

(No Model.)

3 Sheets—Sheet 1.

J. A. BAUGHMAN.
MATCH MAKING MACHINE.

No. 389,950.

Patented Sept. 25, 1888.

FIG. 1.

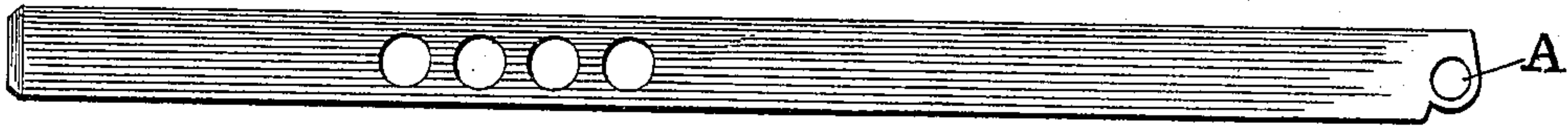


FIG. 2.

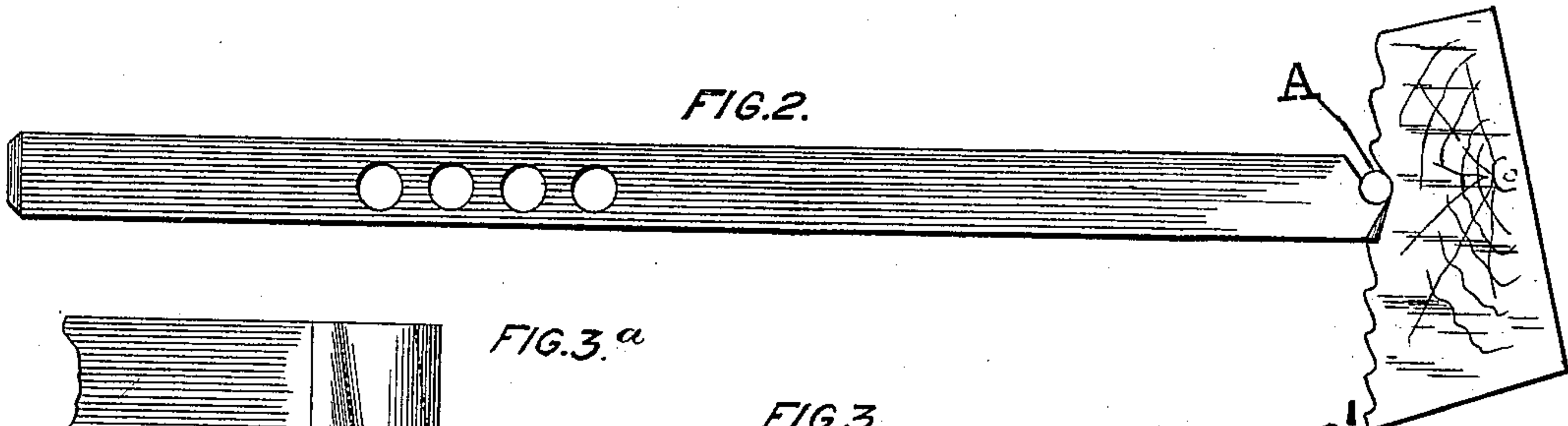


FIG. 3.^a

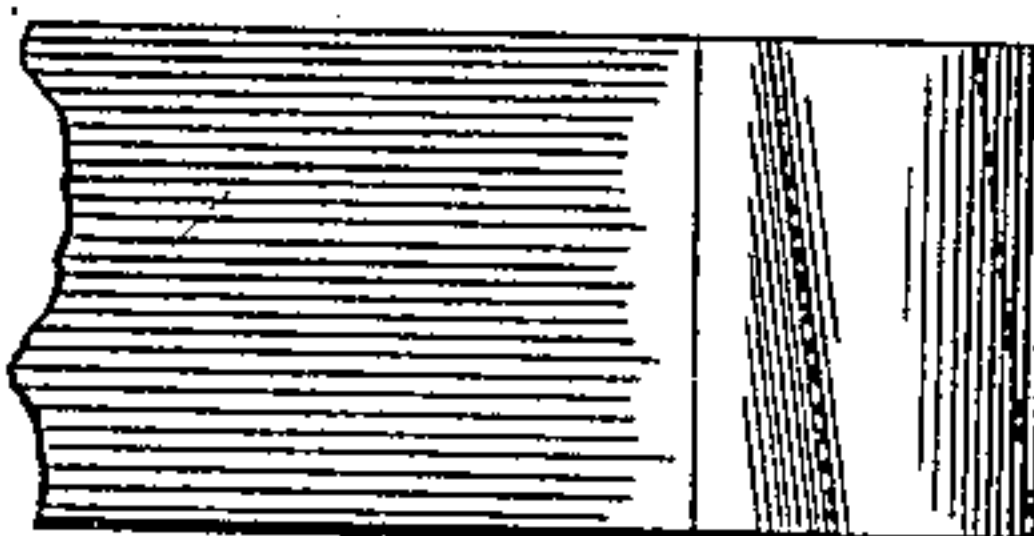


FIG. 3.

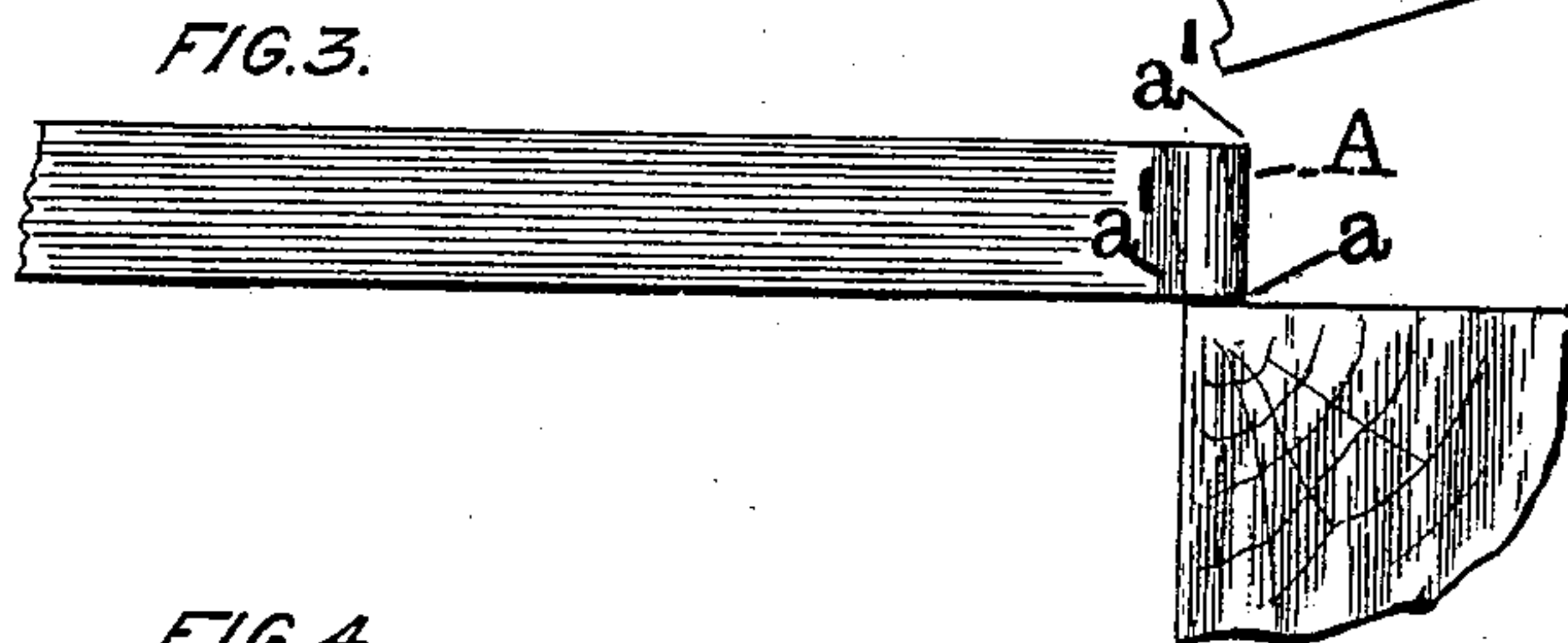


FIG. 4.

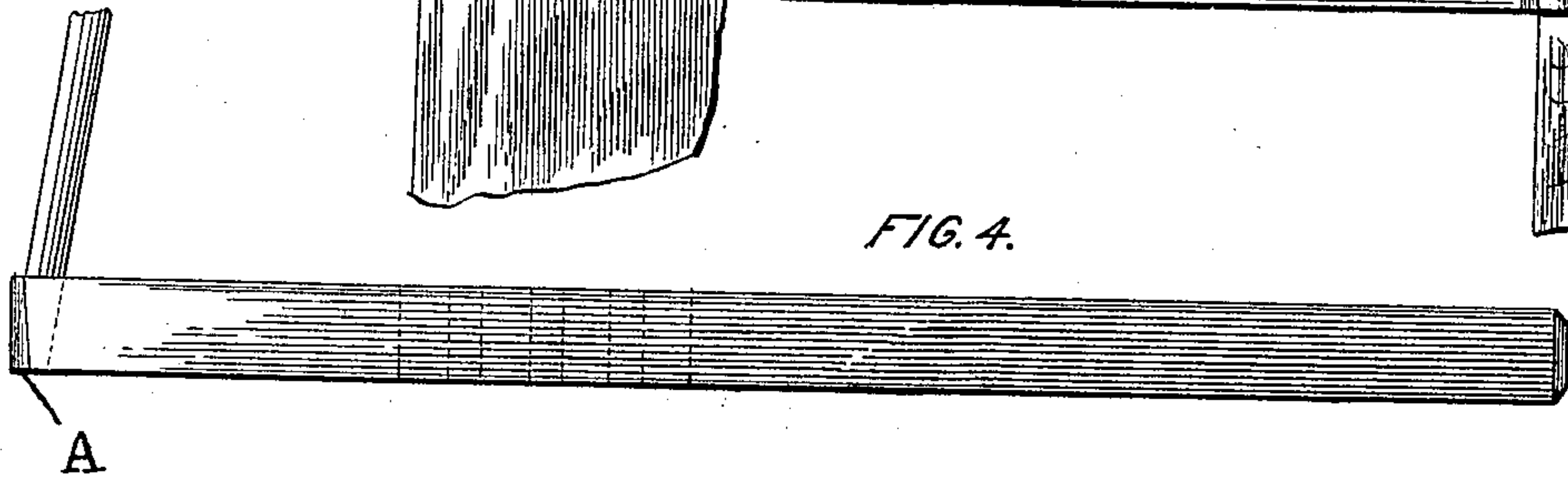


FIG. 5.

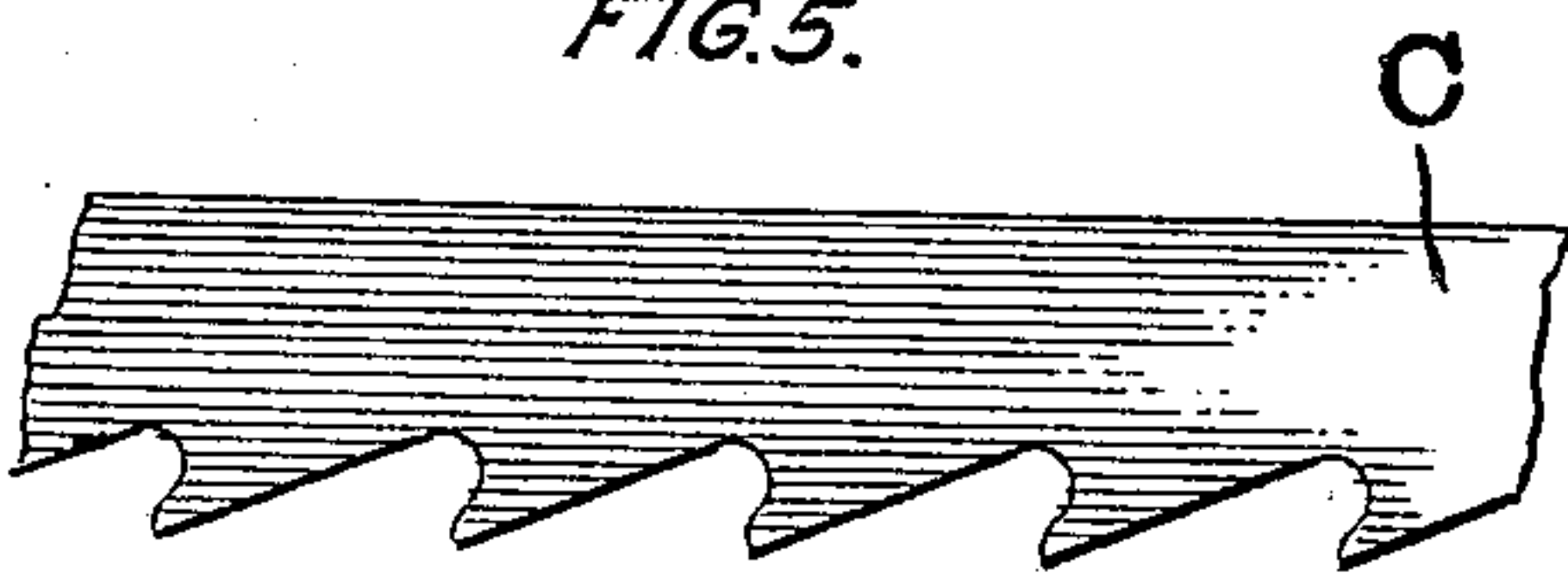
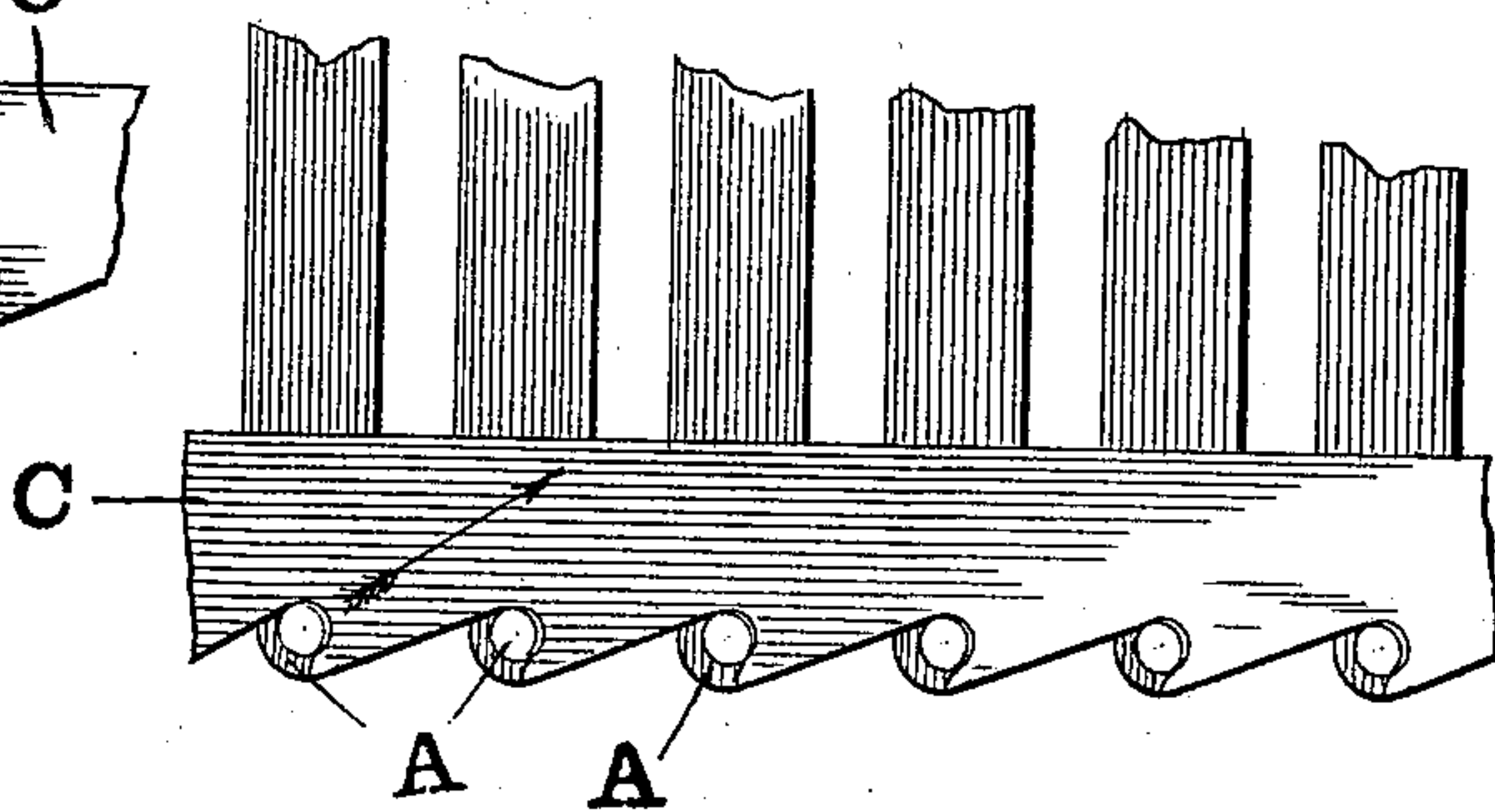


FIG. 6.



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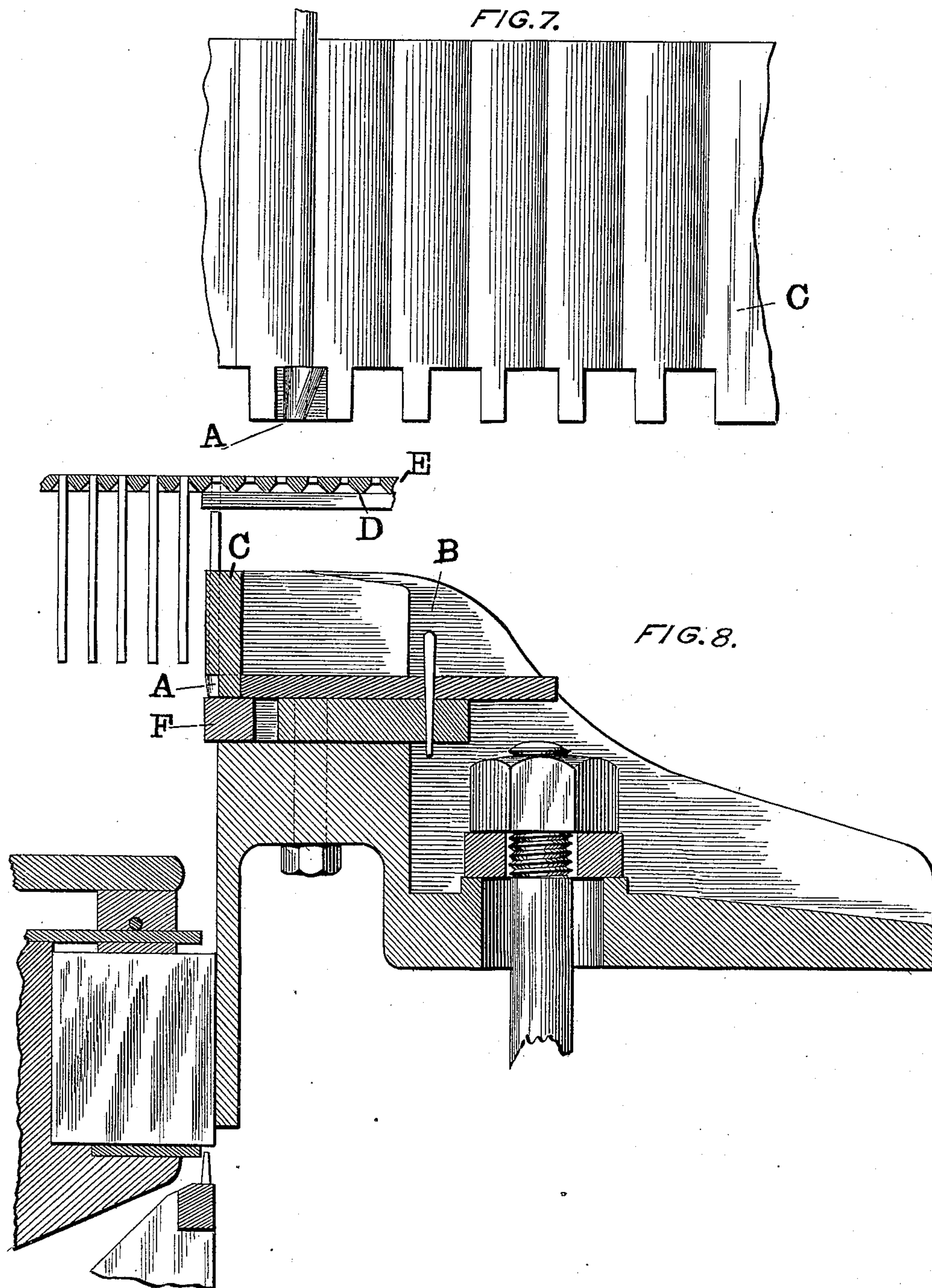
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3 Sheets—Sheet 3.

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FIG. 9.



D

FIG. 10.

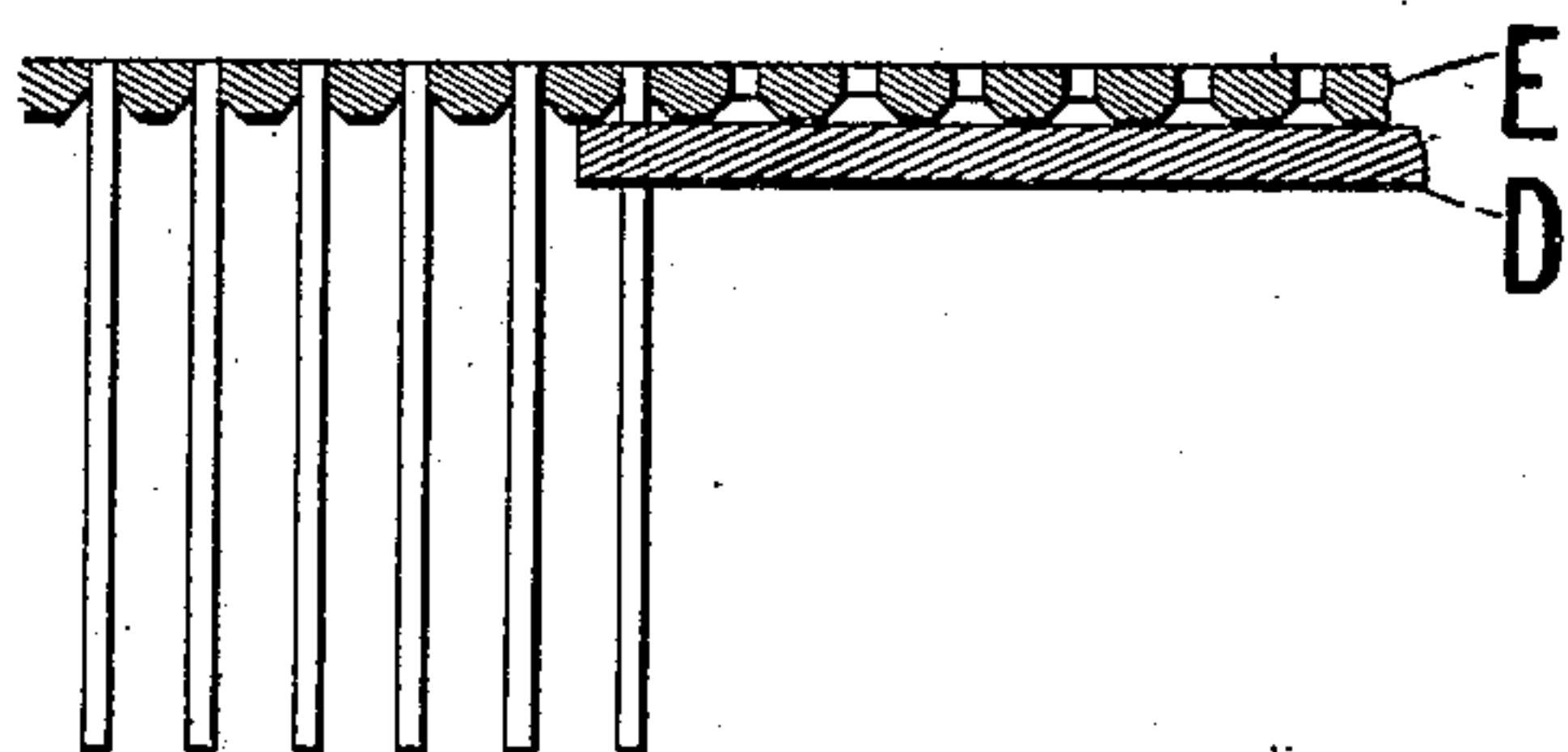
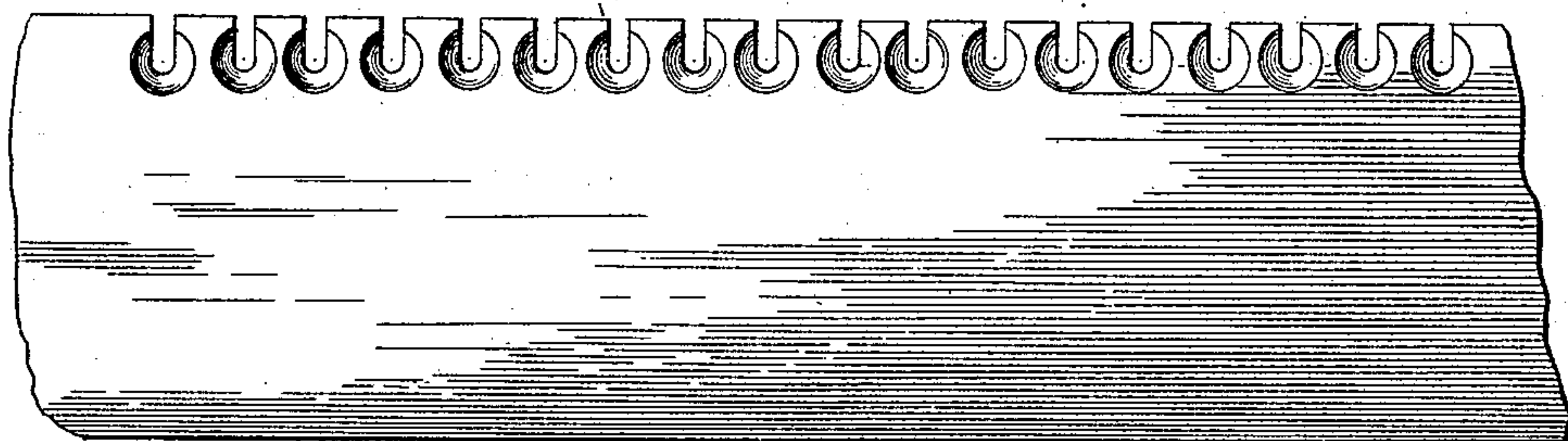
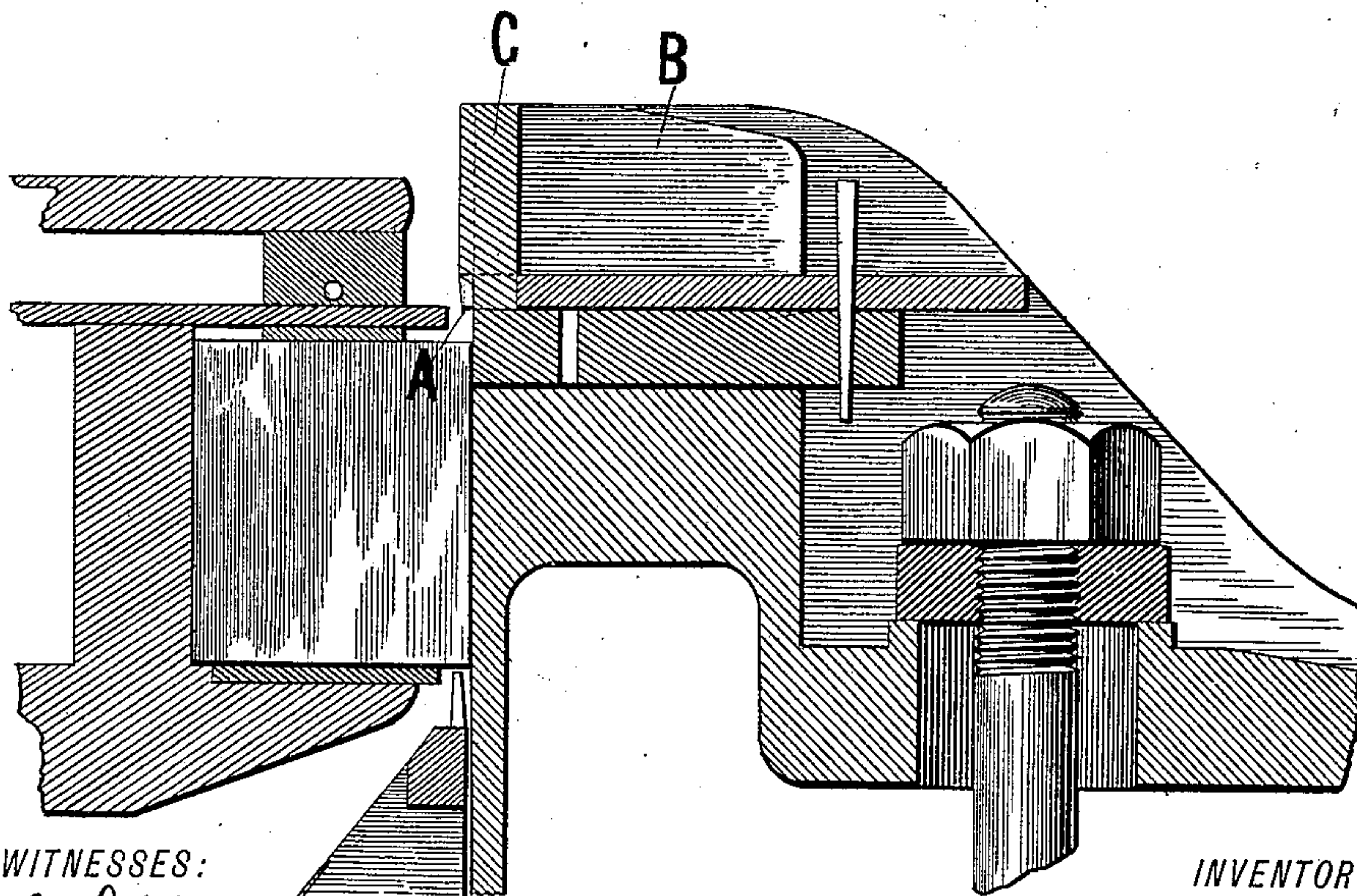


FIG. 11.



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UNITED STATES PATENT OFFICE.

JOSEPH A. BAUGHMAN, OF AKRON, OHIO.

MATCH-MAKING MACHINE.

SPECIFICATION forming part of Letters Patent No. 389,950, dated September 25, 1888.

Application filed April 19, 1886. Serial No. 199,331. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH A. BAUGHMAN, of Akron, county of Summit, and State of Ohio, have invented new and useful Improvements in Match-Making Machines; and I do hereby declare that the following is a full and exact description of the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

10 This invention relates to that class of well-known match-making machines in which match-sticks are cut from a block in the downward movement of a head carrying the cutters, and are set in a receiving-plate in the upward movement of the head; and it consists, mainly, in the combination, with a vertically-moving head carrying knives or cutters of special construction and a vertical supporting-plate having open-sided grooves, of a receiving-plate, 15 into which the match-sticks are set, as will be fully described hereinafter.

In the drawings, Figure 1 represents a top view of the knife, showing holes extending through the shank of the same, by means of 25 which holes the knives are secured to the cutter-head; Fig. 2, a bottom view of the same as it appears in connection with the block; Fig. 3, a side view of the knife as it is about to enter the block. Fig. 3^a is an enlarged view of 30 Fig. 3; Fig. 4, a view of the knife with the stick cut by it in place as it appears when the latter is free to assume its natural position; Fig. 5, a top view of the grooved supporting-plate; Fig. 6, a top view of the grooved supporting-plate with the knives in position below the plate; Fig. 7, a front view of the same; Fig. 8, a view illustrating the operation of the mechanism, with the parts in the relative positions occupied by them just before the sticks 40 cut from the block and held by the knives and grooved supporting-plate are entered through the openings in the guiding-plate into the receiving-plate; Fig. 9, a sectional view of a guide-plate employed in connection with the 45 receiving-plate; Fig. 10, a bottom view of the same; Fig. 11, a view illustrating the operation of the mechanism, the parts being shown in the relative positions occupied by them just before the knife descends to perform the cutting action.

To enable others skilled in the art to make

and use my invention, I will proceed to describe fully the construction of the same.

A represents a cylindrical knife, having a cutting-edge, *a*, at the lower side of the same 55 and the solid portions *a' a'* to furnish the requisite strength for the cutting action. The cylindrical opening through the knife is inclined inward from the end of the knife, as shown in Fig. 3, and also toward one side, as shown in 60 Fig. 7. By means of the specific construction of the knife the proper clearance is obtained in the cutting action, and also the sticks when cut are held against the bearing sides of the grooved supporting-plate with positive pressure, as will be fully described hereinafter. 65

B, Figs. 8 and 11, represents any suitable head, in which the series of knives A A is held.

C represents a supporting-plate, located above the knives and in contact therewith, as 70 shown in Figs. 6, 7, 8, and 11, which plate has open-sided grooves, as shown in Figs. 5 and 7. This supporting-plate is so constructed and so located relatively to the other parts that its bearing-lines, against which the sticks rest 75 when in place, coincide in vertical planes with the edges of the corresponding openings in the guiding and receiving plates. The coincidence is such substantially that the center of the sticks at the upper ends registers with the center of 80 the openings in the guiding and receiving plates above, or near enough thereto for all practical purposes. The cut sticks are held with positive force against the bearing-lines of the grooves by means of the peculiar construction 85 of the knives, the pressure being exerted by the knives upon the sticks, as indicated by the arrow, Fig. 6. By means of this construction the sticks are firmly pressed back into the grooves and securely held in proper registering position during the upward movement, 90 and consequently the upper ends enter without difficulty through the openings in the guiding-plate into the receiving-plate, and are thus properly set for dipping. 95

D represents the guiding-plate, of any proper construction, and E the receiving-plate in which the matches are set.

F represents a bar or plate, which is moved in beneath the cutters after the downward 100 movement has been completed, to furnish a base of resistance for the lower ends of the match-

sticks as their upper ends are thrust into the receiving-plate.

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

1. In combination with a vertically-moving head carrying cutters having inclined openings, substantially as described, and a supporting-plate having open-sided grooves, a receiving-plate in which the match-sticks are set, substantially as described.

2. In combination with the vertically-moving head carrying the cutters having inclined openings, substantially as described, and a supporting-plate having open-sided grooves,

a guide-plate and a receiving-plate, substantially as described.

3. In combination with a vertically-moving head carrying cutters having inclined openings, substantially as described, and a supporting-plate having open-sided grooves, a receiving-plate and a holding-plate, F, substantially as described.

This specification signed and witnessed this 27th day of January, 1886.

JOSEPH A. BAUGHMAN.

Witnesses:

O. C. BARBER,
CHARLES BAIRD.