

B. SMITH.

Making Windows Weather-Proof.

No. 137,572.

Patented April 8, 1873.

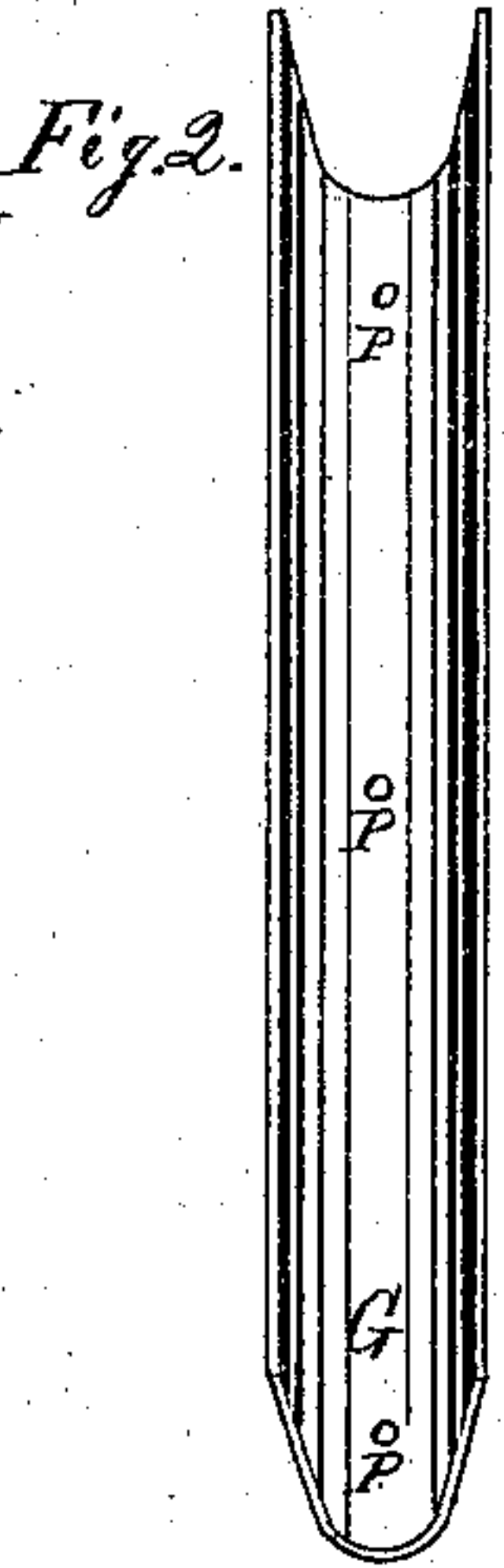
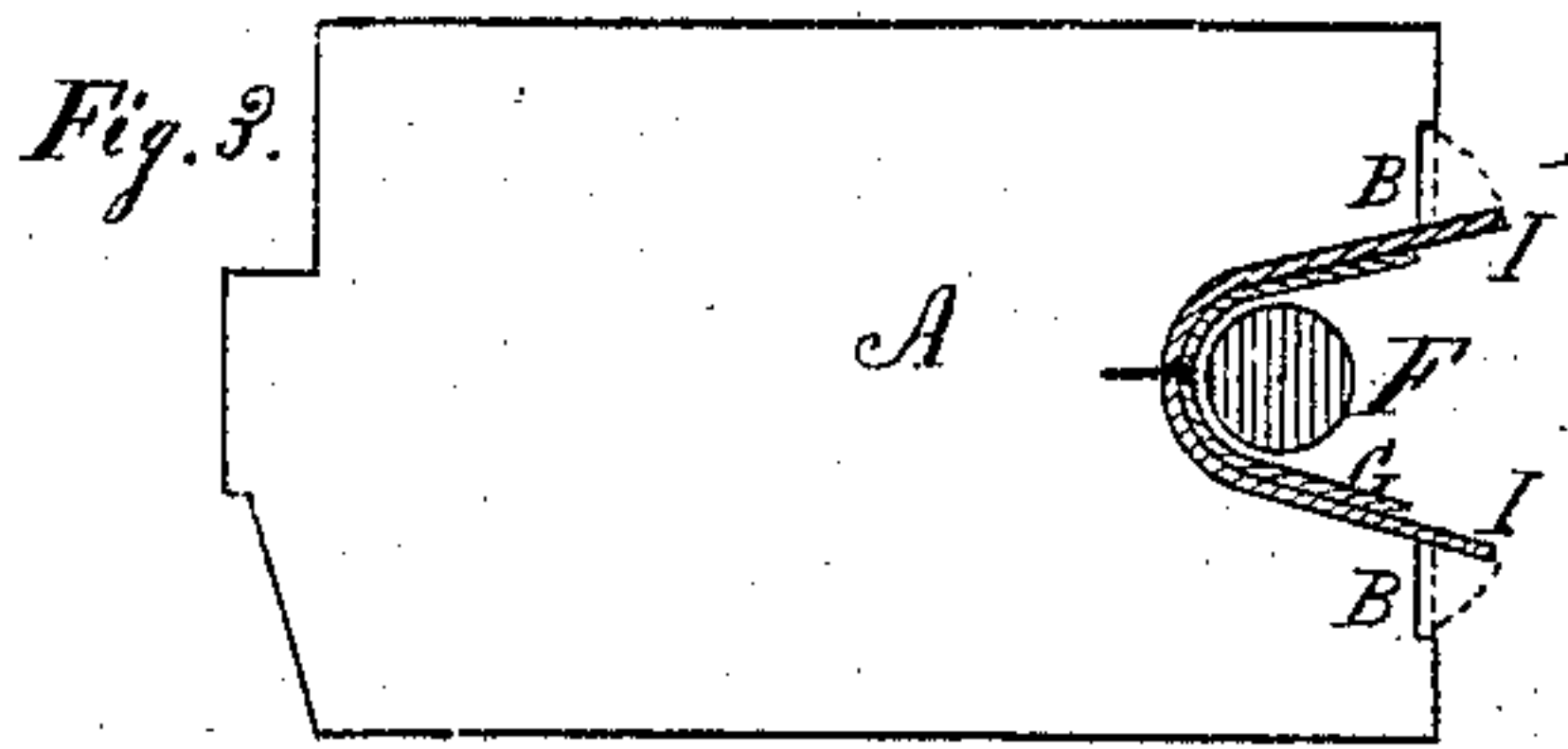


Fig. 1.

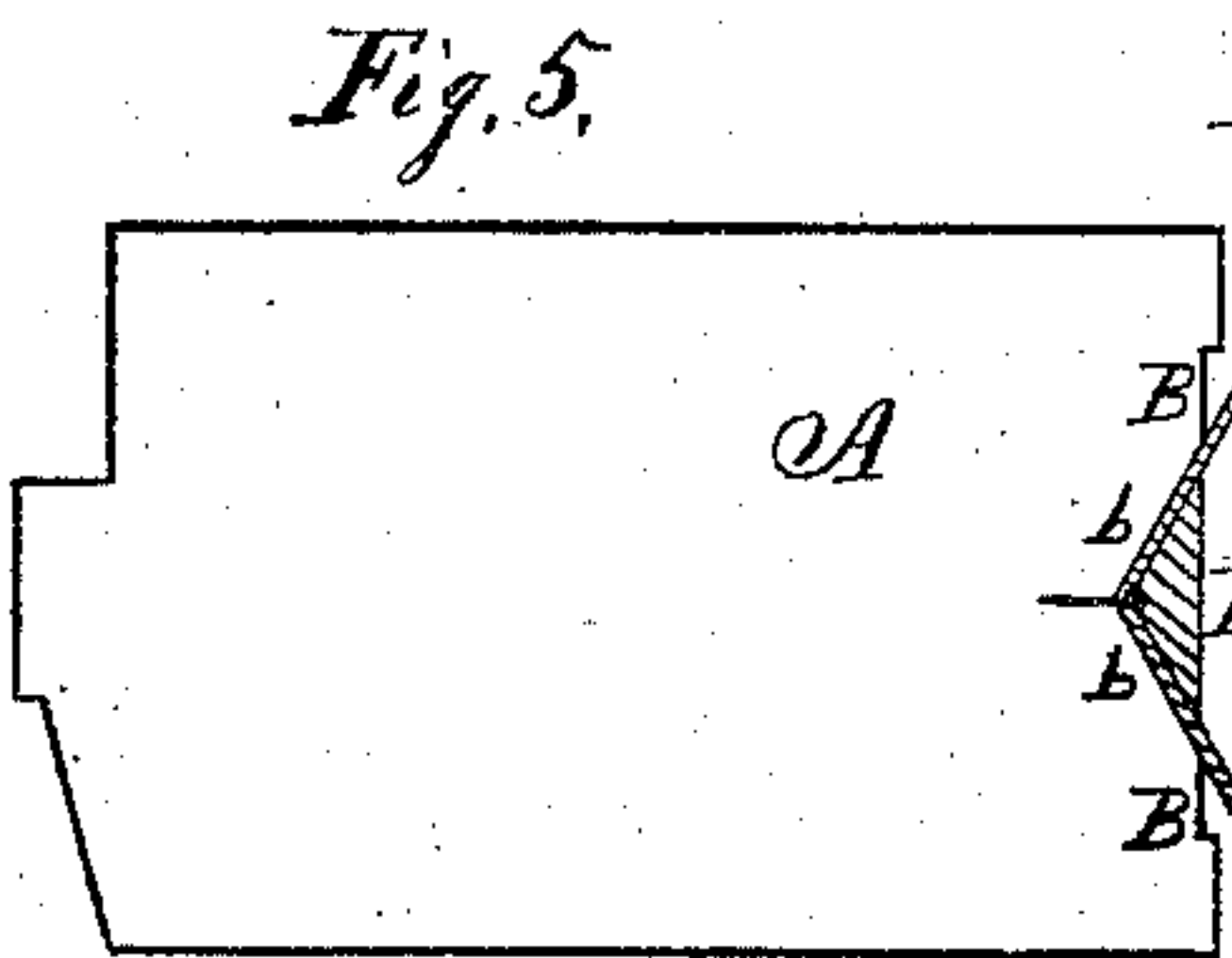
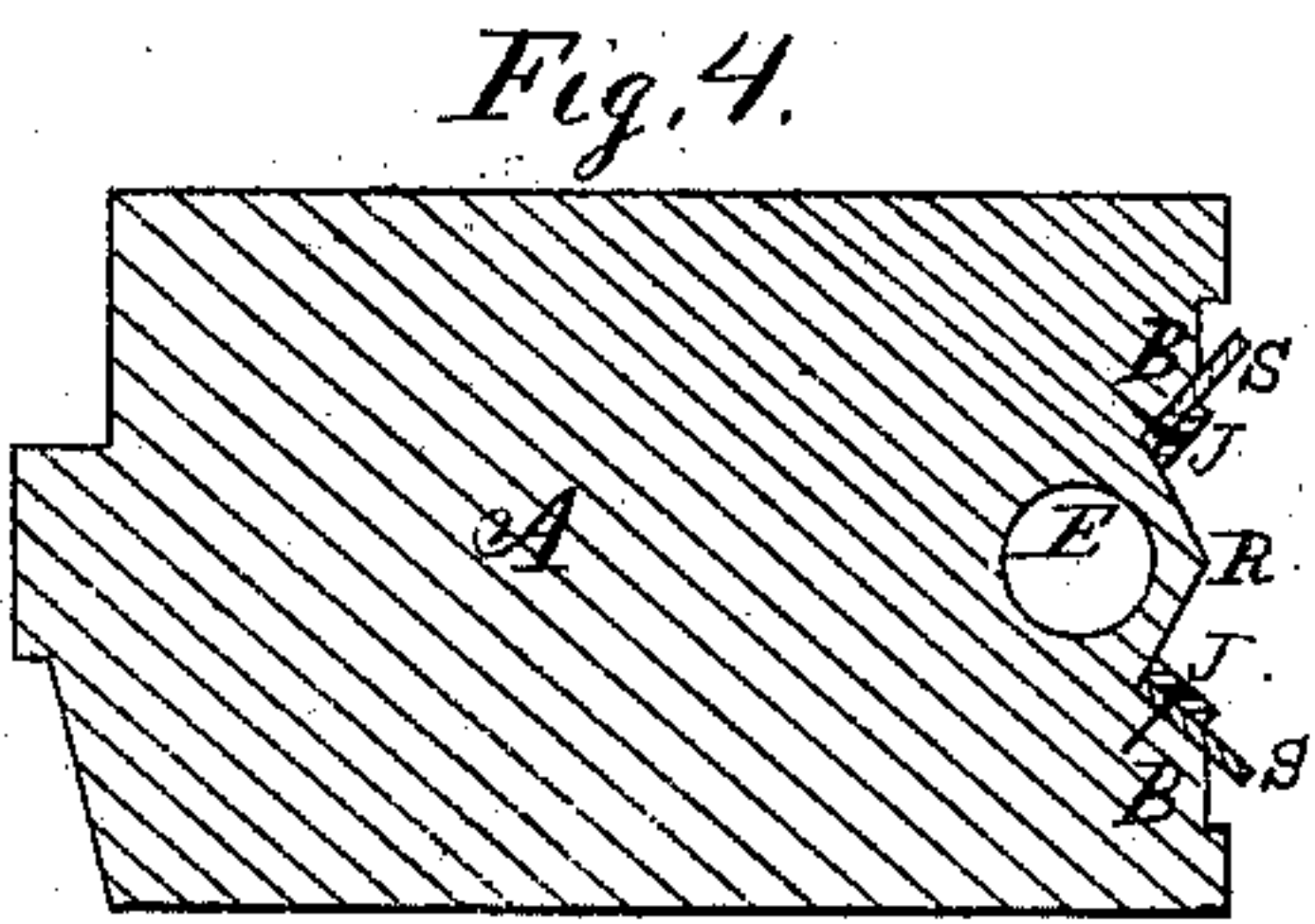
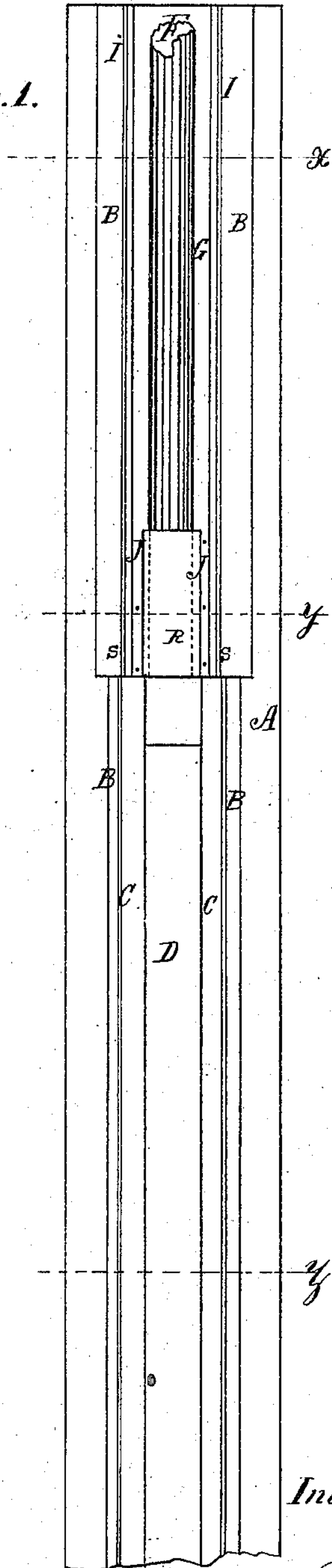


Fig. 6.



Witnesses,

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UNITED STATES PATENT OFFICE.

BENJAMIN SMITH, OF CHICAGO, ILLINOIS.

IMPROVEMENT IN MAKING WINDOWS WEATHER-PROOF.

Specification forming part of Letters Patent No. **137,572**, dated April 8, 1873; application filed October 21, 1872.

To all whom it may concern:

Be it known that I, BENJAMIN SMITH, of Chicago, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Water-Proofs for Windows and Doors, of which the following is a specification:

The present invention relates to securing the joints of windows and doors by the use of elastic substance; and its nature consists in grooving the edges of the sashes or doors, and arranging the rubber strips therein so as to form dead-air chambers between the edges of the rubber, and so that the rubber can be as well used where the sashes or doors come closely to the jamb-casing as when run a greater distance from the jambs; and it further consists in the novel construction and arrangement of a curved sheet-metal plate for holding the rubber to those parts of the sashes in which the cords for balancing them are countersunk, whereby the entire length of a sash may be rendered water-proof.

In the drawing, Figure 1 is an elevation of the edge of a sash provided with my improved water-proof device; Fig. 2, a view of the plate which holds the rubber under the sash-cord; Fig. 3, a section of Fig. 1 on line *x*; Fig. 4, a section on line *y*; Fig. 5, a section on line *z*. Fig. 6 is a view of the strip which holds the rubber in the sash-stile.

To prepare a stile to receive the rubber, I form a V-shaped groove in its edges, as shown at *b b*, Fig. 5, and then form rabbets B at the margins of the groove. The rubber, of the proper width and thickness, is then put in the V-shaped groove *b b* and held in place by means of a strip, D, fastened to the stile A by nails or screws. The ends C C bear against the window-jamb, and consequently form between them a dead-air chamber, and the stile is so arranged by means of the rabbets B that the ends C of the rubber may be pressed back to come even with its edge, thereby allowing rubber to be used where the sash fills the window-frame. Were it not for this arrangement a water-proof could not be used on sash fitting

a frame tightly unless the sash be planed off; and to enable the ends C to always turn to the rabbets B the V-shaped form of rubber and strips is required. This arrangement is such that a sash can be run as well when it fits tightly in places in the frame as though no rubber were used, except what little extra friction there may be. The sash will not wedge fast by means of the rubber, but the latter will readily conform to any inequality in the jamb-casing. To hold the rubber I I to that part of the sash adjacent to the sash-cord, the cord-groove is enlarged so that the rubber and a plate, G, will pass under the cord F, after which the plate G is fastened by nails or screws put through holes P, Fig. 2. In sash run by weights and cords there is on each edge a part, R, of solid wood necessary to hold the end of the cord, which passes through a hole E, Fig. 4. If it be desired to provide a water-proof for this part of the sash the edges of the lower end of rubber I may be elongated so as to meet the rubber C, and to hold said elongated pieces in place the plate G can be elongated at its lower ends, as shown at Figs. 1 and 4, and fastened over the rubber so as to hold it in place.

By this means sash hung by cords can be made water-tight in a frame by rubber fastened to its edges. Thus the appearance of rubber on the outside of sash is avoided, while at the same time the sash can be readily removed from the frame and replaced.

Having thus described my invention, what I claim as new is—

1. The stile A, provided with the V-shaped groove *b b* and rabbets B B, in combination with the V-shaped rubber C C and strip D, as set forth.

2. The curved plate G and rubber I I passing under the cord F, and elongated at J S, to meet the rubber C, as and for the purpose specified.

BENJAMIN SMITH.

Witnesses:

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