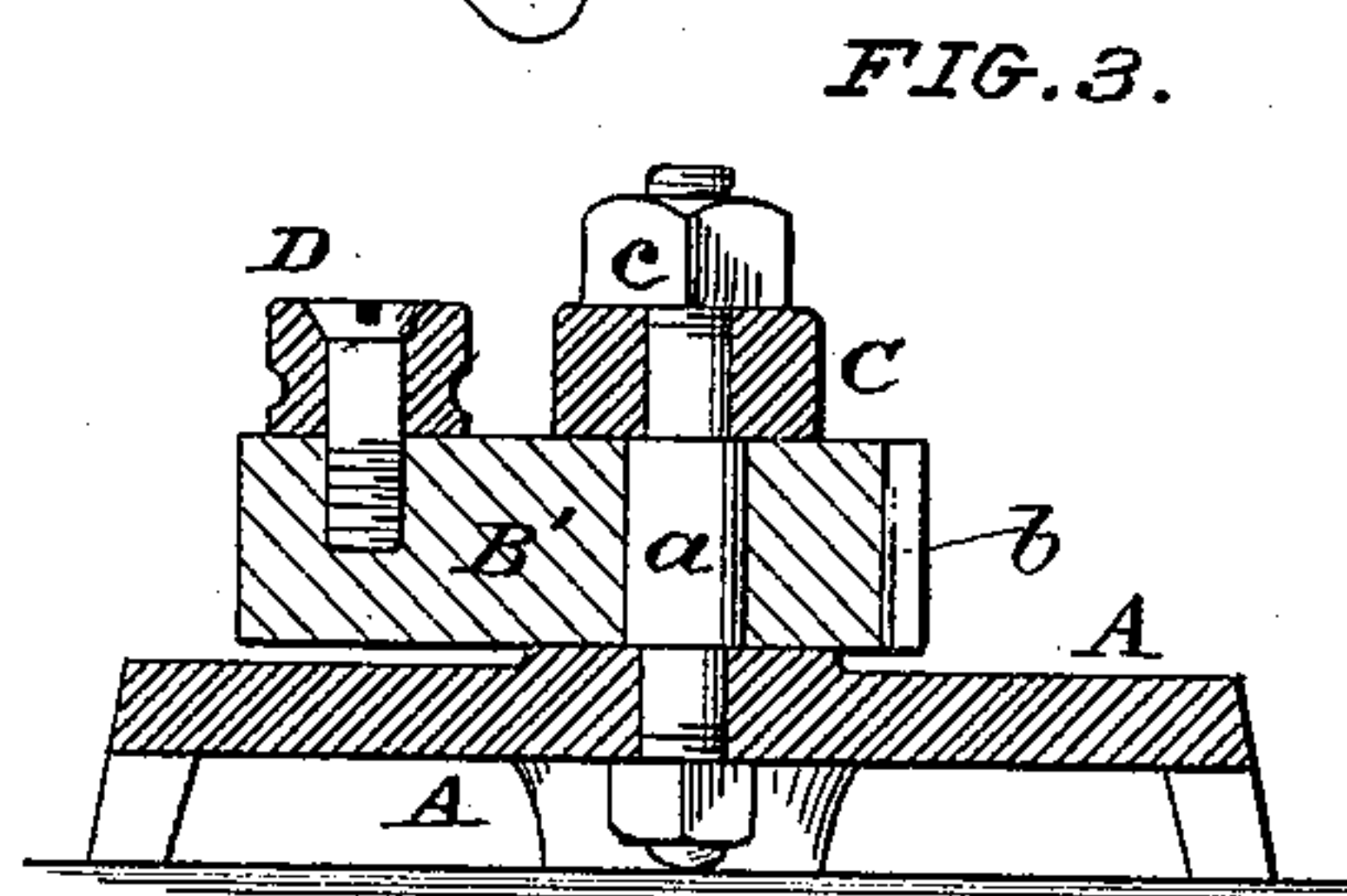
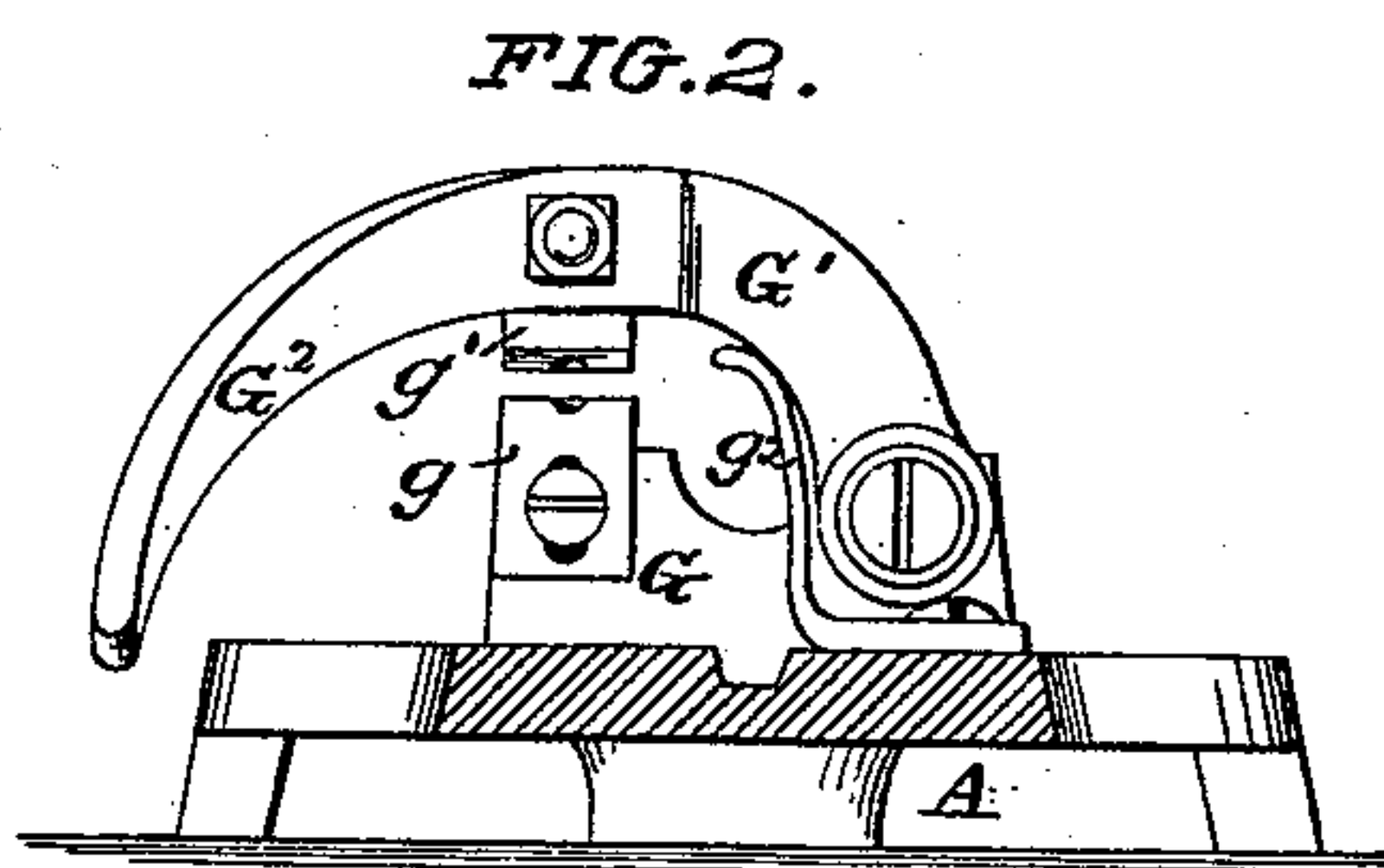
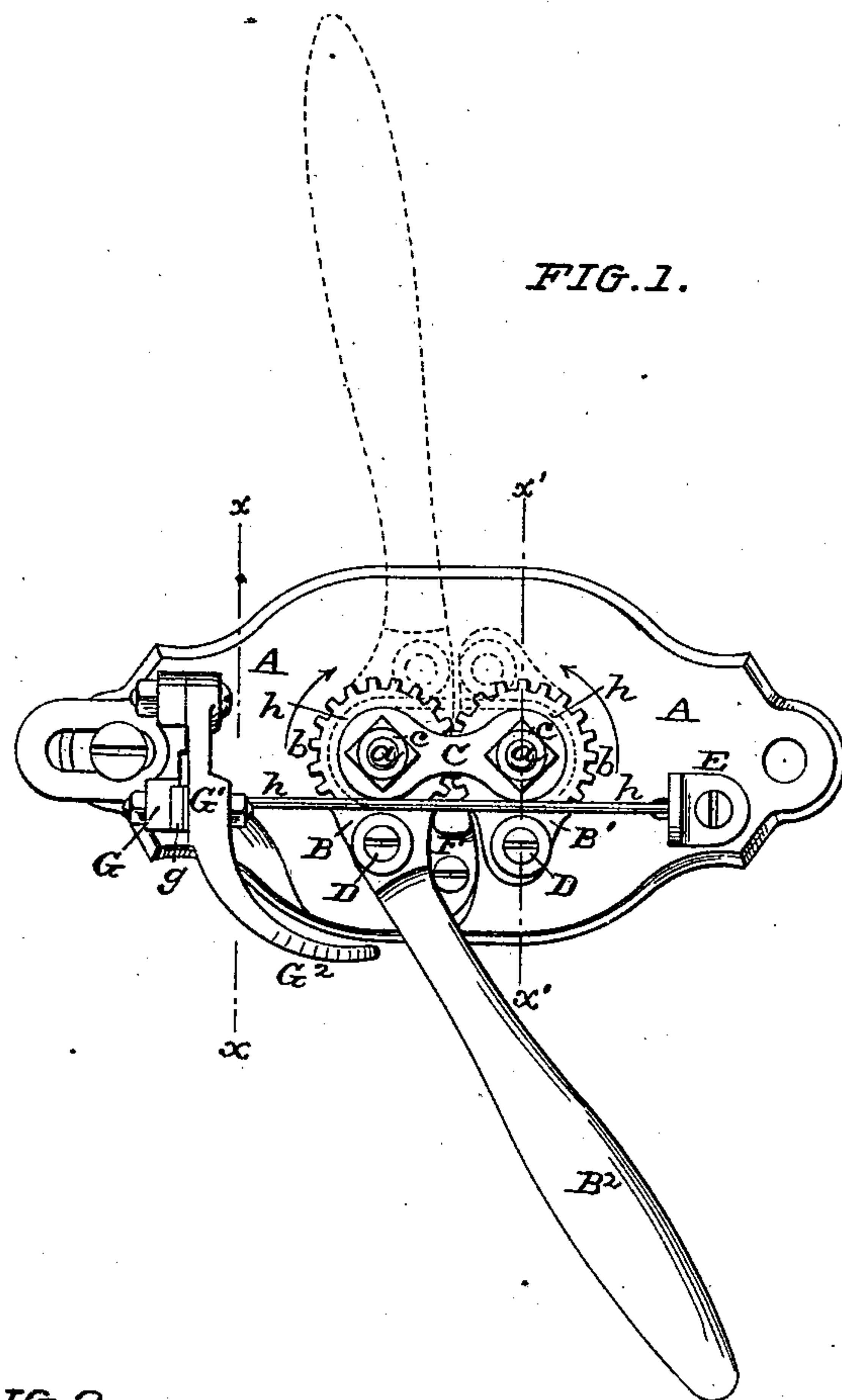


S. E. SMITH.
Bail-Forming Machine.

No. 226,364.

Patented April 6, 1880.



ATTEST:

E. L. Morse

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INVENTOR:

Sylvester E. Smith
per *Robert Burns*
att'y.

UNITED STATES PATENT OFFICE.

SYLVESTER E. SMITH, OF ST. LOUIS, MISSOURI.

BAIL-FORMING MACHINE.

SPECIFICATION forming part of Letters Patent No. 226,364, dated April 6, 1880.

Application filed October 21, 1879.

To all whom it may concern:

Be it known that I, SYLVESTER E. SMITH, of the city of St. Louis, in the State of Missouri, have invented certain Improvements in
5 Machines for Forming Bails; and I do hereby declare the following to be a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification.

10 This invention relates to the construction of a machine for bending wire bails for pans or other purposes in a perfect and quick manner; and this invention consists—

First, in the provision on a suitable base or
15 bed plate of a fixed block or templet, around which the wire is bent to form the bail, and a pair of turning formers journaled on the base and geared together so as to turn in opposite directions, these formers being provided with
20 bending pins or rollers, which engage the ends of the wire and bend the same into shape, as the turning formers are rotated by a handle, with which one of these formers is provided for this purpose.

25 Secondly, in the combination, with said bending device, of a shears to cut the wire to proper lengths. This device is adjustable on the bed-plate to cut various lengths of wire, and its movable jaw is depressed to cut the
30 wire by the handle of the bending or forming device as it is performing its functions, as will hereinafter more fully appear.

In the drawings, Figure 1 is a top view, illustrating my improvement. Fig. 2 is a cross-
35 section at line $x x$. Fig. 3 is a cross-section at line $x' x'$.

In the drawings, A represents the bed-plate, having journal pins or studs a , upon which are pivoted the turning formers $B B'$. They also
40 support the fixed block or templet C, around which the bail is formed, and this former is held in place by nuts c , which screw upon the screw-threaded upper ends of the journal-pins, as clearly indicated in Fig. 3.

45 The formers $B B'$ are geared together by gear-teeth b , as shown, so that they will move in opposite directions, and one of them is provided with a handle, B^2 , by which they are operated.

50 D are bending pins or rollers attached to the formers $B B'$. E is an adjustable stop for gaging the length of the wire.

F is an adjustable knee-piece for supporting the center of the bail while it is being bent and preventing the same from bulging out. 55

The wire-cutting shears consists of a fixed jaw, G, adjustably secured to the bed-plate A, and a pivoted portion, G' , each portion being provided with the usual removable cutter-jaws or knives $g g'$. The pivoted portion G' is
60 formed with an inclined curved extension, G^2 , which projects under the handle B^2 of the bail-bending mechanism, so that as said handle is turned to form the bail it will depress the pivoted portion of the shears and cause it to
65 cut off the wire to the proper length. The portion G' is held up and the jaws kept open by a spring, g^2 , as indicated in Fig. 2.

It is intended to have various sizes of tem-
70 plets C, which can take the place of each other in the machine, so as to enable various sizes of bails to be formed, and for this purpose the stop E, shears G G' , and knee-piece F, are made adjustable, so as to suit the different lengths, &c., of the wire required to be used
75 in forming the different sizes of bails.

The operation of my improved machine is as follows: The wire h is pushed between the shears and against the stop E. On the handle
80 B^2 being turned the shears are first operated to cut off the wire to the proper length, after which the bending pins or rollers D (turning in opposite directions) bend the ends of the wire around the former or templet C. In Fig.
85 1 the position of the straight wire blank is shown in full lines and the formed bail in dotted lines, as also the two positions of the formers, &c.

Having thus fully described my said inven-
90 tion, what I claim is—

1. The formers $B B'$, geared together and provided with bending-pins or rollers D D, in combination with the templet or block C, sub-
95 stantially as and for the purpose set forth.

2. The shears G G' , provided with an in-
95 clined extension, G^2 , in combination with the handle B^2 of the bending mechanism, as and for the purpose set forth.

Witness my hand this 16th day of October, A. D. 1879.

SYLVESTER E. SMITH.

In presence of—

ROBERT BURNS,
JULIUS SAUER.