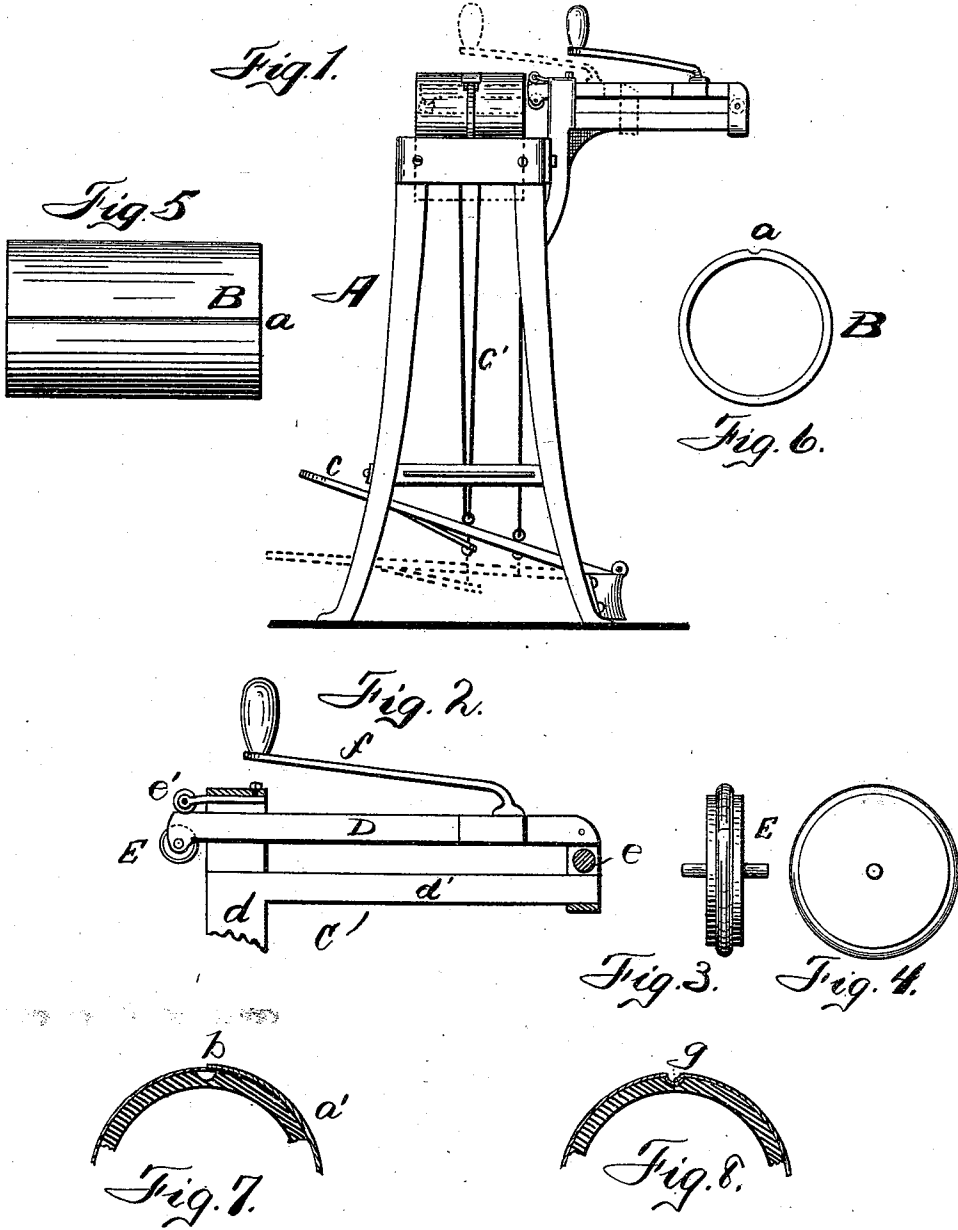


(No Model.)

J. N. LAKE & J. CLARK.  
FORMING MACHINE.

No. 555,575.

Patented Mar. 3, 1896.



WITNESSES:

*Charles W. Morvin.*  
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# UNITED STATES PATENT OFFICE.

JUDSON N. LAKE AND JASPER CLARK, OF ELMIRA, NEW YORK.

## FORMING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 555,575, dated March 3, 1896.

Application filed May 18, 1895. Serial No. 549,746. (No model.)

To all whom it may concern:

Be it known that we, JUDSON N. LAKE and JASPER CLARK, of Elmira, in the county of Chemung, in the State of New York, have invented new and useful Improvements in Forming-Machines, of which the following, taken in connection with the accompanying drawings, is a full, clear, and exact description.

This invention relates to improvements in forming-machines upon which Letters Patent of the United States were granted to Jasper Clark, dated May 28, 1895, No. 539,856, having more particular reference to the mechanism for soldering the laps or joints of the cylinder.

Our object is to produce a mechanism to be applied to forming-machines for easily, efficiently, and cheaply soldering or uniting the sides of the cylinder or meeting edges of the receptacle; and to that end our invention consists in the several new and novel features and combinations of parts hereinafter described and which are specifically set forth in the claim hereunto annexed. It is constructed as follows, reference being had to the accompanying drawings, in which—

Figure 1 is a side view of a forming-machine provided with our improvements. Fig. 2 is an enlarged view of the grooving apparatus. Figs. 3 and 4 are edge and side views, respectively, of the grooving-wheel. Fig. 5 is a top plan view of the mandrel. Fig. 6 is a top view thereof. Fig. 7 is a cross-section of a segment of the mandrel, showing the lap of the meeting edges of the cylinder. Fig. 8 is a similar view showing them grooved ready for the solder.

A is the frame constructed in any ordinary manner.

B is a mandrel having a longitudinal groove *a*, preferably upon its upper face, and is vertically yieldingly mounted, as set forth in the application above referred to, and means are provided for clamping the metal *a'* around the mandrel, said meeting edges overlapping each other substantially as shown at *b* in Fig. 7, one of the edges being within the line of the groove *a*.

*c* is a treadle suitably mounted and is connected to the frame in which the mandrel is mounted by rods *c'*, so that when the treadle

is depressed to the position shown in Fig. 1 in dotted lines the mandrel will take the position shown in dotted lines in the same figure.

Upon the rear of the frame A is mounted a bracket C, comprising an upright *d* and rearwardly-extending arm *d'*. Upon the bracket C is slidingly mounted an arm D, one end of which is provided with a roller *e*, which allows it to move longitudinally upon the arm of the bracket *d'*. In the opposite end is journaled the grooving-wheel E, constructed substantially as shown, and above the arm D is a frictional roller *e'* yieldingly mounted and adapted to engage with the upper edge of said arm D.

*f* is an operating-handle secured to the arm D.

When the metal has been clamped around the mandrel so that the meeting edges overlap each other, as above described, and the mandrel brought down to the position shown in dotted lines in Fig. 1, the grooving-wheel E will be in line with the groove *a* upon the mandrel. We then force the arm D over and allow the grooving-wheel E to force the lap into the groove, as shown in Fig. 8, thereby forming what we are pleased to call a "grooved lap" *g*. We then pour metal into the groove thus formed, thereby soldering the meeting edges together.

Having described our invention, what we claim, and desire to secure by Letters Patent, is—

In a forming-machine, the frame, a vertically-movable grooved mandrel mounted thereon, means for moving the mandrel, and a bracket projecting from one end of the frame, combined with a sliding arm mounted on the bracket, a handle attached to the top of the arm and extending toward the mandrel, the grooving-wheel E journaled upon the inner end of the arm, and the frictional wheel *e'* mounted upon the frame and bearing upon the top edge of the arm, substantially as shown.

In witness whereof we have hereunto set our hands on this 20th day of April, 1895.

JUDSON N. LAKE.  
JASPER CLARK.

In presence of—

JAMES M. MOCKLER,  
EDWARD A. PRENTICE.