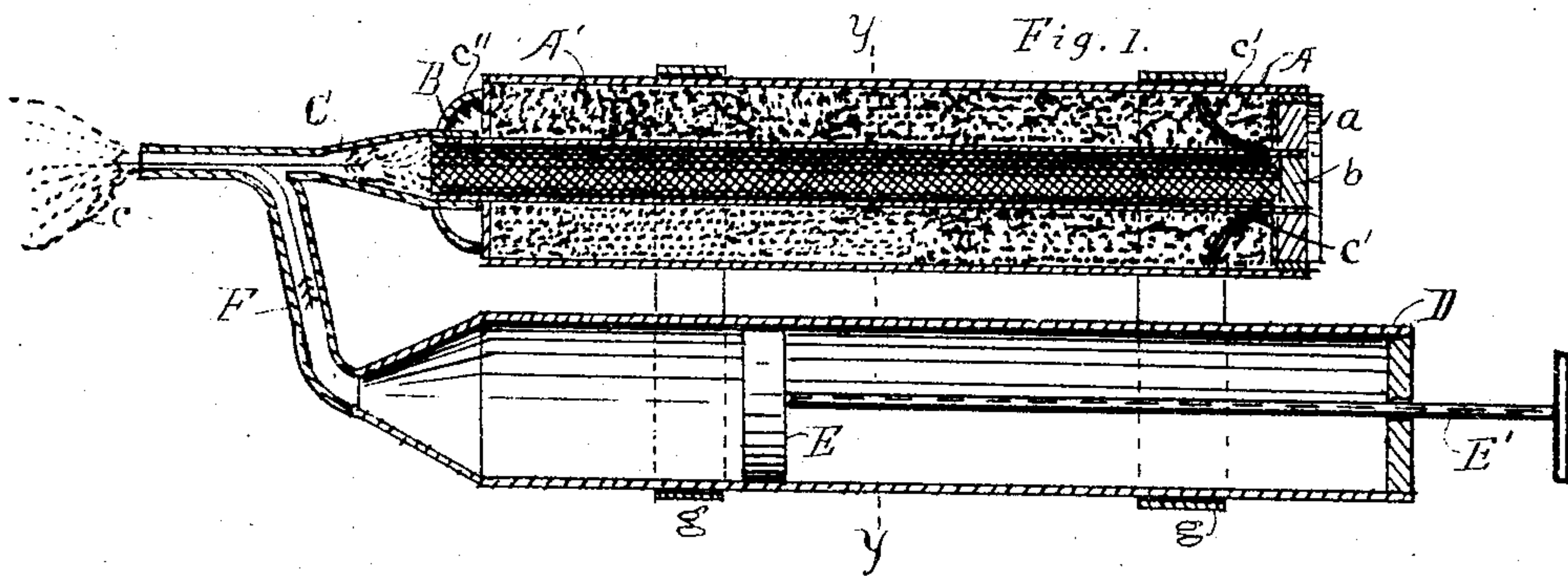


No. 779,923.

PATENTED JAN. 10, 1905.

H. M. GILLETT.
FIRE EXTINGUISHER.
APPLICATION FILED DEC. 23, 1903.



Inventor

Witnesses

A. Alger
C. V. Bailey

By

Henry M. Gillett

Charles J. Bailey
Attorney.

UNITED STATES PATENT OFFICE.

HENRY M. GILLETT, OF GRAND RAPIDS, MICHIGAN.

FIRE-EXTINGUISHER.

SPECIFICATION forming part of Letters Patent No. 779,923, dated January 10, 1905.

Application filed December 23, 1903. Serial No. 186,386.

To all whom it may concern:

Be it known that I, HENRY M. GILLETT, a citizen of the United States, residing at Grand Rapids, in the county of Kent and State of Michigan, have invented certain new and useful Improvements in Fire-Extinguishers, of which the following is a specification.

My invention relates to improvements in appliances for spraying powder; and its object is to successfully throw a fine powerful spray of dry or powdered fire-extinguisher upon fires. I attain this object by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a longitudinal section of my appliance on the line $x x$ of Fig. 2, showing the air-pipe curved to allow a direct flow of the powder from the receptacle. Fig. 2 is a cross-section of the same on the line $y y$ of Fig. 1; and Fig. 3 is a side elevation of the same, showing the air-pipe in direct line with the air-chamber and the pipe from the powder-receptacle curved to meet it.

Similar letters refer to similar parts throughout the several views.

A represents the cylinder, into which the powder is placed, and to insure a free outflow of powder I place a fine screen B, which, with the cylinder A, forms a chamber A' for the storage of the powder, so that the outflow of air through the tubes F and C will form a vacuum that will draw the powder through the screen B and force it out of the tube C, as indicated by the spray c in Fig. 1. The back end of the cylinder A has a removable stopper a , and the same end of the screen B has a like stopper b , and the screen may be readily removed and replaced, if desired.

The device for producing a strong current of air for forming the vacuum in the screen B consists of a cylinder D, having a close-fitting plunger E, which is operated by the stem E' by hand to force air through the tube F, as indicated by the arrow in Fig. 1, into the tube C, where a direct current of air is formed, as indicated by the arrow, in the tube C, forming the vacuum in the screen, as hereinbefore stated. In Fig. 1 I have represented the chamber A' as filled with powder, while in Fig. 2 I have shown it empty. It will be

readily seen that the action of the air forced from the air-cylinder through the pipe F will have practically the same effect in forming the necessary vacuum in the screen B and drawing the powder into this vacuum and forcing it out of the discharge-pipe, no matter which form is used—that is, the direct flow of the powder, as in Fig. 1, or the direct flow of air, as in Fig. 2—though I think I rather prefer the former.

The cylinders A and B are bound together by the bands g in such a manner that they may be readily taken apart; but the means for so binding them together are so numerous and so obvious that I do not deem it necessary to go into a detailed description, especially as this does not enter vitally into the elements of my invention.

The necessity for drawing the powder out by vacuum arises from the fact that if air were forced through the screen it would simply pack the powder solidly in the chamber A' and prevent the action desired, while with a vacuum formed in the screen B by forcing air into and out of the pipes F and C without passing through the screen will, on the contrary, loosen up the powder and draw it through the screen and force it out freely in the form of a spray c , as shown.

In Fig. 1, $c' c'$ represent springs attached to the screen B for the purpose of holding it centrally in the cylinder A when the cork or stopper a is removed for filling the cylinder with powder or for other purpose. c'' represents an elastic cap that I place over the tube C to form an air-tight joint with the end of the cylinder A to avert the danger of air being drawn in and around the joint between the end of the cylinder A and of the screen B.

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

1. In a fire-extinguisher, an outer cylinder, an inner perforated cylindrical screen, forming a chamber between the cylinder and the screen for the reception of powder, and a flue for the passage of powder from the chamber and an air-cylinder attached parallel with the outer cylinder, and pipes connecting this cylinder with the perforated cylinder to force

air out and form a vacuum in the perforated cylinder, for drawing the powder through, substantially as and for the purpose set forth.

2. In a dry-powder fire-extinguisher, a cylindrical receptacle, a cylindrical screen centrally located therein, adjusting-springs on said screen, an outflow-pipe leading from said screen, an air-pump attached to said cylinder and connected to exhaust in connection

with the outflow-pipe, substantially as and for the purpose set forth.

Signed at Grand Rapids, Michigan, December, 1903.

HENRY M. GILLET.

In presence of—

ITHIEL J. CILLEY,
HEINO KONING.