

(No Model.)

J. TYE.
WIRE MAT.

No. 359,235.

Patented Mar. 8, 1887.

Fig. 1

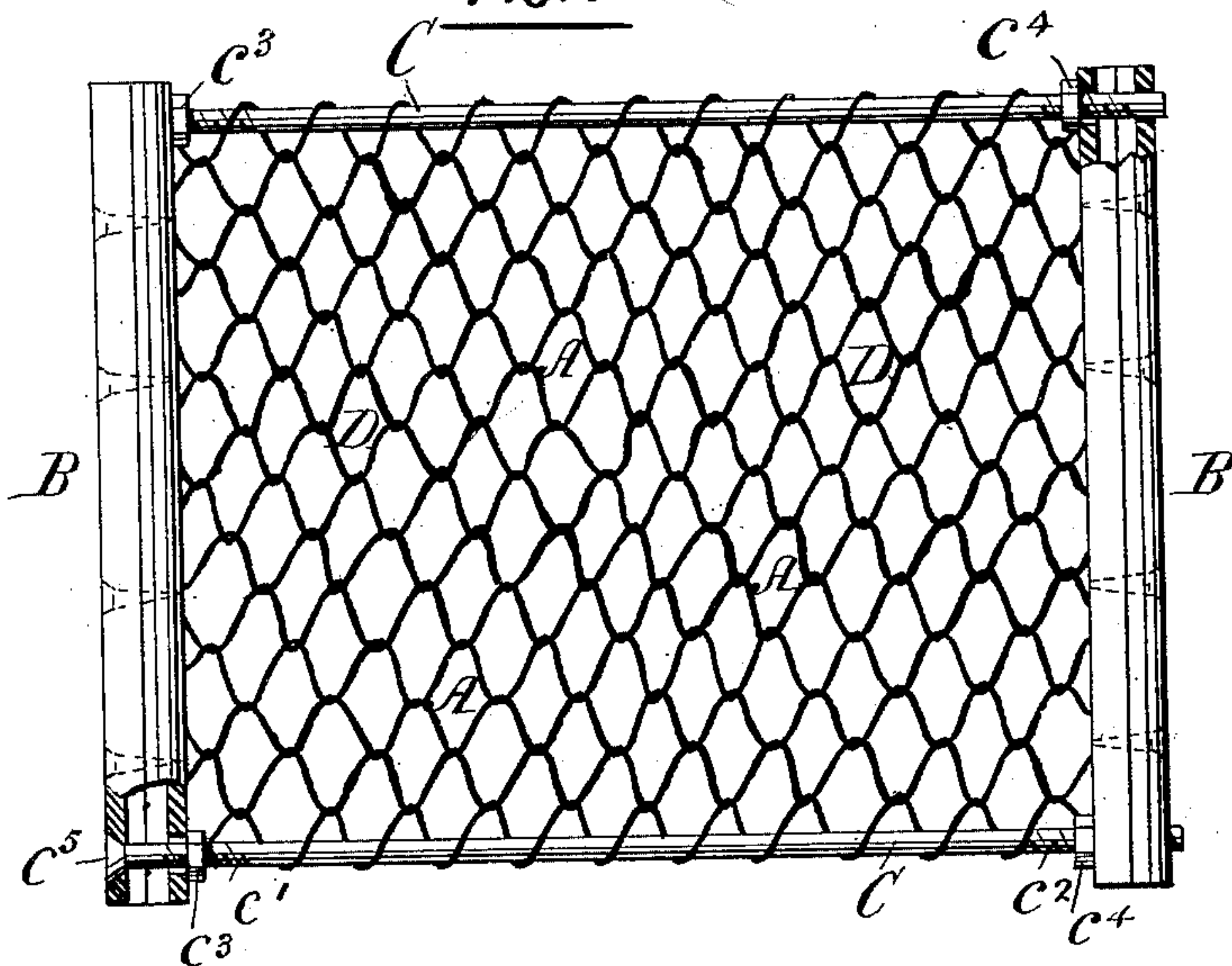


Fig. 2

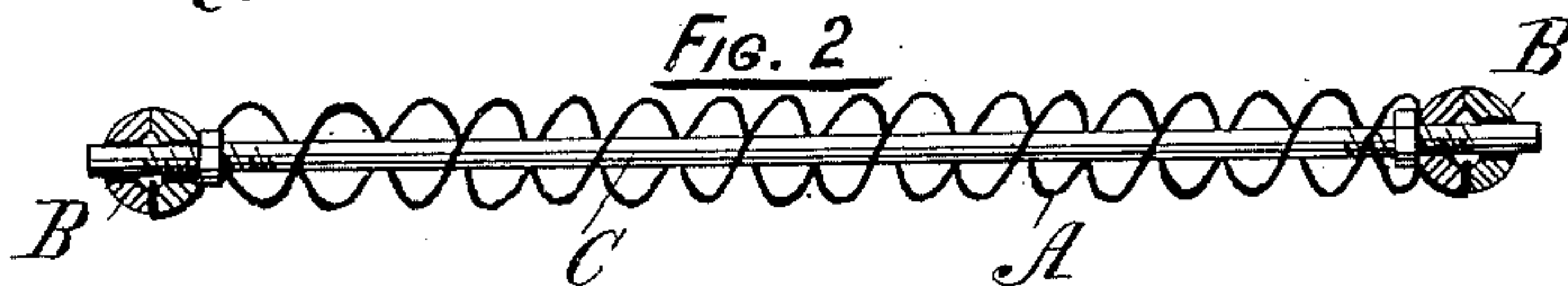


Fig. 3

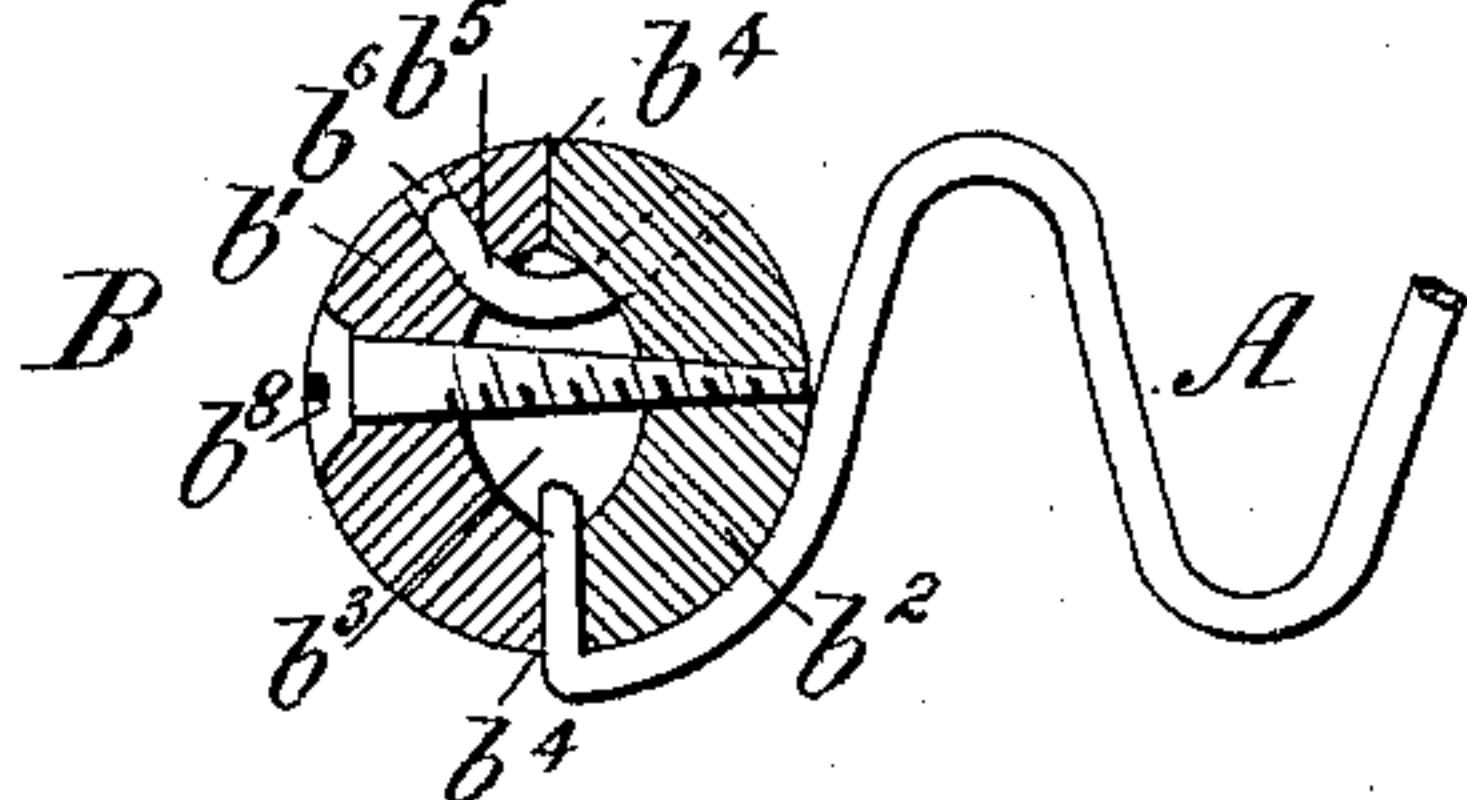


Fig. 4

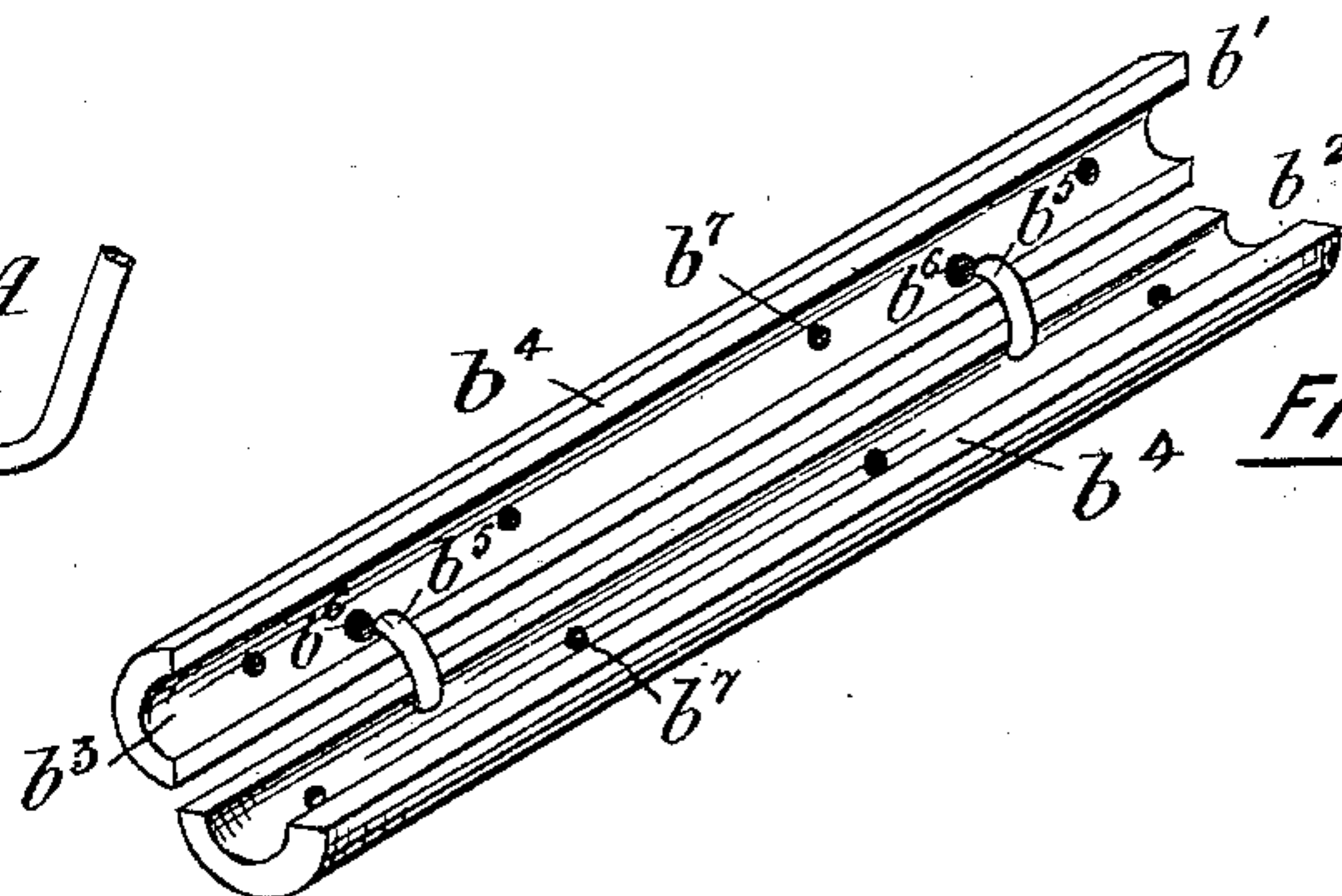
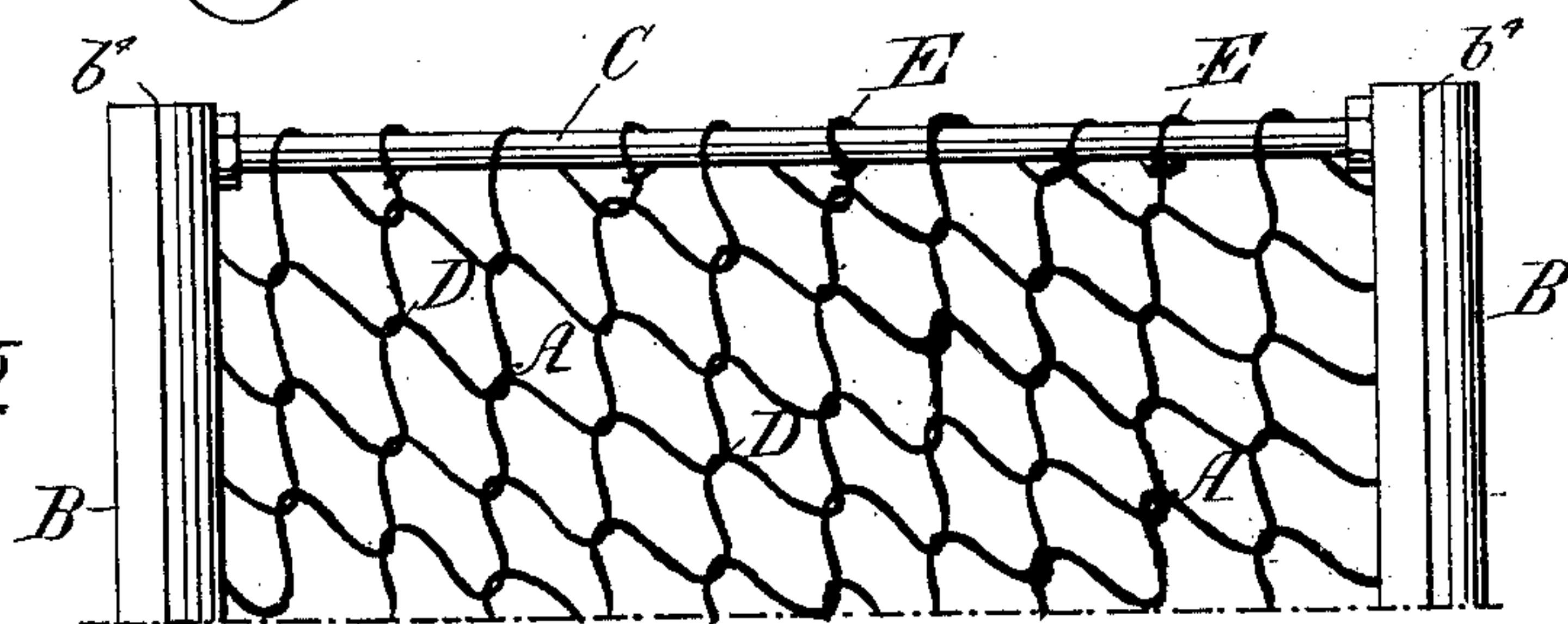


Fig. 5



Witnesses

Chas. McDowell
Ed. Cameron

Inventor

John Tye

Per Atty.

Reynolds & Kellogg

UNITED STATES PATENT OFFICE.

JOHN TYE, OF TORONTO, ONTARIO, CANADA, ASSIGNOR TO JOHN D. OLIVER,
OF SAME PLACE.

WIRE MAT.

SPECIFICATION forming part of Letters Patent No. 359,235, dated March 8, 1887.

Application filed July 8, 1886. Serial No. 207,436. (No model.)

To all whom it may concern:

Be it known that I, JOHN TYE, of the city of Toronto, in the county of York and Province of Ontario, in the Dominion of Canada, have
5 invented certain new and useful Improvements in Wire Mats; and I do hereby declare that the following is a full, clear, and exact description of the same.

This invention relates to improvements in
10 that class of wire mats which are used as foot scrapers and wipers and like articles. Its object is to lighten the construction and cheapen the manufacture without impairing the efficiency or durability.

15 In all other wire door or foot mats of which I am aware it has been necessary not only to have a woof of cross-wires linked or intertwined with the warp or longitudinal wires of the fabric, but also a heavy iron frame and
20 crossing or intersecting bars to afford the necessary stiffness and rigidity to the article. Again, in other mats of this class the stretching or adjustability of the coils has not been provided for, but, on the contrary, the outer
25 ends of the wires have had to be permanently twisted by hand around the frame, a work at once tedious and expensive, besides impairing the mat in its appearance. By my invention all these difficulties are overcome, and I like-
30 wise produce a mat the wire fabric of which can be quickly renewed at trifling expense, should it become damaged from any cause, while preserving the same framing or hold-fast devices.

35 To this end my improvements consist, mainly, in the combination, with longitudinal or diagonal wires linked together, of clamping-irons gripping and holding the ends of the coils, and of side rods connected with the end
40 clamping-irons in such manner that the wires may be stretched should such adjustment become necessary.

Certain details of construction and combinations of parts are also included in my invention, for full comprehension of which reference
45 must be had to the following detailed description and accompanying drawings, forming part of this specification, similar letters of reference indicating like parts.

50 In the drawings, Figure 1 is a plan, partly

in broken section, of a mat constructed according to my invention; Fig. 2, an edge view, partly in section, illustrating another way of applying the stretching-rods; Fig. 3, an enlarged sectional detail showing the way in
55 which I usually connect the wires with the end clamps; Fig. 4, a perspective view of the two parts of my clamps, and Fig. 5 illustrates a modification.

Referring to Figs. 1, 2, 3, and 4, A A are a
60 series of coils, made from wire of suitable gage, each linked with its neighboring coil, (in substantially the same manner as the wires of the well-known coiled or woven wire mattresses,) the ends of each strand being held by clamps
65 B B. These clamps are by preference of rounded or oval shape, and are made in two sections, $b' b^2$, with a hollow center, b^3 , the edges $b^4 b^4$, which come together, being flat, feather-edged, or of other suitable configura-
70 tion. I usually connect these sections $b' b^2$ by means of curved hooks b^5 , attached to one section and entering curved holes b^6 in the other section, as seen in Figs. 3 and 4, thus forming
75 a hinge at one of the joints and allowing the opposite meeting edges to separate and admit the ends of the wires A A to the interior of the clamp, as shown in Fig. 3, said wires being flattened, if found necessary, at this point to allow a close joint to be formed. 8c

$b^7 b^7$ are threaded holes in one section of the clamp, into which screws b^8 are inserted to hold the whole firmly together; or I may use rivets or other like means of fastening in place of the screws. 85

C C are longitudinal rods, one at each side of the mat running from one clamp to the other, and by preference passing through the outer wire coils. These rods are for the purpose of stretching the wire should adjustment be-
90 come necessary, being provided with screw-threads at each end, as shown at $c' c^2$, and having nuts $c^3 c^4$ working on these threads and arranged to press against the sides of the clamps B. The ends of the rods pass through holes drilled
95 in the clamps, and said rods may have countersunk heads c^5 in one clamp and the hole in the opposite clamp may be threaded and the rod screwed into it, as shown in Fig. 1; or the drilled holes may be plain and the ends of the 100

rods just slipped into them, the nuts, bearing against the clamps and being screwed up to same, being relied on to effect the stretching. This construction may be varied, according to
5 the ideas of the mechanic.

In the modification, Fig. 5, I show the wire coils A running parallel with each other, but in a diagonal line between the clamps B, the weaving being the same as in Fig. 1, but the
10 wires being arranged so as to bring the lanes or channels between the coils parallel to the clamps, thus making the scrapers D run directly across the mat, whereas they are diagonal in Fig. 1. This modified construction will
15 necessitate the looping of some of the wires around the stretching-rods C, as shown at E, these loops being large enough to allow said rods to pass freely through them and slide therein while the stretching is being performed.
20 My end clamps and continuous stretching-rods may be used with other forms of mesh, it being apparent that I am not limited to the manner of weaving above described.

I am aware that there are many devices in
25 use for stretching the wire fabric of spring-beds, and I am also aware that clamps consist-

ing of two flat pieces of wood have been used for holding the ends of the wire fabrics in beds; but I do not lay claim to any of such devices in themselves or to the idea of stretching a
30 wire fabric, broadly speaking.

Having thus described my invention in such manner that persons skilled in the art may make and practice the same, I beg to state that what I claim is as follows:

1. A wire door or foot mat, composed of a series of coiled wires forming a mesh, end clamps holding the ends of said wire mesh, and stretching-rods extending between said clamps and connected therewith, said stretch-
35 ing-rods also passing through the extreme outer coils of the mesh at the sides of the mat, substantially as set forth.

2. The combination, in a clamp for wire mats, of two sections, b^1 b^2 , hollowed in the center, hinges or hooks b^5 , and screws or rivets b^7 ,
45 substantially as and for the purpose specified.

Toronto, Canada, June 3, 1886.

JOHN TYE.

Witnesses:

C. R. McDOWELL,
R. A. KELLOND.