

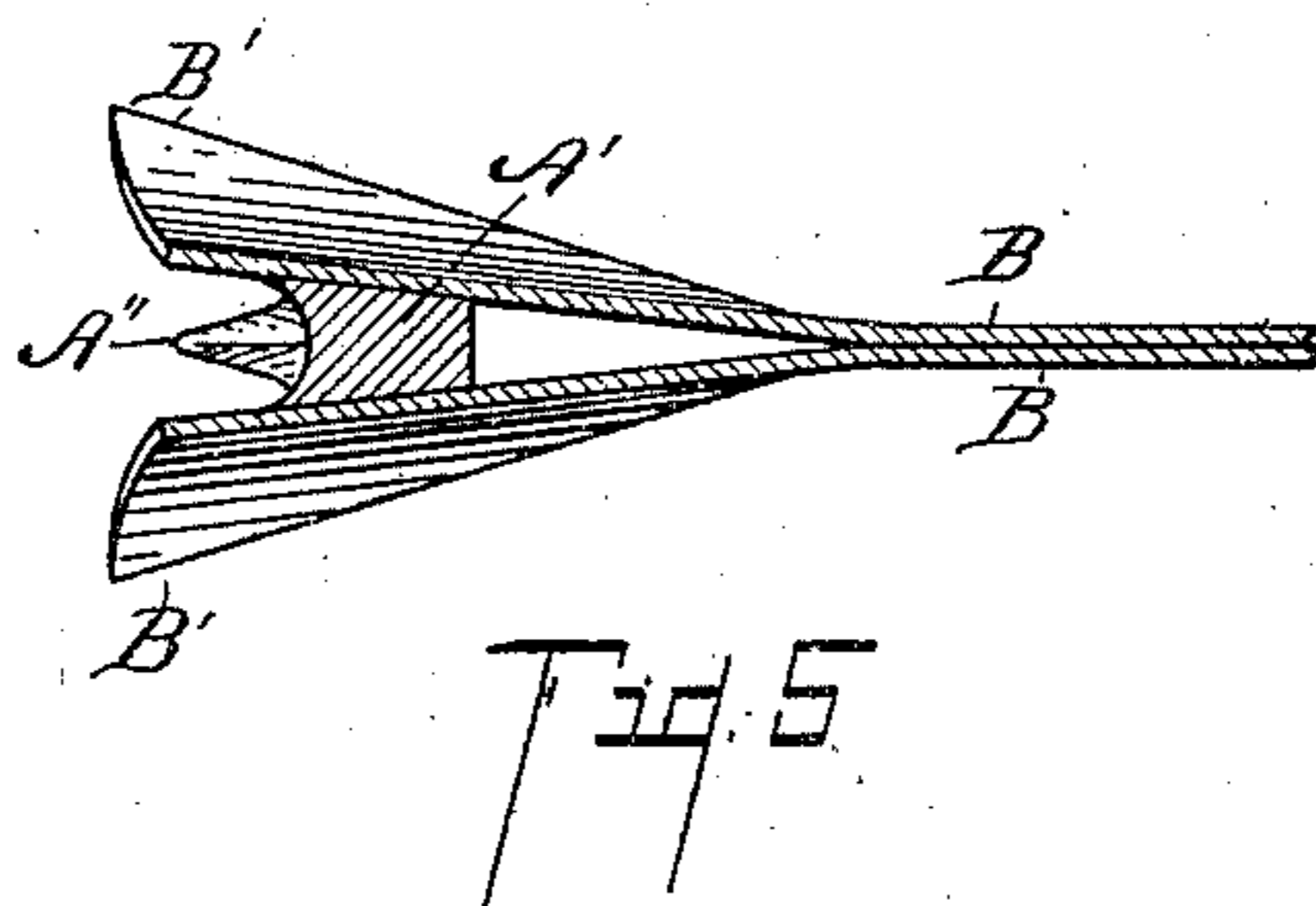
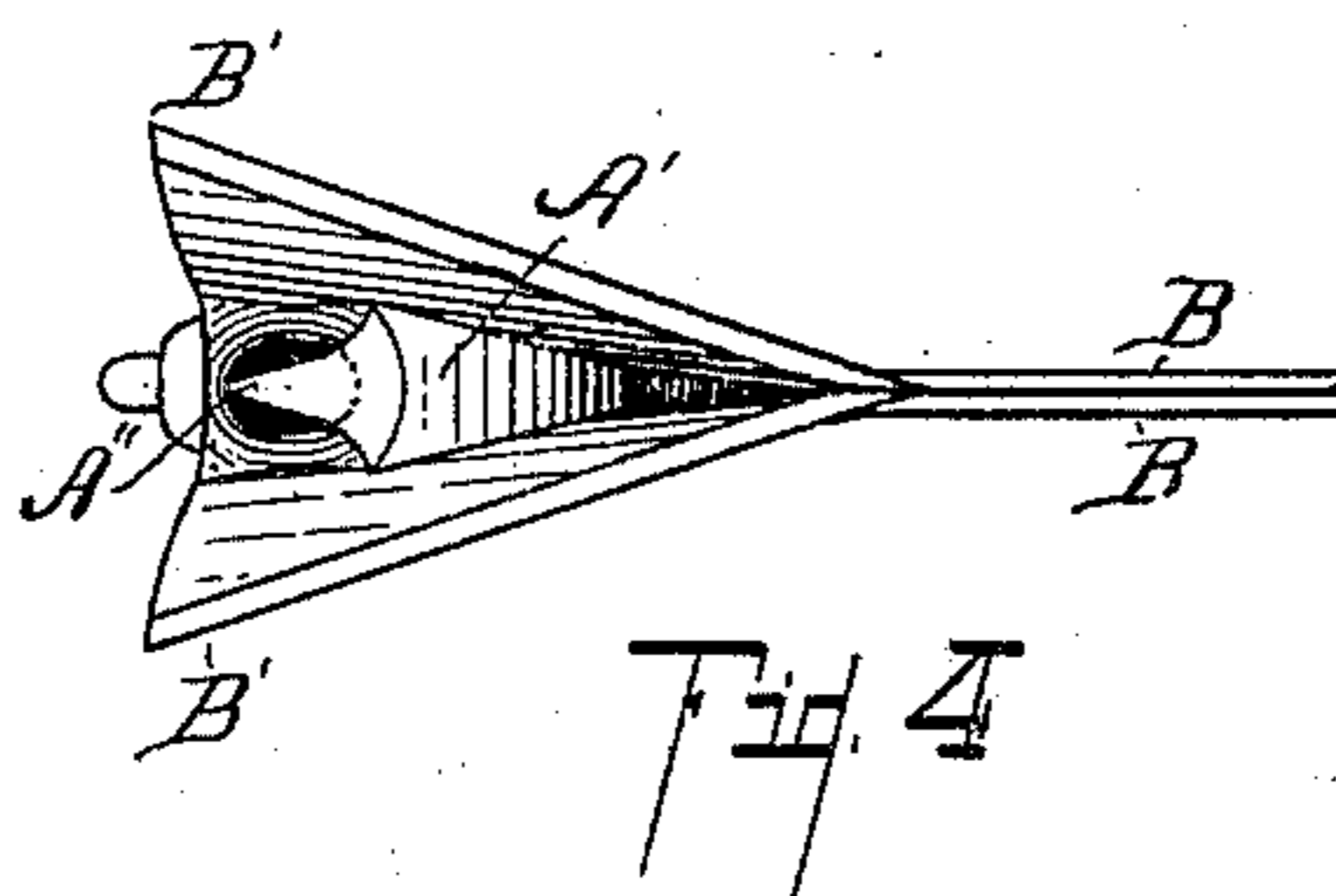
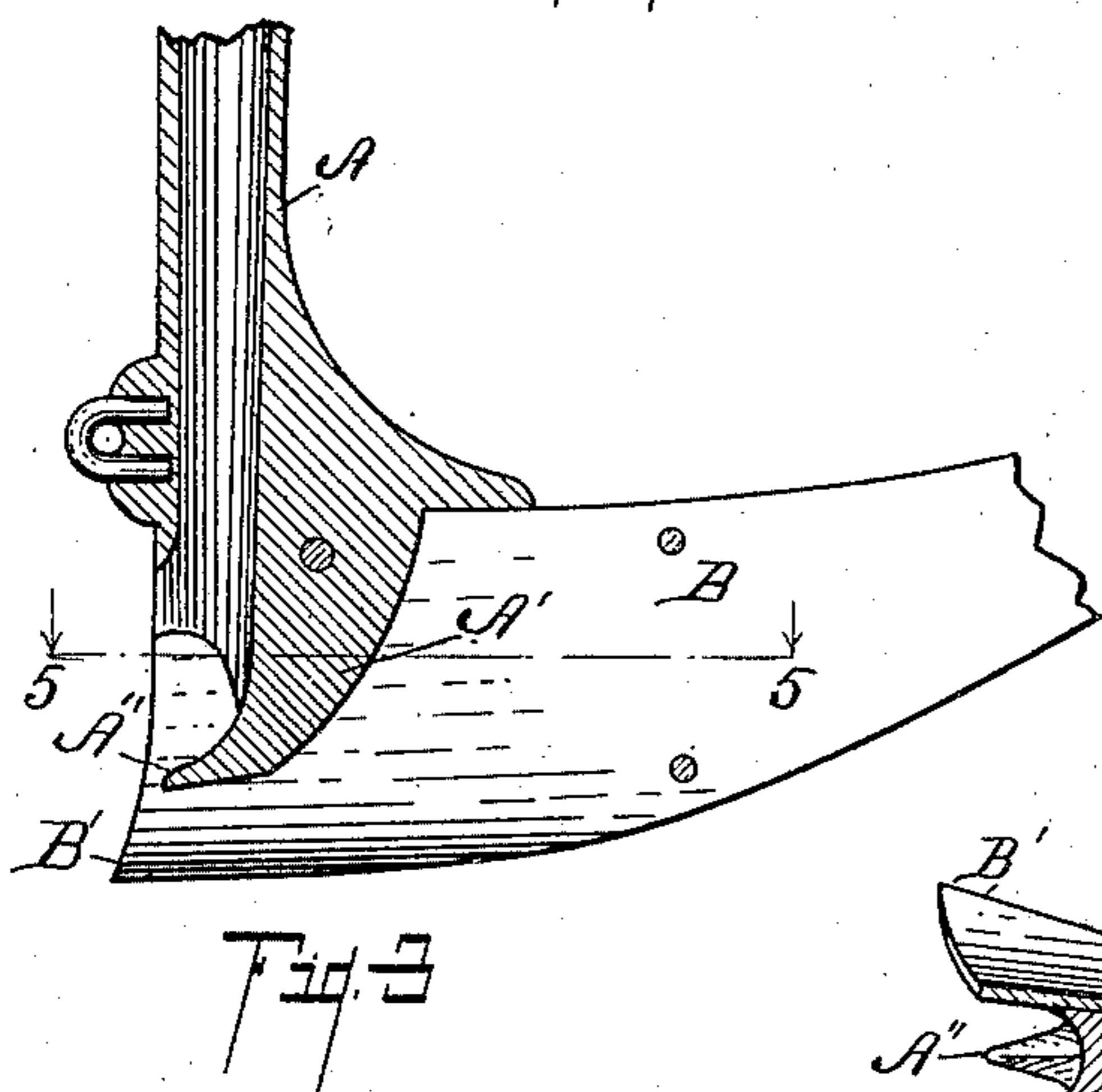
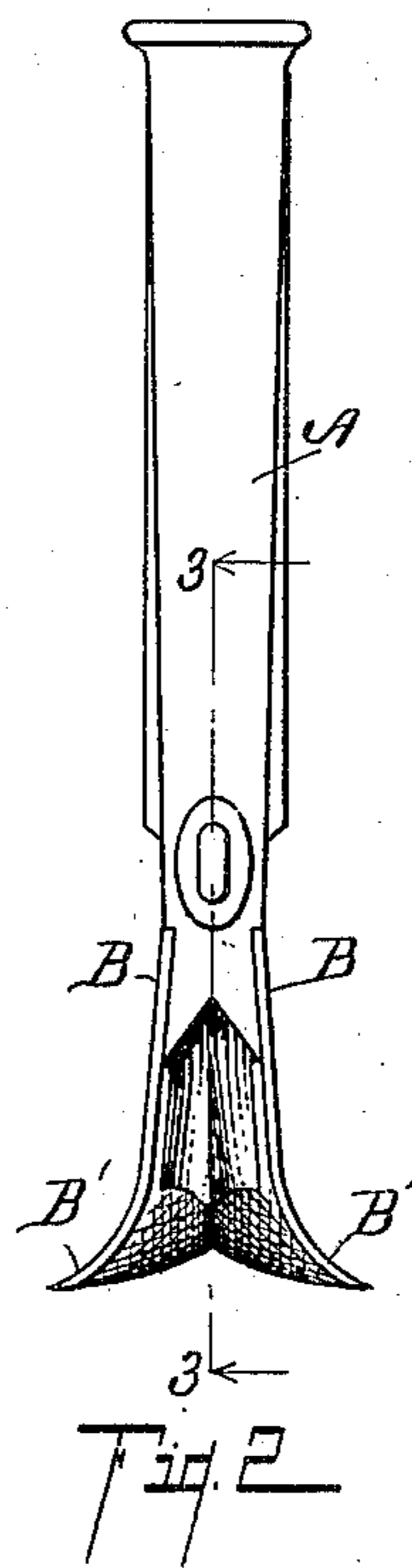
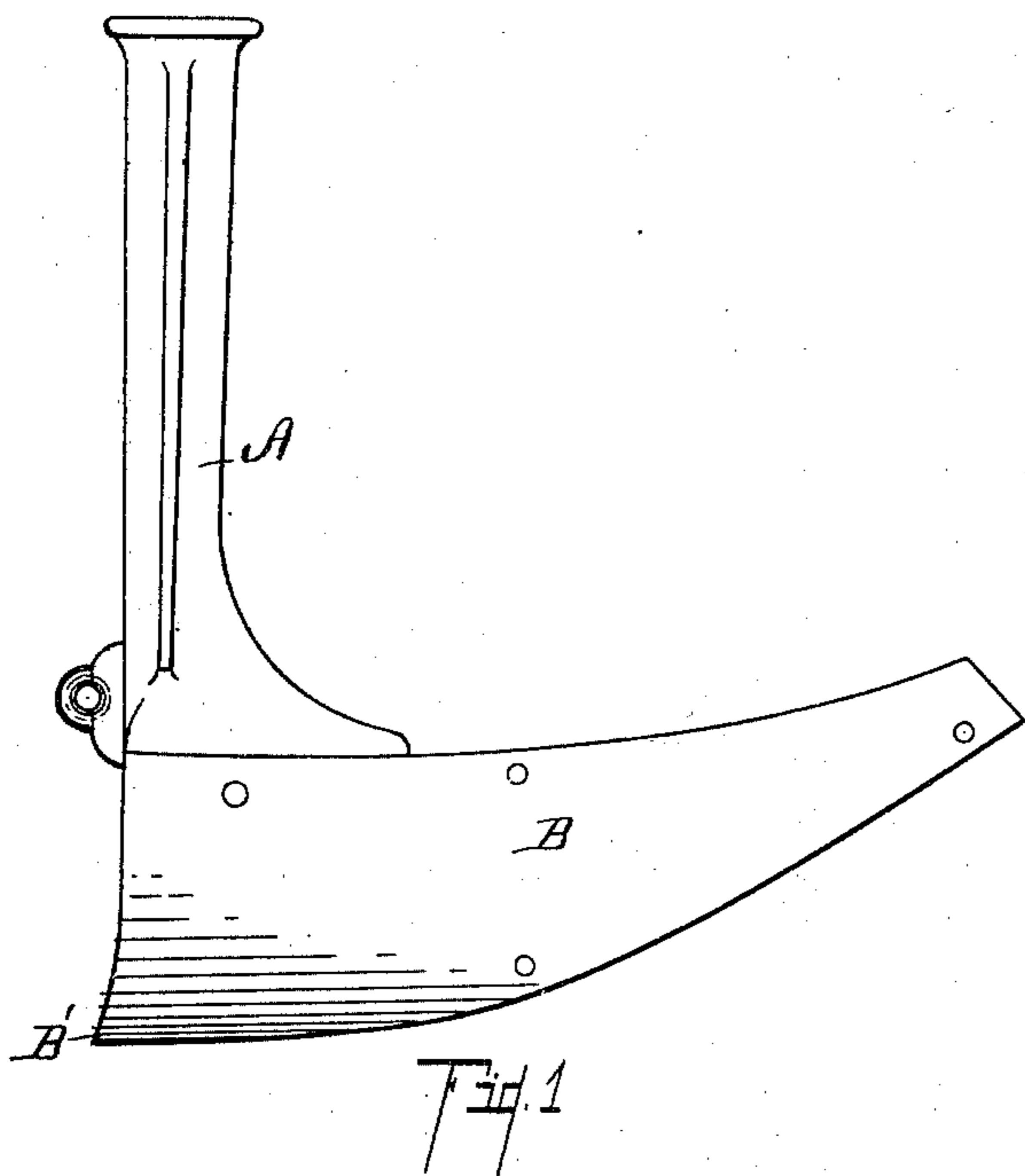
No. 709,636.

Patented Sept. 23, 1902.

W. F. HOYT.
GRAIN DRILL.

(Application filed Mar. 10, 1900.)

(No Model.)



Witnesses:

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UNITED STATES PATENT OFFICE.

WILL F. HOYT, OF DOWAGIAC, MICHIGAN.

GRAIN-DRILL.

SPECIFICATION forming part of Letters Patent No. 709,636, dated September 23, 1902.

Application filed March 10, 1900. Serial No. 8,234. (No model.)

To all whom it may concern:

Be it known that I, WILL F. HOYT, a citizen of the United States, residing at the city of Dowagiac, in the county of Cass and State of Michigan, have invented certain new and useful Improvements in Grain-Drills, of which the following is a specification.

This invention relates to improvements in grain-drills.

10 The object of the invention is to provide a grain-drill so constructed that it will open a wide furrow with a substantially level bottom in which the grain shall be distributed in substantially equal amounts in two or more
15 rows or drills.

I accomplish the object of my invention by the devices and means described in this specification.

20 The invention is clearly defined, and pointed out in the claim.

A structure embodying my invention is fully illustrated in the accompanying drawings, forming a part of this specification, in which—

25 Figure 1 is a side elevation of a grain-drill shoe with its boot attached which embodies my invention. Fig. 2 is a rear elevation of the same. Fig. 3 is a detail longitudinal sectional elevation taken on a line 3 3 of Fig. 2. Fig. 4 is an inverted detail plan view of the rear end of the shoe with the boot or hopper attached. Fig. 5 is a detail sectional plan view taken on line 5 5 of Fig. 3.

35 In the drawings the sectional views are taken looking in the direction of the little arrows at the ends of the section-lines, and similar letters of reference refer to similar parts throughout the several views.

Referring to the lettered parts of the drawings, A is the boot. B is the shoe, which is made up of side plates suitably secured together and opened outwardly at the heel, the bottom of the plates being curved outwardly at B' to cut a broad furrow at that point and
45 throw the earth or soil to each side somewhat like the moldboard of a plow. The boot A extends down between these parts at A' and

is attached by a rivet or any other suitable means to the shoe at this point. The lower portion of the part A' is curved downwardly 50 and rearwardly, and a central fin A'' divides the passage-way at this point into two divergent branches, so that when the grain drops down through the boot as a single stream this stream will be divided at the bottom and the
55 kernels deflected to each side, and so distributed in two or more rows or drills.

It is desired to remark that while this special structure is superior on account of its simplicity any device which divides the stream 60 into divergent branches at or near this point will accomplish the same purpose, and it is the intent of this patent to cover such branching and diverging of the passage-way in connection with a furrow-opener no matter 65 how such division or branching may be accomplished. It is obvious that the simple fin or projection A'' is the simplest device and probably as effective as any that can be devised. Other styles of furrow-opener may 70 open a wide furrow, when such means could be used in combination with the same to advantage.

Having thus described my invention, what I claim as new, and desire to secure by Letters 75 Patent, is—

In a grain-drill, the combination of the shoe B made up of side plates opened outwardly at the heel and curved outwardly at the bottom to open a wide furrow; a boot having a 80 downwardly and rearwardly curved projecting portion A' with a centrally-located fin A'' secured within the shoe so as to divide the stream of grain descending through the boot in substantially equal streams and so distribute 85 it in the bottom of the furrow in double rows, all coacting substantially as described, for the purpose specified.

In witness whereof I have hereunto set my hand and seal in the presence of two witnesses. 90

WILL F. HOYT. [L. S.]

Witnesses:

C. L. FOWLE,
F. W. JONES.