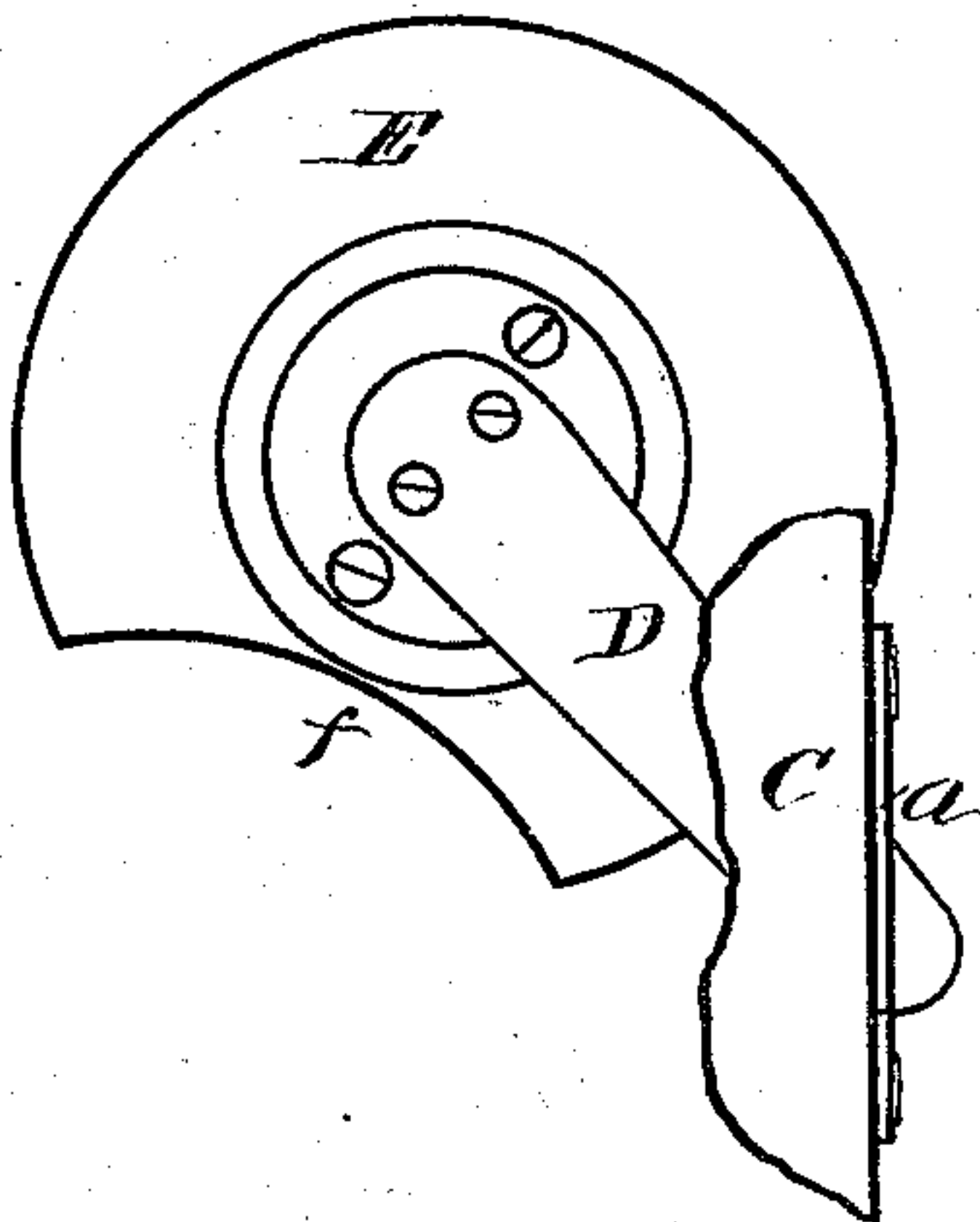
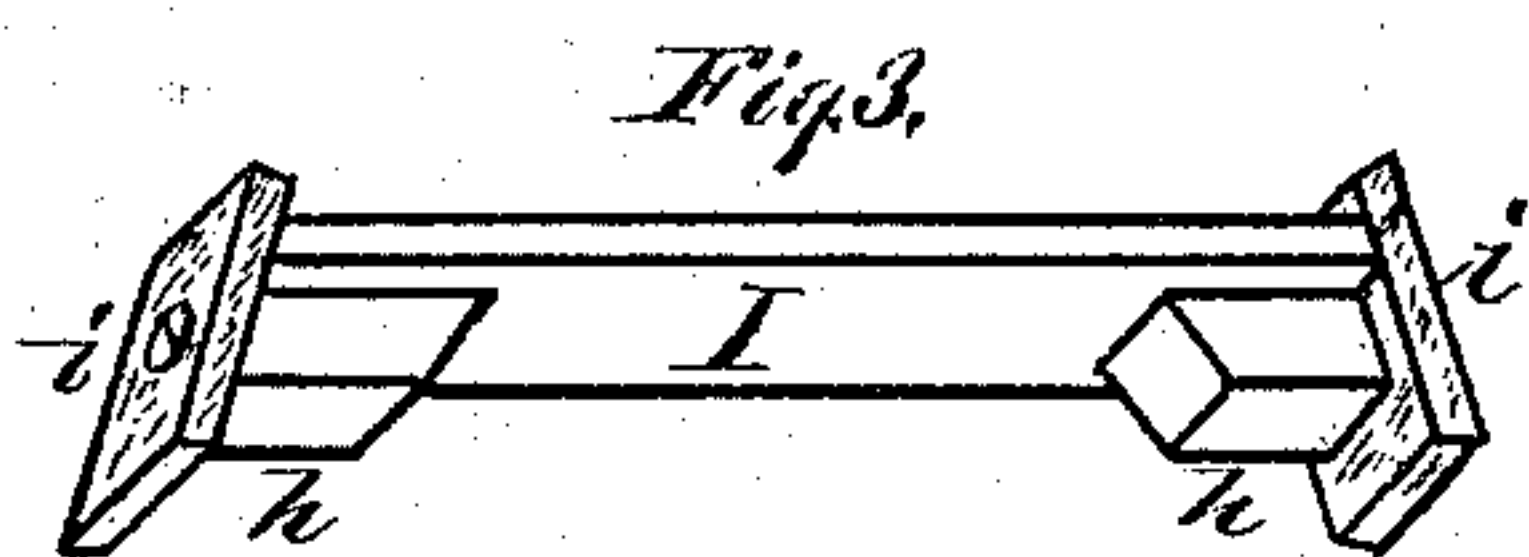
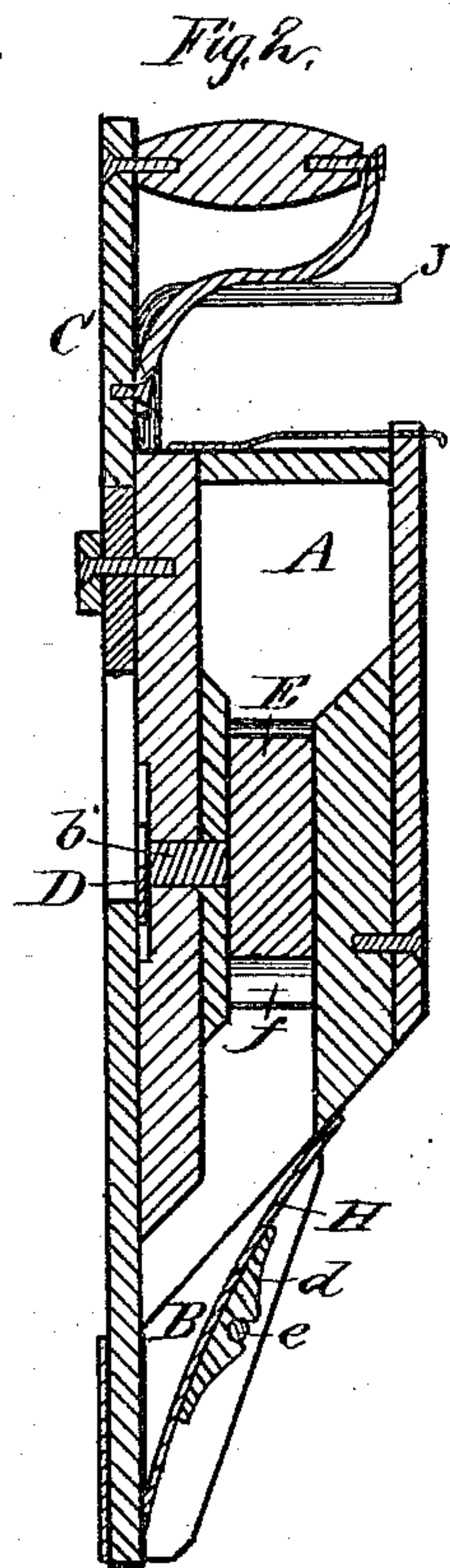
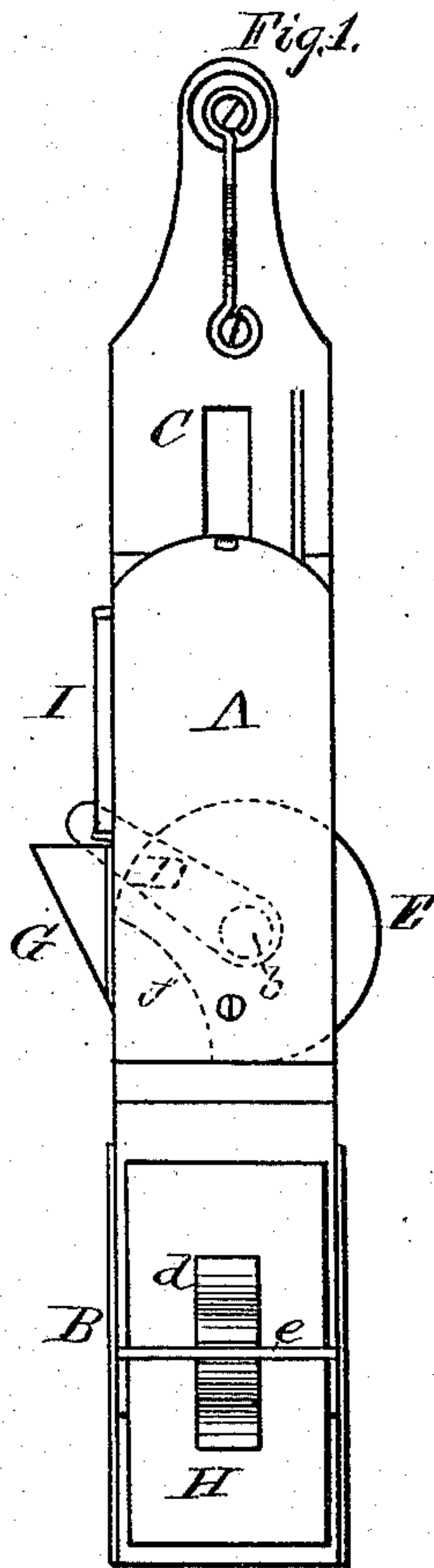


F. VAN DOREN.  
Corn-Planter.

No. 162,779.

Patented May 4, 1875.



Witnesses;

Jas. F. Duhamel,  
Thomas. Byrne.

Inventor;

F. Van Doren.  
Per  
H. A. Abbott.  
Attorney.

# UNITED STATES PATENT OFFICE.

FRANCIS VAN DOREN, OF ADRIAN, MICHIGAN.

## IMPROVEMENT IN CORN-PLANTERS.

Specification forming part of Letters Patent No. 162,779, dated May 4, 1875; application filed February 11, 1875.

*To all whom it may concern:*

Be it known that I, FRANCIS VAN DOREN, of Adrian, county of Lenawee and State of Michigan, have invented certain new and useful Improvements in Corn-Planters, of which the following is a specification:

The nature of my invention consists in the construction and arrangement of a hand corn-planter, as will be hereinafter more fully set forth.

In order to enable others skilled in the art to which my invention appertains to make and use the same, I will now proceed to describe its construction and operation, referring to the annexed drawing, which forms a part of this specification, and in which—

Figure 1 is a front view of my corn-planter. Fig. 2 is a longitudinal section of the same. Fig. 3 is a detached view of the reversible cut-off.

A represents the corn-box, tapering at its lower end, and provided with the foot B, in the form usual for this class of corn-planters. C represents the plunger, operated, by hand, up and down. This plunger is, on one side, provided with a notched plate, *a*, to operate a lever, D, attached to one end of a shaft, *b*, passing through the planter. On this shaft, within the planter, is secured a wheel, E, formed with a recess, *f*, to receive the corn, and, when the wheel is turned by the downward motion of the plunger, to drop the corn into a cup, G, on the outside of the planter, from which it falls down into the shoe B, and is forced down by the next downward motion of the plunger, as is the case in all planters of this class. The shoe B is closed by means of a reversible spring-plate, H, provided in the center with a notched block, *d*, fitting under a rod, *e*, in the shoe. Either end of this spring may be placed downward, and, when

worn out at that end, reversed, so as to last much longer than the plate now generally in use. Above the cup G, in the side of the planter, is a reversible cut-off, consisting of a bar, I, with a block, *h*, at either end on the inner side, to which block is fastened a piece of rubber, *i*, by a screw through the center, as shown. This rubber piece *i*, which bears on the wheel E, having four sides, can be changed when worn till all four sides have been used, and then the cut-off is reversed, bringing the other rubber—also with four sides—to the wheel, thus making eight sides to wear out before the rubber need to be replaced. On the upper end of the box A is a small handle, J, to be used in pulling the planter out of the ground to prevent the plunger from rising until the planter is entirely raised. This is very necessary in soil that is wet or sticky, as otherwise the corn and dirt will stick on the end of the plunger, and be drawn up into the shoe, preventing it from discharging properly.

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

1. The reversible spring-plate H, provided with the central notched block *d*, in combination with the planter A, shoe B, and rod *e*, as and for the purposes herein set forth.

2. The reversible cut-off consisting of the bar I, blocks *h h* at the ends thereof, and the rubber pieces *i i* fastened to the blocks by central screws, substantially as and for the purposes herein set forth.

In testimony that I claim the foregoing as my invention I hereunto affix my signature.

FRANCIS VAN DOREN.

Witnesses:

T. L. BURR,  
S. B. MANN.