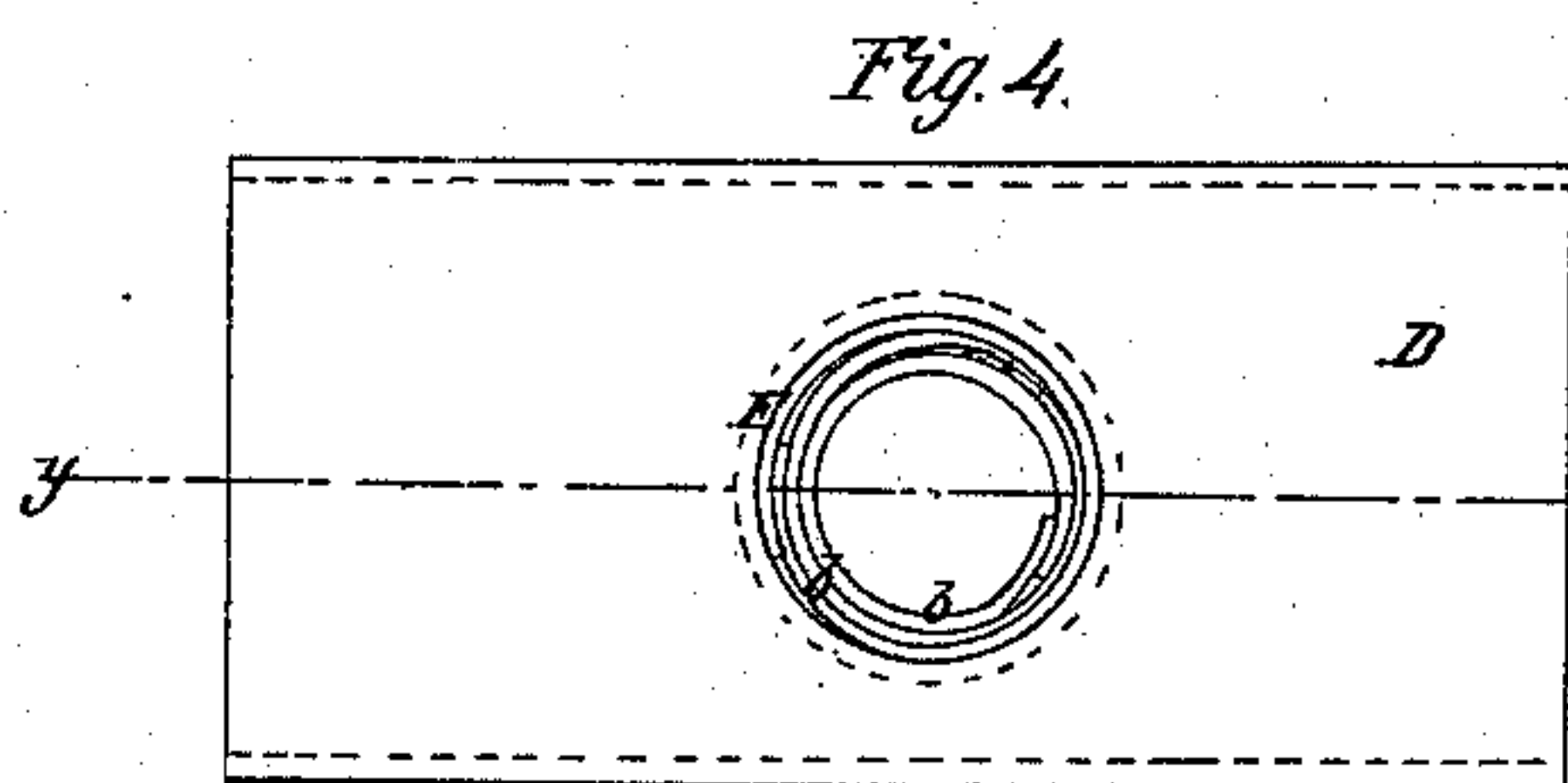
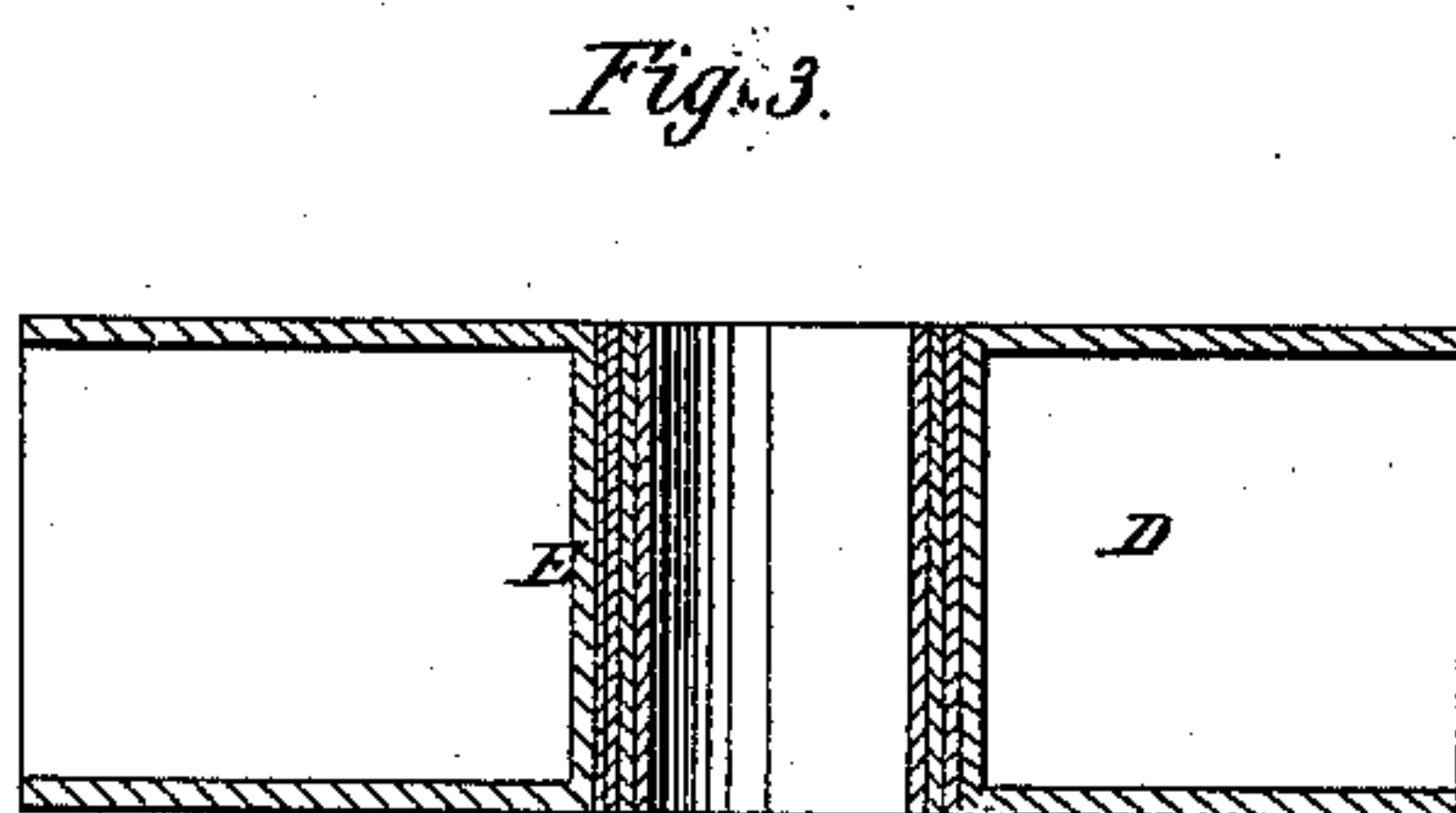
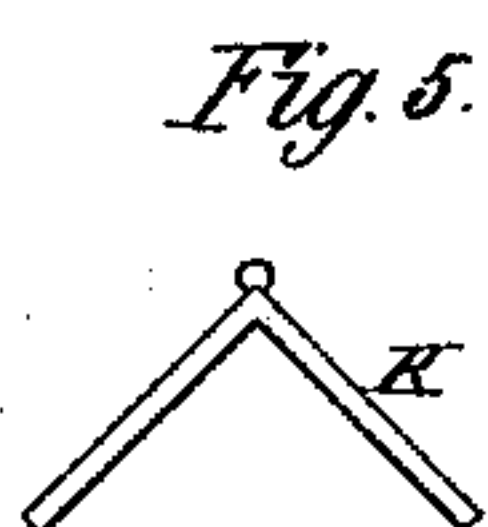
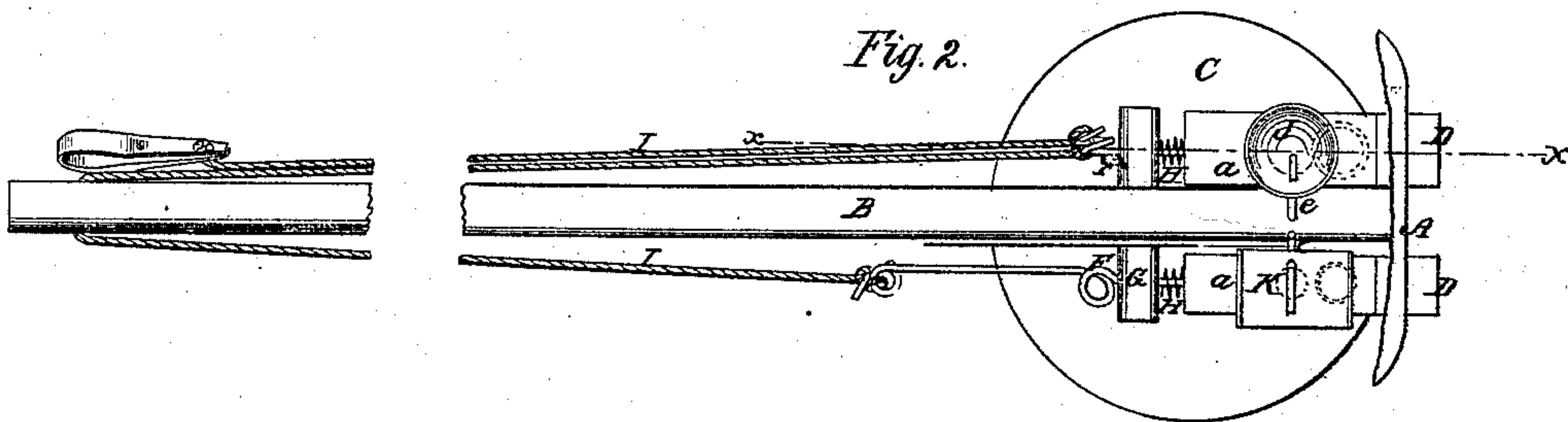
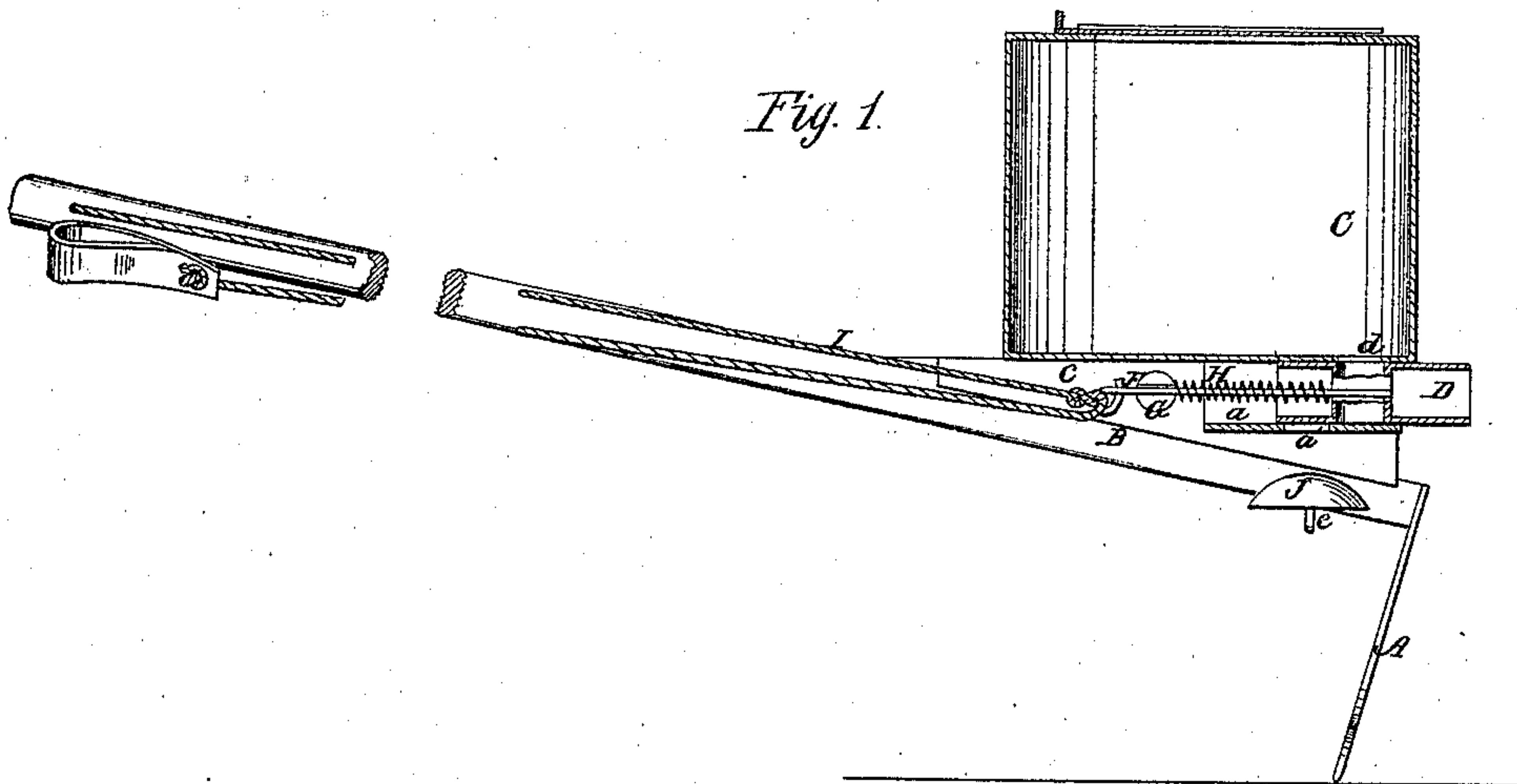


N. Safford.

Hand Seeder.

N^o 58,486.

Patented Oct. 2, 1866.



Witnesses:
Alex. F. Roberts
J. W. B. Compton

Inventor:
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per Munn & Co.
Attorney

UNITED STATES PATENT OFFICE.

NELSON SAFFORD, OF PLEASANT VALLEY, VERMONT.

IMPROVEMENT IN HAND-PLANTERS.

Specification forming part of Letters Patent No. 58,486, dated October 2, 1866.

To all whom it may concern:

Be it known that I, NELSON SAFFORD, of Pleasant Valley, in the county of Chittenden and State of Vermont, have invented a new and Improved Seed-Planting Attachment for Hoes; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a side view of my invention, taken in the line *x x*, Fig. 2; Fig. 2, an inverted plan of the same; Fig. 3, an enlarged detached side sectional view of one of the sliding boxes pertaining to the same, *y y*, Fig. 4, indicating the line of section; Fig. 4, a plan or top view of Fig. 3; Fig. 5, a detached end view of one of the seed-scatterers pertaining to the same.

Similar letters of reference indicate like parts.

This invention relates to a new and improved seed-planting attachment for hoes, whereby seed may be dropped and covered with the hoe at one operation.

The invention consists in a novel means employed for varying the capacity of the seed-cells, in order to suit the size of the seed to be planted and the quantity to be deposited in a hill at each dropping, and also in an improved means for scattering the seed.

A represents a hoe, and B the handle thereof. These parts may be of usual construction, and therefore do not require a minute description.

C represents a seed-box, which may be of cylindrical or other form, and constructed of sheet metal or wood. To the under side of this seed-box there are affixed two rectangular tubes, *a a*, in which slides D D are fitted, and work freely. These slides may be of sheet metal, and made in the form of rectangular tubes, in order to insure lightness, and in each slide D there is fitted a vertical tube, E, the capacity of which may be varied, as desired, by inserting one or more concentric metal bands, *b*, within it, as shown clearly in Fig. 4. These bands *b* are constructed of any elastic sheet metal, bent in the form of tubes, and having lapped ends, so that they will be kept in the tubes E by virtue of their own elasticity.

The inner or rear end of each slide D has a rod, F, attached, and these rods pass through a bar, G, which passes through the hoe-handle B, or through a block, *c*, attached thereto, and on the rod F there are placed spiral springs H, one end of which bears against the slides D, and the opposite ends against the bar G. These springs H have a tendency to keep the slides D shoved forward to such an extent that the tubes E will be in front of and out of line with holes *a'* in the bottom of the tubes *a*, and in line with holes *d* in the bottom of the seed-box C, as shown clearly in Fig. 1.

The rods F have cords I attached to them, which extend back, and are connected to the handle at a point convenient to be actuated by the right hand of the operator.

When a dropping of seed is to be made, the operator simply draws back one of the slides D, so as to bring its tube E in line with the hole *a'* in the bottom of the tube *a*, and out of line with the hole *d*, in the bottom of the seed-box.

The two slides D are used in order that discharging-tubes E, materially differing in diameter, may be used to suit very large and small seeds.

J represents a seed-scatterer, constructed of a circular convex plate, having a rod or arm, *e*, attached to fit into the hoe-handle B. This scatterer is directly underneath the hole *a'* in the tube *a*, through which the seed is dropped, and effectually scatters the seed, causing it to be distributed in the hill with a requisite space between the kernels or grains.

Instead of a circular convex plate, a double inclined plate, K, may be used, as shown in Fig. 5.

This scatterer K would be preferable in those cases where the seed is to be scattered lengthwise in rows.

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

1. The elastic bands *b*, one or more, fitted in the tube or hole E of a seed-dropping slide, for the purpose of varying the capacity of the same, substantially as and for the purpose set forth.

2. The scatterers, constructed as shown, or in any equivalent way, when applied to a hoe seed-planter, substantially as and for the purpose specified.

NELSON SAFFORD.

Witnesses:

PETER COOKE,

ALEX. F. ROBERTS.