

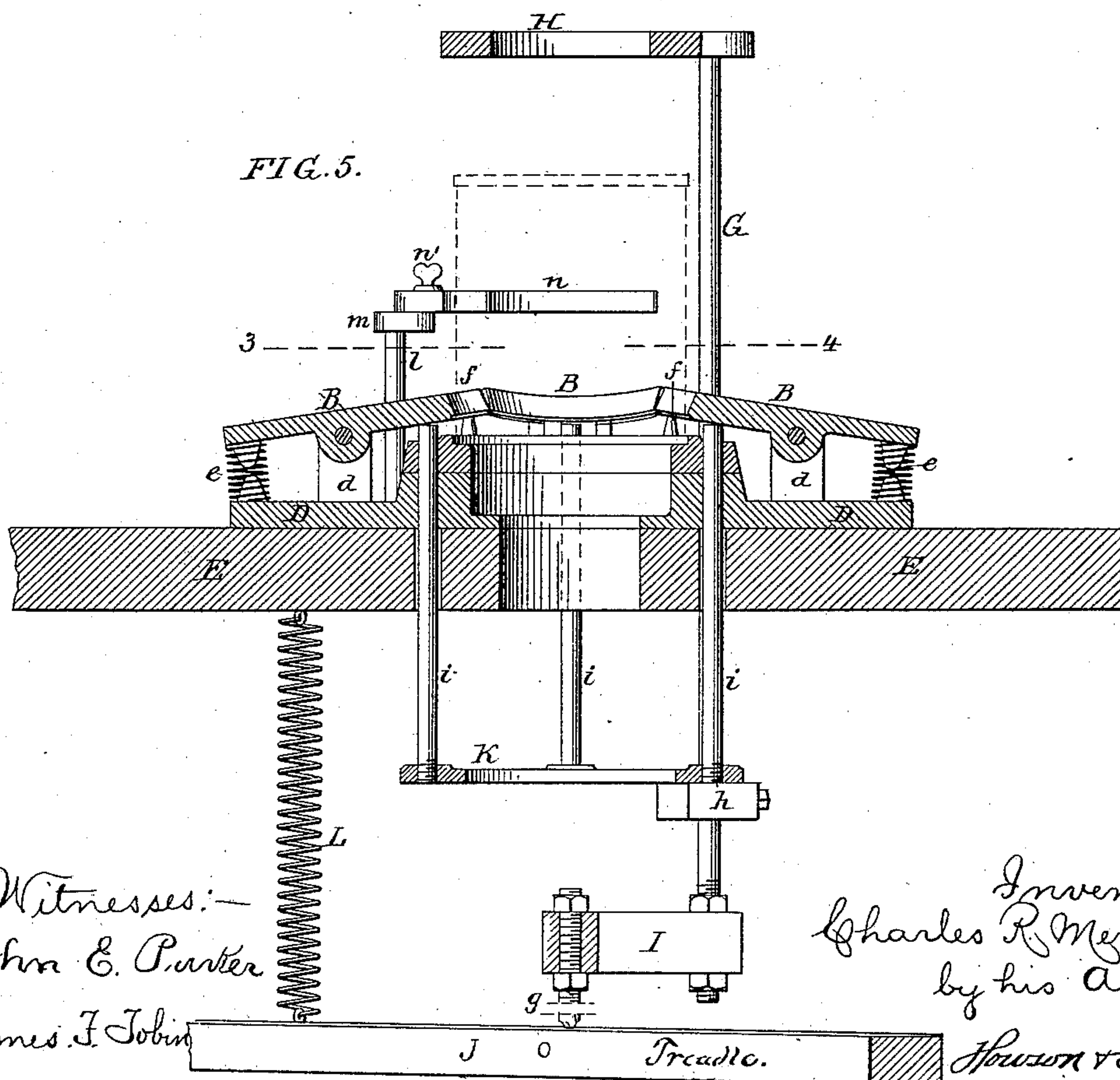
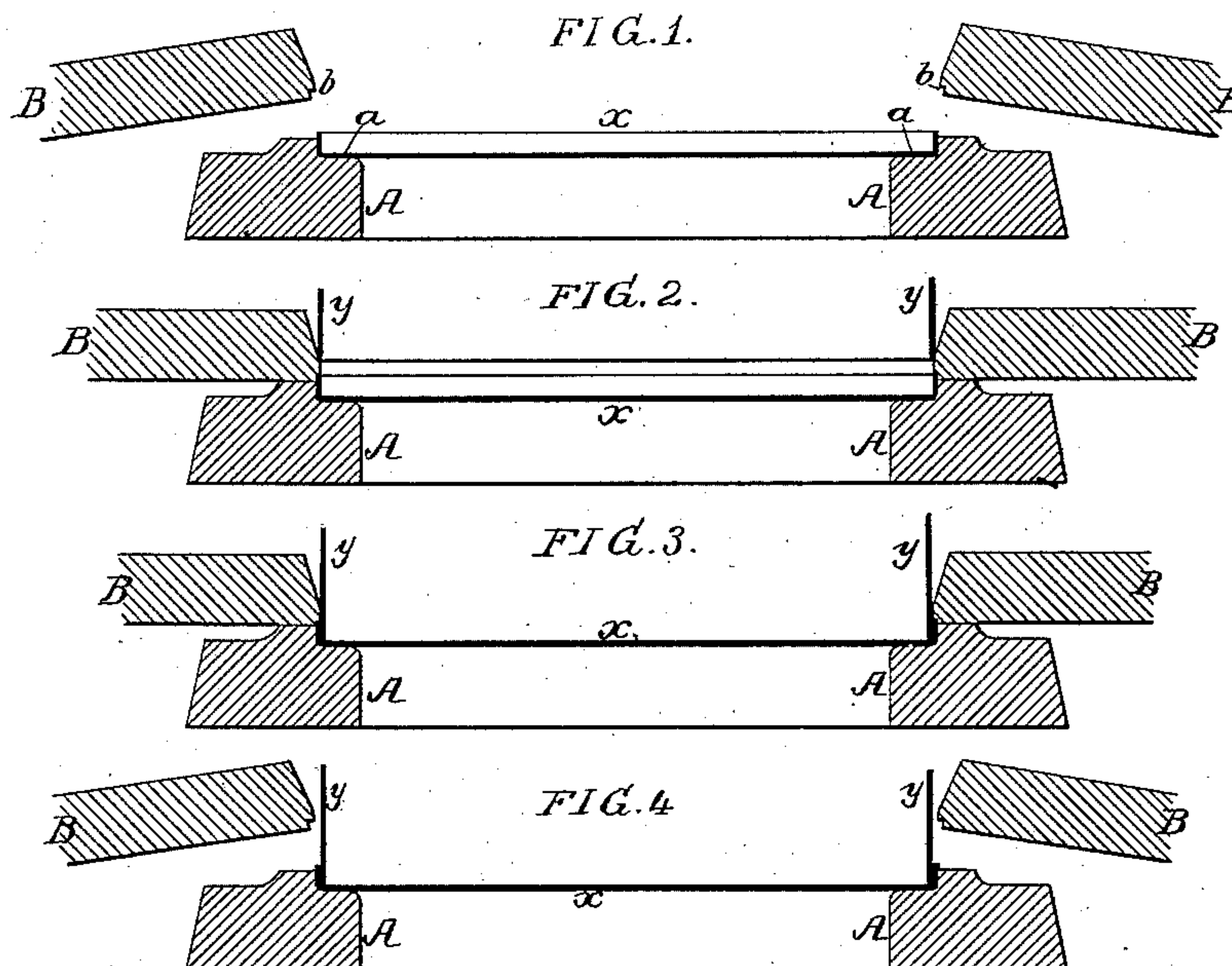
(No Model.)

2 Sheets—Sheet 1.

C. R. MERRIAM.
CAN HEADING MACHINE.

No. 299,825.

Patented June 3, 1884.



Witnesses:—
John E. Parker
James F. Tobin

Inventor.
Charles R. Merriam
by his Attys
Hewson & Sons

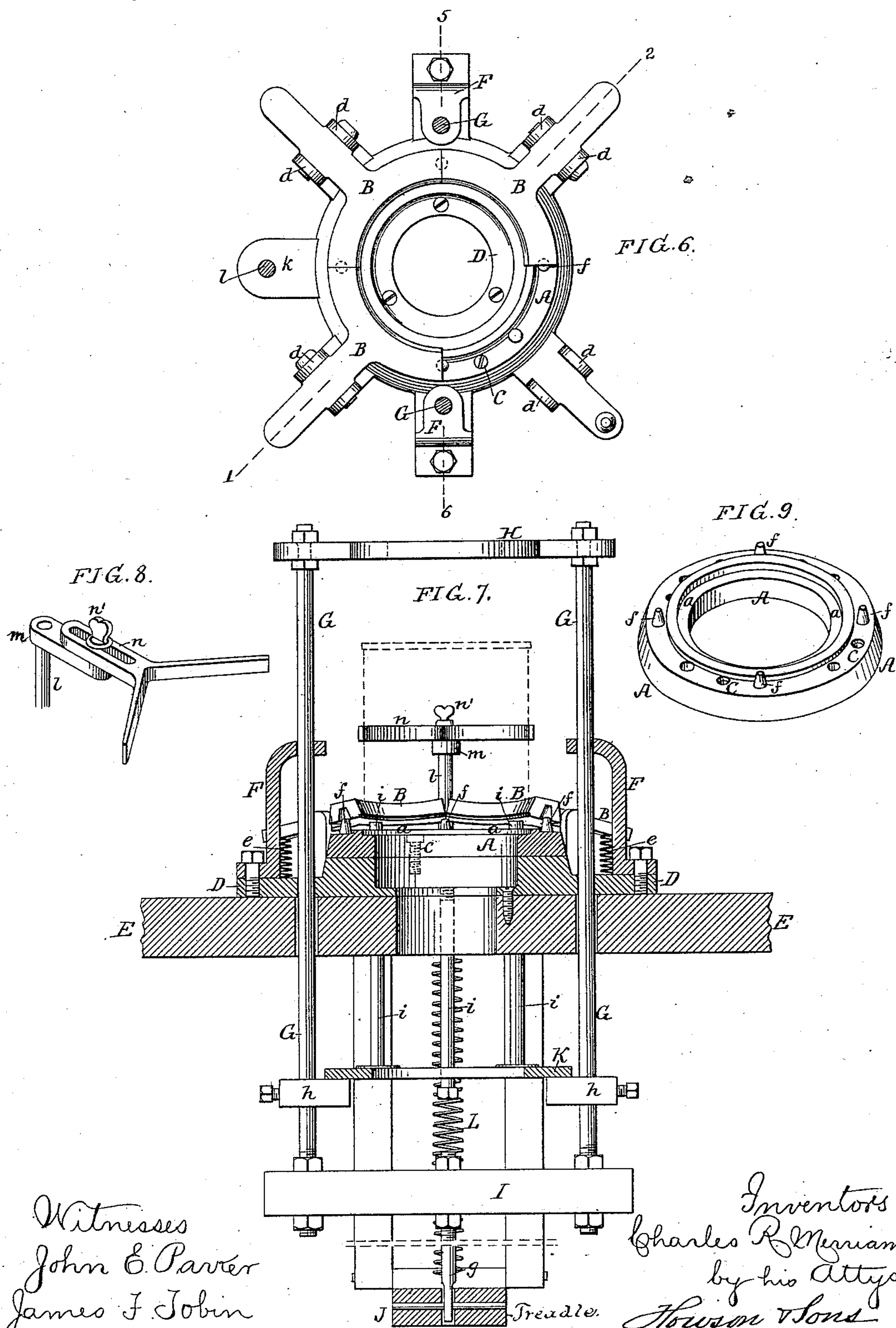
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2 Sheets—Sheet 2.

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UNITED STATES PATENT OFFICE.

CHARLES R. MERRIAM, OF PHILADELPHIA, PENNSYLVANIA.

CAN-HEADING MACHINE.

SPECIFICATION forming part of Letters Patent No. 299,825, dated June 3, 1884.

Application filed March 10, 1884. (No model.)

To all whom it may concern:

Be it known that I, CHARLES R. MERRIAM, a citizen of the United States, and a resident of Philadelphia, Pennsylvania, have invented certain Improvements in Can-Heading Machines, of which the following is a specification.

My invention relates to a machine for applying heads to cans prior to the soldering of the same.

The main object of my invention is to construct a machine for holding the head of the can in position while the body of the can is automatically guided and forced into it, this and further objects of my invention being fully described hereinafter.

In the accompanying drawings, Figures 1, 2, 3, and 4, Sheet 1, are diagrams illustrating the different steps in the operation of the machine. Fig. 5 is a vertical section of the organized machine on the line 1 2, Fig. 6. Fig. 6, Sheet 2; is a sectional plan on the line 3 4, Fig. 5, showing one of the arms removed. Fig. 7 is a vertical section on the line 5 6, Fig. 6; and Figs. 8 and 9 are detached perspective views of parts of the machine.

I will first describe the different steps in the heading of the can, referring to Figs. 1, 2, 3, and 4, in which A is a ring having an internal annular groove, *a*, to receive the can-head *x*, the edge of which projects slightly above the surface of the ring A. B are a series of segments, forming, when depressed, a complete ring, the segments having grooves *b* in the under sides, so as to lap over the edge of the can-head, the upper inside edges of the segments being beveled in order that the body *y* of the can, when depressed, will be contracted to allow it to freely enter the head. Fig. 1 is a view showing the segments elevated in order to allow the head *x* to be placed in position on the ring A. Fig. 2 shows the segments depressed and overlapping the head *x*, the body *y* of the can being in position to be depressed. Fig. 3 shows the can-body depressed and its lower edge forced into the flanged head *x*; and Fig. 4 shows the segments elevated as in Fig. 1, to permit the removal of the headed can.

Figs. 5 to 9 are views of the organized machine forming the subject of my invention.

Referring to Figs. 5, 6, and 7, D is the base of the machine, which is, in the present instance, secured to a table, E, by screws passing through a flange on the base. To this base D is secured by set-screws *c*, Fig. 6, the ring A, Fig. 9, this ring being grooved at *a*, as before described, for the reception of the head of the can, and being recessed on the outside to allow for the free escape of the surplus of powdered rosin, which is applied to the head of the can before forcing the body into the same. The segments B are hinged to lugs *d* on the base D, springs *e* between the outer ends of the segments and the base tending to keep the inner ends of the segments depressed. On the ring A at the junctions of the segments B are tapered dowel-pins *f*, which, when the segments are depressed, enter recesses in the edges of the segments, and serve to keep them in place radially and circumferentially. Passing through the base D and brackets F thereon are two guide-rods, G G, connected together at the top by a ring, H, and at the bottom by a cross-bar, I, the latter being attached to a treadle, J, by a rod, *g*. On the rods G G are two adjustable blocks, *h h*, which support a ring, K, carrying vertical rods *i*—four in the present instance—these rods passing through openings in the base D and ring A, and bearing upon the under sides of the segments B, (see Fig. 5,) the rods having a tendency to elevate the segments, owing to the lifting action of a spring, L, connected to the treadle J. The blocks *h* can be so adjusted that when the treadle is at the limit of its upward movement the segments will be raised to any desired extent. The rings A and segments B are readily detachable from the base D, in order that different-sized cans may be headed by the same machine, a new ring and new set of segments being applied when there is a change in the size of the cans. To a projection, *k*, on the base D is secured a rod or post, *l*, at the top of which is a block, *m*, and secured to this block by a set-screw, *n'*, is an adjustable gage, *n*, for insuring the proper centering of the can-body in respect to the ring A and segments B. The operation of the machine is as follows: The parts being in the position shown in Figs. 1, 5, 6, and 7, a can-head, *x*, is placed in the ring A, and the can-body held against the

gage *n*, the lower edge of the body being above the segments B. The treadle being depressed, the rods *i* are withdrawn from beneath the segments B, and the latter descend, owing to the action of the springs *e* thereon, so as to clamp the head *x* in the recess of the ring. The downward movement of the treadle continuing, the upper ring, H, strikes the top of the can-body and forces the lower edge of the same down through the opening bounded by the segments and into the can-head. On removing pressure from the treadle the latter rises under the influence of the spring L, the can-body being first relieved from the pressure of the ring H, and the rods *i* then acting on the segments B so as to elevate the same and free the can, which can then be removed prior to a repetition of the operation.

I claim as my invention—

20 1. The combination of the base D, the ring A, the pivoted segments B, springs for acting thereon, the treadle J, and the can-depressing ring H, and segment-elevating rods *i*, controlled by said treadle, as set forth.

2. The combination of the ring A, the pivoted segments B, the operating-rods *i* therefor, the treadle J, and the ring K, carrying said rods and supported by but adjustable in respect to the treadle, as set forth. 25

3. The combination of the ring A, having dowel-pins *f*, with the segments B, having end recesses to which said dowel-pins are adapted when the segments are depressed, as set forth. 30

4. The combination of the ring A and segments B, means for operating said segments and depressing a can, and an adjustable gage, *n*, whereby said can is centered in respect to the ring and segments, as set forth. 35

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses. 40

CHARLES R. MERRIAM.

Witnesses:

JOHN CLAYTON,
HARRY SMITH.