

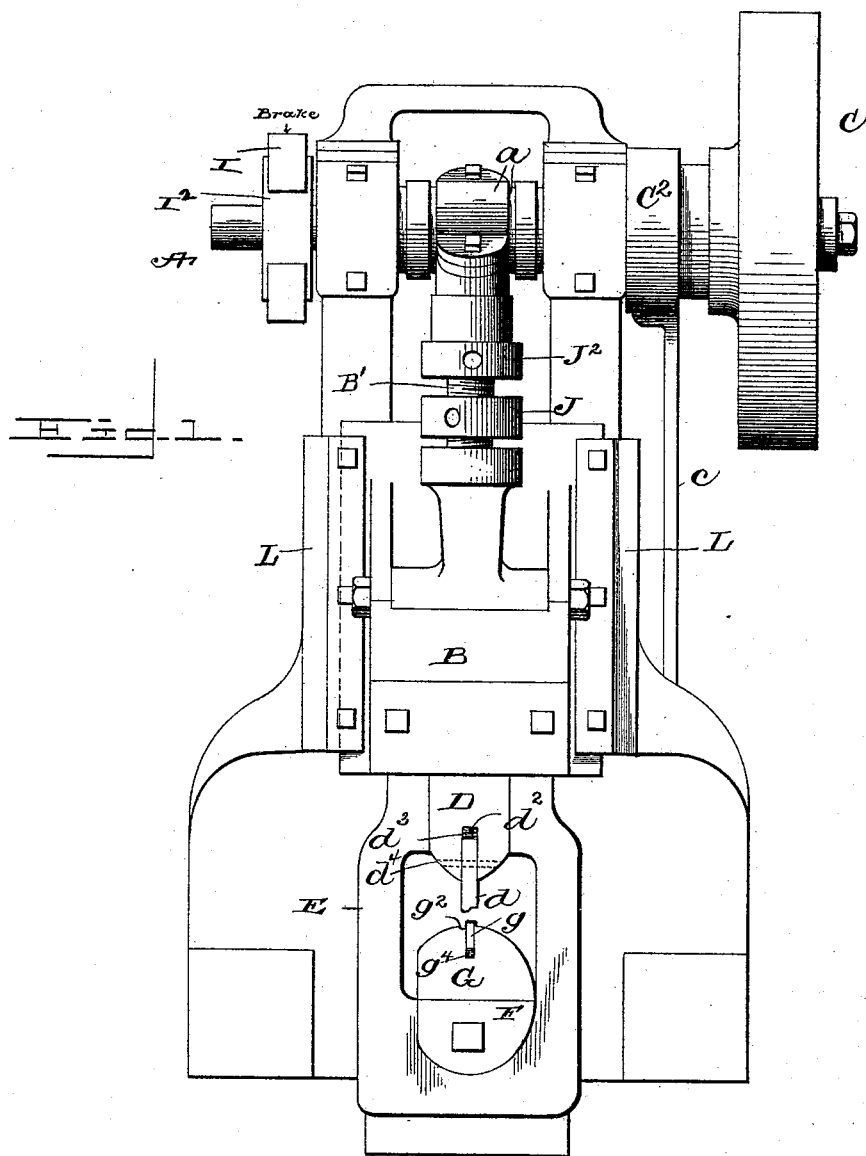
(No Model.)

4 Sheets—Sheet 1.

R. GREGG.
CAN MAKING MACHINE.

No. 491,015.

Patented Jan. 31, 1893.



Witnesses
John D. Davis
E. H. Parry

Inventor
Robert Gregg,
by *A. S. Dyreforth,*
his Attorney

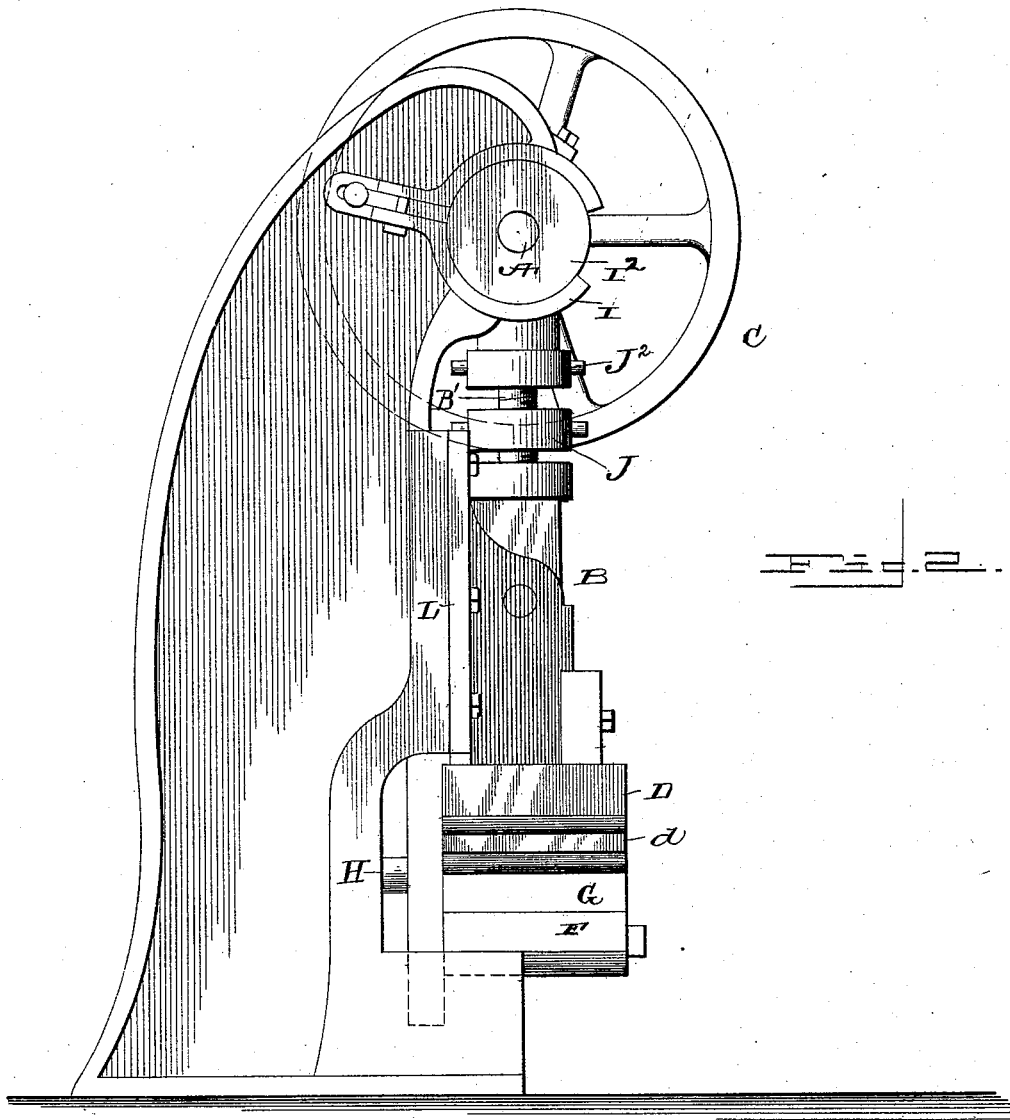
(No Model.)

4 Sheets—Sheet 2.

R. GREGG.
CAN MAKING MACHINE.

No. 491,015.

Patented Jan. 31, 1893.



Witnesses
John D. Irvine
C. J. Parry.

Inventor
Robert Gregg,
by *A. S. Dyke*,
his Attorney.

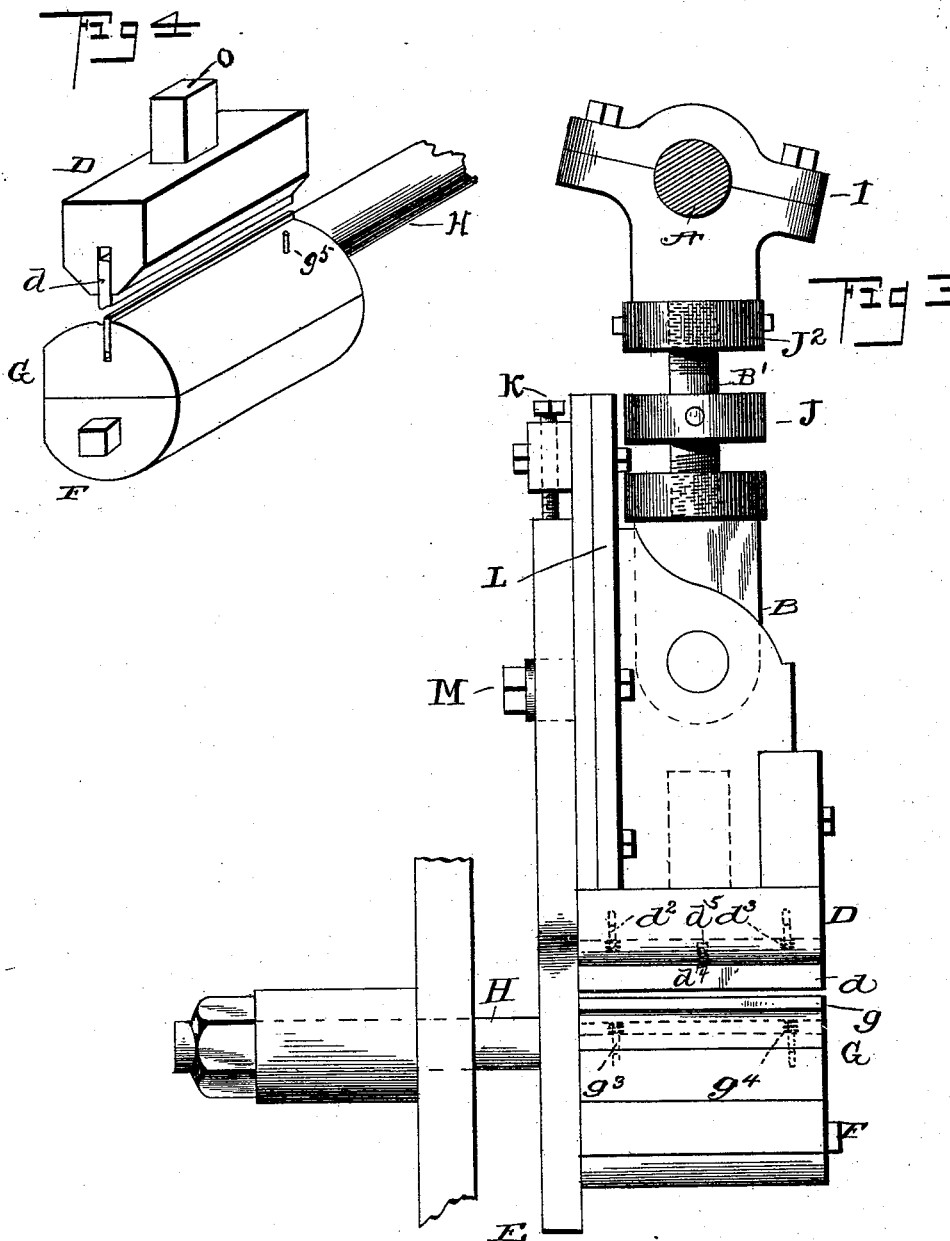
(No Model.)

4 Sheets—Sheet 3.

R. GREGG.
CAN MAKING MACHINE.

No. 491,015.

Patented Jan. 31, 1893.



Witnesses
John D. Smith
E. H. Parry

Inventor
Robert Gregg,
By his Attorney,
A. L. Dyer

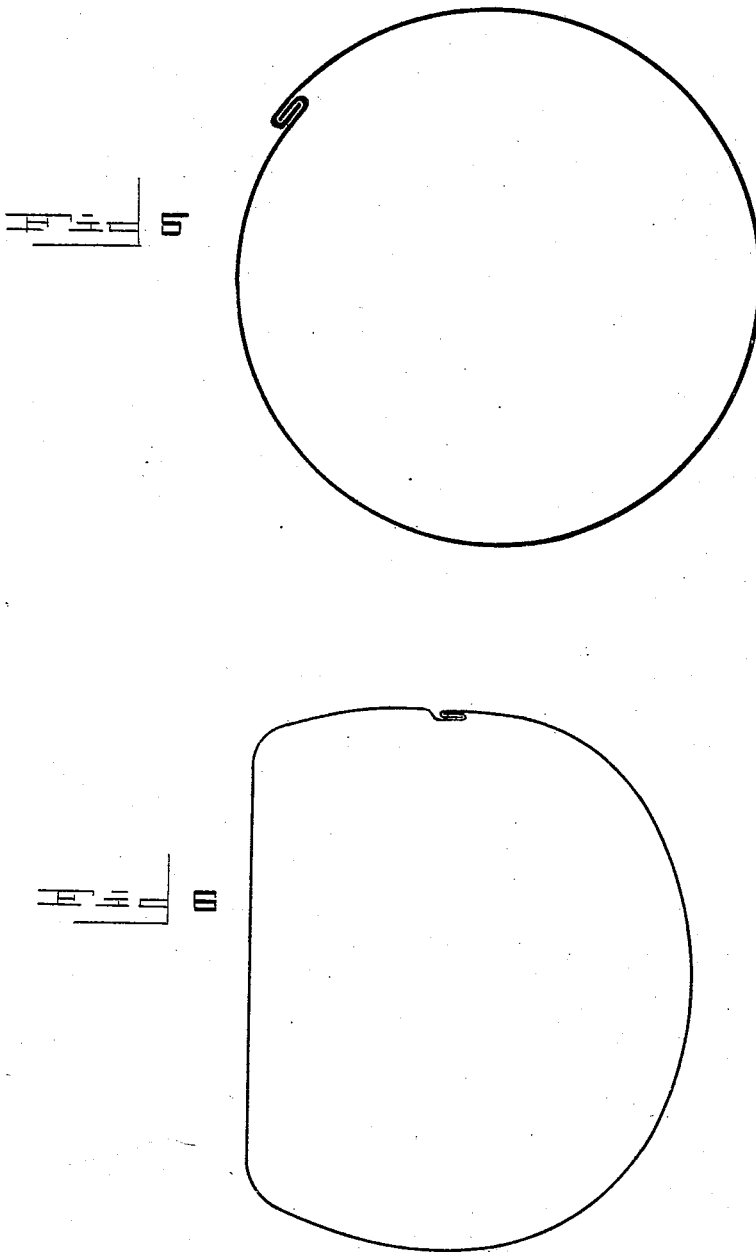
(No Model.)

4 Sheets—Sheet 4.

R. GREGG.
CAN MAKING MACHINE.

No. 491,015.

Patented Jan. 31, 1893.



Witnesses
John Danvers
G. Parry

Inventor
Robert Gregg,
by A. S. Dyke-ford,
his Attorney

UNITED STATES PATENT OFFICE.

ROBERT GREGG, OF CHICAGO, ILLINOIS, ASSIGNOR TO THE FAIRBANK
CANNING COMPANY, OF SAME PLACE.

CAN-MAKING MACHINE.

SPECIFICATION forming part of Letters Patent No. 491,015, dated January 31, 1893.

Application filed December 15, 1891. Renewed December 13, 1892. Serial No. 455,008. (No model.)

To all whom it may concern:

Be it known that I, ROBERT GREGG, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have
5 invented certain new and useful Improvements in Can-Making Machines; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to
10 which it appertains to make and use the same.

This invention relates to the manufacture of sheet metal cans, and particularly to the manufacture of cans of the kind having a side seam formed by interlocking edges and secured by solder, and in which the body of
15 the can is given a peculiar configuration.

The object of the present invention is to produce a machine whereby the side seam of a sheet-metal can may be pressed to secure
20 the parts firmly together; furthermore, to produce a machine whereby any desired configuration may be given the body of the can; furthermore, to produce a machine, whereby the side seam of a sheet metal can may be
25 pressed to secure the parts firmly together, and, by the same movement of the parts of the machine, any desired configuration be given the body of the can, thus obviating necessity for any manipulation of the body by
30 hand or otherwise to give it the desired form.

With these objects in view, the invention consists essentially in a reciprocating-frame, provided at its operative end with a blade or reduced portion of approximately the width
35 of the seam of the can-body and having attached to it a block, there being a fixed block attached to the body or stationary frame of the machine, provided with a blade or reduced portion corresponding to that on the reciprocating portion, the exterior of the blocks
40 being of a form corresponding to the shape to be taken by the completed can.

The invention is illustrated in the accompanying drawings in which:—

45 Figure 1—is a front elevation of the operative parts of a machine constructed in accordance with my invention; Fig. 2—is a side elevation thereof; Fig. 3—is a view in side elevation, showing the operating mechanism removed from the frame; Fig. 4—is a view in
50 perspective, showing the hammer, the upper

and lower blocks constituting the mandrel with grooves, and the blades; Fig. 5—is a view showing the can body before being introduced into the machine, and Fig. 6—is a
55 view showing the can body after being acted upon by the machine.

In the drawings, A represents the main driving-shaft of the machine which is provided with a crank-bend *a*, at a point near its
60 center, to which crank-bend is attached, in any suitable way, the reciprocating frame B.

Adjacent to the end of the shaft A is the pulley-wheel C and interposed between the shaft of the wheel C, and the shaft A is a
65 clutch C² operated by a rod *c*, extending to the bottom of the machine or to any other suitable place to be reached by the hand or foot of the operator.

The mechanism by which a reciprocating
70 motion is imparted to the frame B, and the means by which the motion is governed need not be here described in detail as it forms no part of the present invention, being substantially the same as that employed in stamp
75 presses.

Connecting the frame B and the crank-bearing, is a right and left hand threaded rod B' carrying a rigid collar J and movable in the collar J², the object of which rod is to lengthen
80 or shorten the downward movement of the frame B, the collar J² serving as a binding-nut to hold the said rod at any desired adjustment.

Attached to the frame B which is designed
85 to slide up and down in suitable guide-ways L in the frame of the machine, is a block D, forming a hammer, provided on its lower face with a removable blade *d*, preferably spring-seated and held in position against longitudinal
90 movement by pins; the pins being designated by *d*² and a suitable form of spring by *d*³. In order to prevent the blade *d* from dropping out when the frame is reciprocated, and at the same time permit of its having
95 vertical play, a transverse pin *d*⁴ is employed which passes through a vertical slot *d*⁵ in the blade, as clearly seen in Fig. 3. The lower face of the blade *d* is preferably inclined or has an offset for the purpose hereinafter explained.
100

E represents a yoke preferably of metal and

of proportions which will insure its rigidity. This yoke is formed with the reciprocating frame or is securely fastened thereto and the frame and yoke may be vertically adjusted
5 by means of a set screw K, a binding-nut M, serving to hold the said parts in their adjusted position.

Formed with or attached to the yoke E is a block F which projects from the yoke a distance corresponding to the length of the can-body upon which the machine is to be used, and this block is of a form corresponding to the shape to be assumed by one portion of the finished can-body.

15 Permanently attached to the frame of the machine by means of a rod or bar H is a block G, which projects through the yoke E when the parts of the machine are agrouped. The outer end of this block is flush with that of
20 the block F.

In the upper face of the block G is a blade *g*, flat on its upper face and of about the same size as the blade *d* in the block D, and beside it, in the upper surface of the block G, running the entire length of the blade, is a groove
25 *g*². The blade may be spring-seated, if desired, and held by pins, as shown at *g*³ and *g*⁴. Near its rear end, the block G has a pin or stop *g*⁵. The two blades are placed in line
30 with each other except as to the depending edge of the upper blade, so that a body placed between them will receive pressure from both sides for a space equal to the widths of the blades, as the reciprocating frame descends;
35 but the depending edge of the blade *d* will press the metal of the can-body next to the seam into the groove in block G, forming a groove here in the can-body for solder.

The blocks F and G, together constitute a
40 mandrel and are each provided with a flat side, in order to form a can-body with a flat side adapting it to be strapped to a person and remain in a comparatively stationary position.

45 While one particular form of mandrel is herein shown, it will, of course, be understood that I do not limit myself in this respect, as the invention contemplates the utilization of blocks of any form for giving any desired
50 shape to the can-body.

In the operation of the machine, a can-body having interlocking hooks on its meeting faces, as shown in Fig. 3, of the drawings, is pushed upon the mandrel until stopped by the pin *g*⁵,
55 and, by the hand of the operator, the interlocking edges of the body are brought to a position between the blades *d* and *g*. When the can-body is thus properly placed in the machine, the clutch C² is operated by the rod

c connecting the shaft A with the driving
60 wheel C, and, the parts being so constructed that one complete revolution is given the shaft A, the frame B descends carrying with it the block D, the loop E, and the block F. This movement will bring the blades together
65 and press the interlocking edges of the body closely together, the offset or upper edge or ledge of the blade *d* coming upon the extreme edge of the superimposed part and pressing
70 it down and the lower or depending edge pressing the metal into the groove in the block, grooving the metal. Simultaneously with this action, the block F carried by the yoke E descends, and draws down the material of the can, causing it to conform to the
75 shape of the exteriors of the blocks F and G.

The mechanism herein described may be controlled by a brake I operating in a wheel I² fixed upon the main shaft A.

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

1. In a machine for use in making sheet metal cans, a frame capable of reciprocating movement and having a blade on its lower
85 face, a block connected to the reciprocating frame, a stationary block connected with the frame of the machine, and provided with a blade on its upper face, both blocks constituting a mandrel having a configuration cor-
90 responding to the shape to be assumed by the completed can, substantially as described.

2. In a machine for use in making sheet metal cans, a frame capable of a reciprocating movement having a blade at its lower
95 end, a yoke depending from the reciprocating frame having a block attached to it, and a stationary block attached to the frame of the machine projecting into the yoke, the stationary block being provided with a blade cor-
100 responding to that on the block carried by the reciprocating frame, substantially as described.

3. In a machine for use in making sheet metal cans, a frame capable of a reciprocating
105 movement, a block secured to the frame, and a stationary block projecting from the frame of the machine, both blocks constituting a flattened mandrel whereby a corresponding contour will be given the can operated upon,
110 substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

ROBERT GREGG.

Witnesses:

S. H. McLAUGHLIN,
THOMAS I. KOOP.