

No. 629,451.

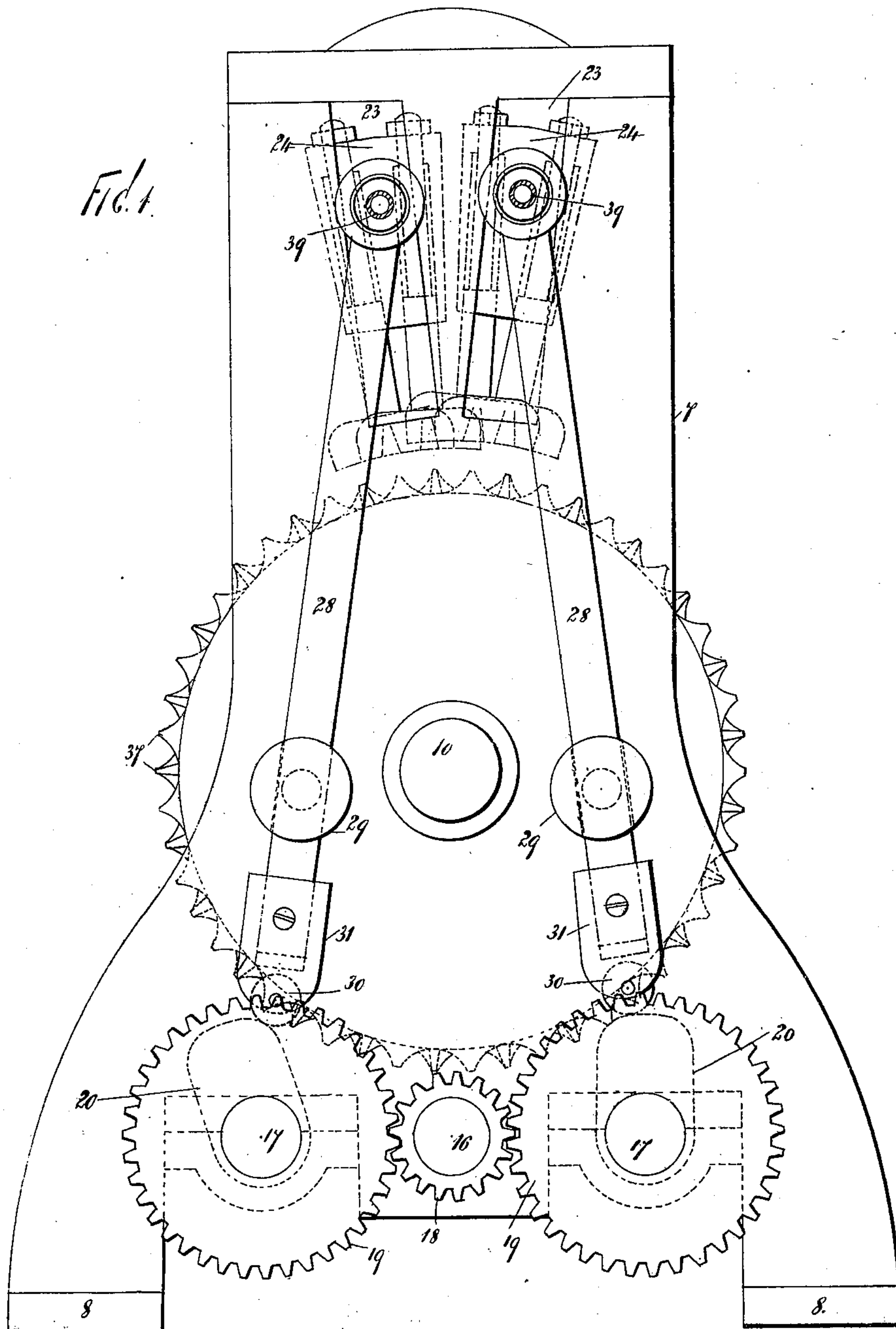
Patented July 25, 1899.

H. T. LOOMIS.  
MACHINE FOR MAKING TRIMMINGS.

(Application filed Sept. 20, 1898.)

(No Model.)

4 Sheets—Sheet 1.



WITNESSES

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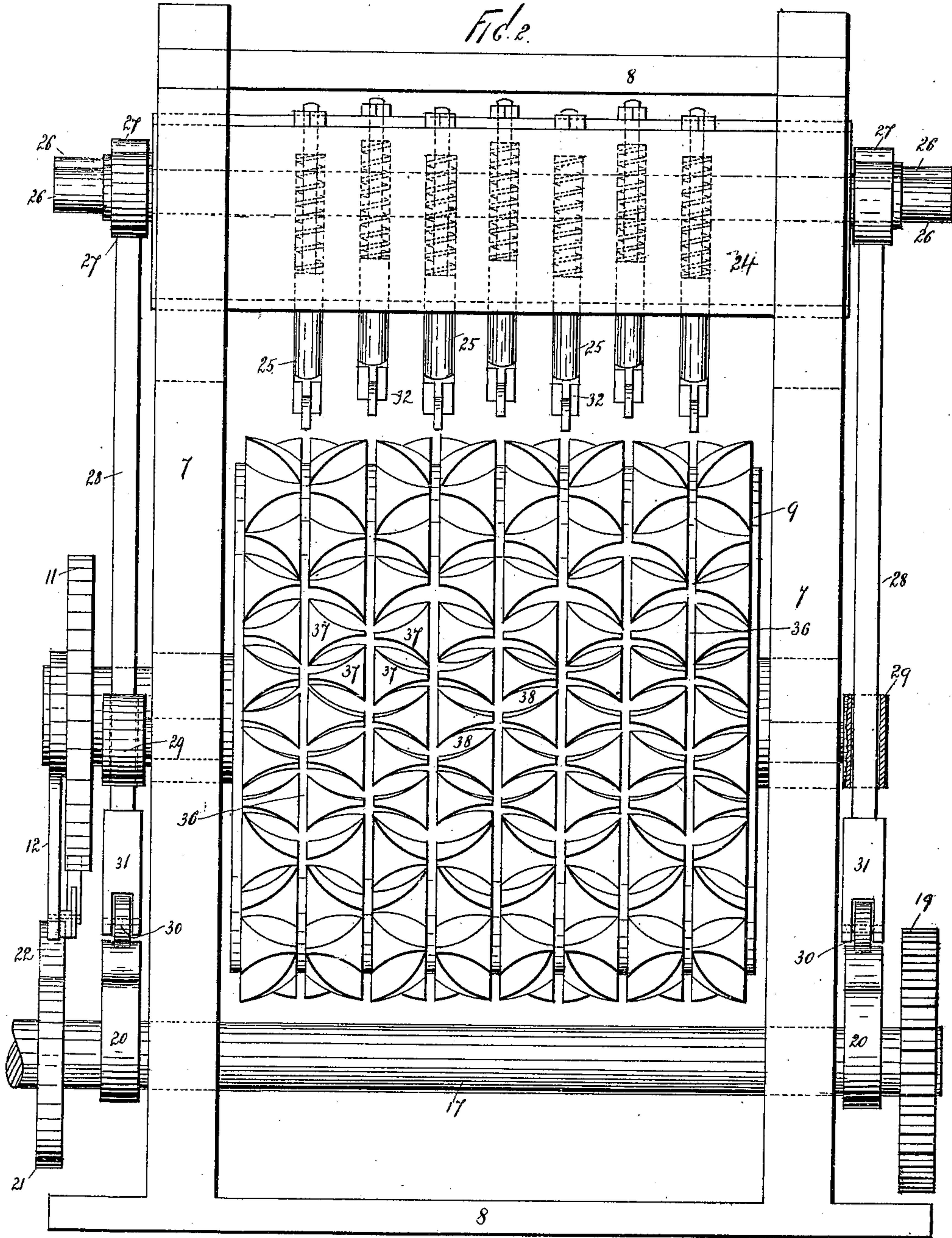
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4 Sheets—Sheet 2.



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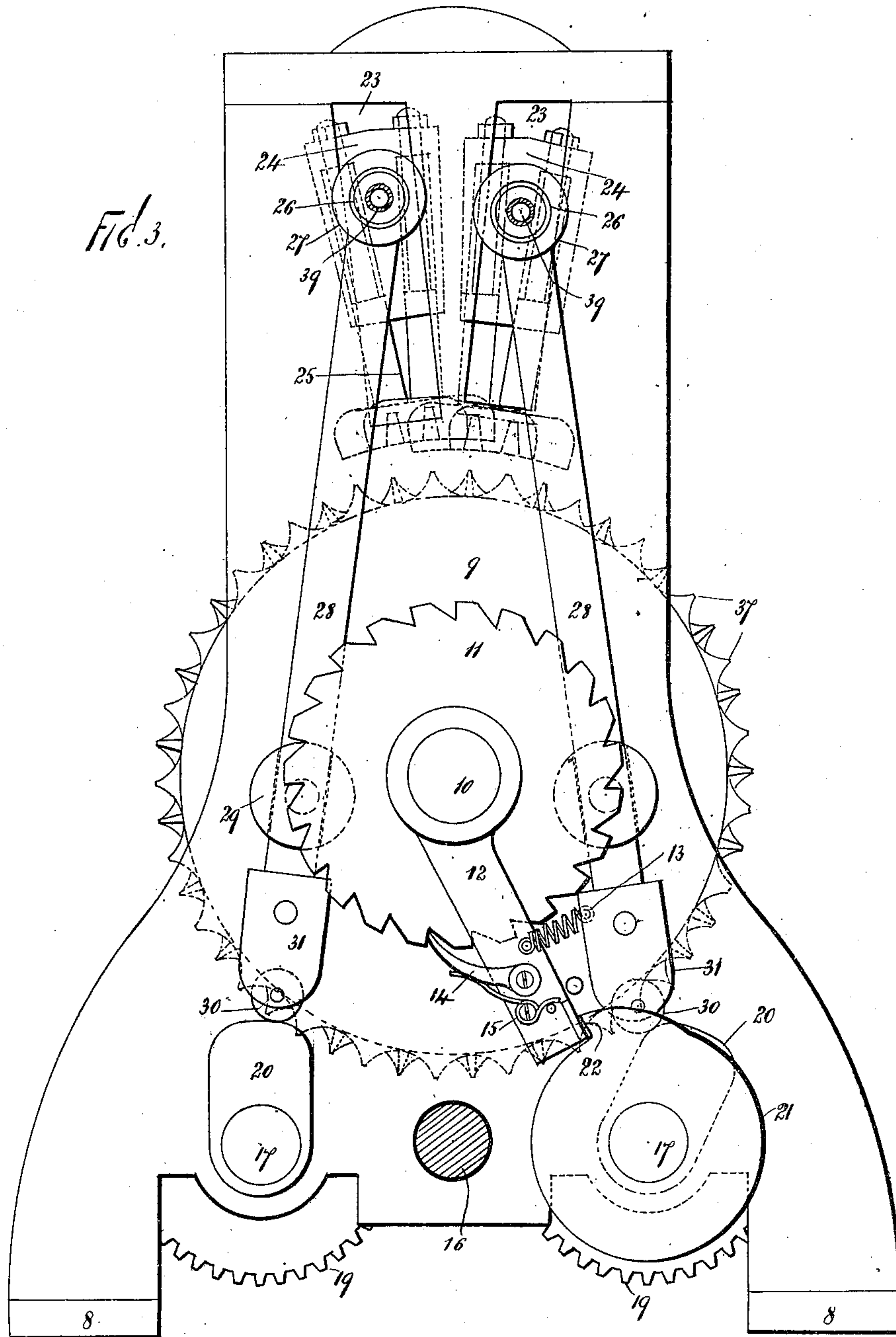
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4 Sheets—Sheet 3.



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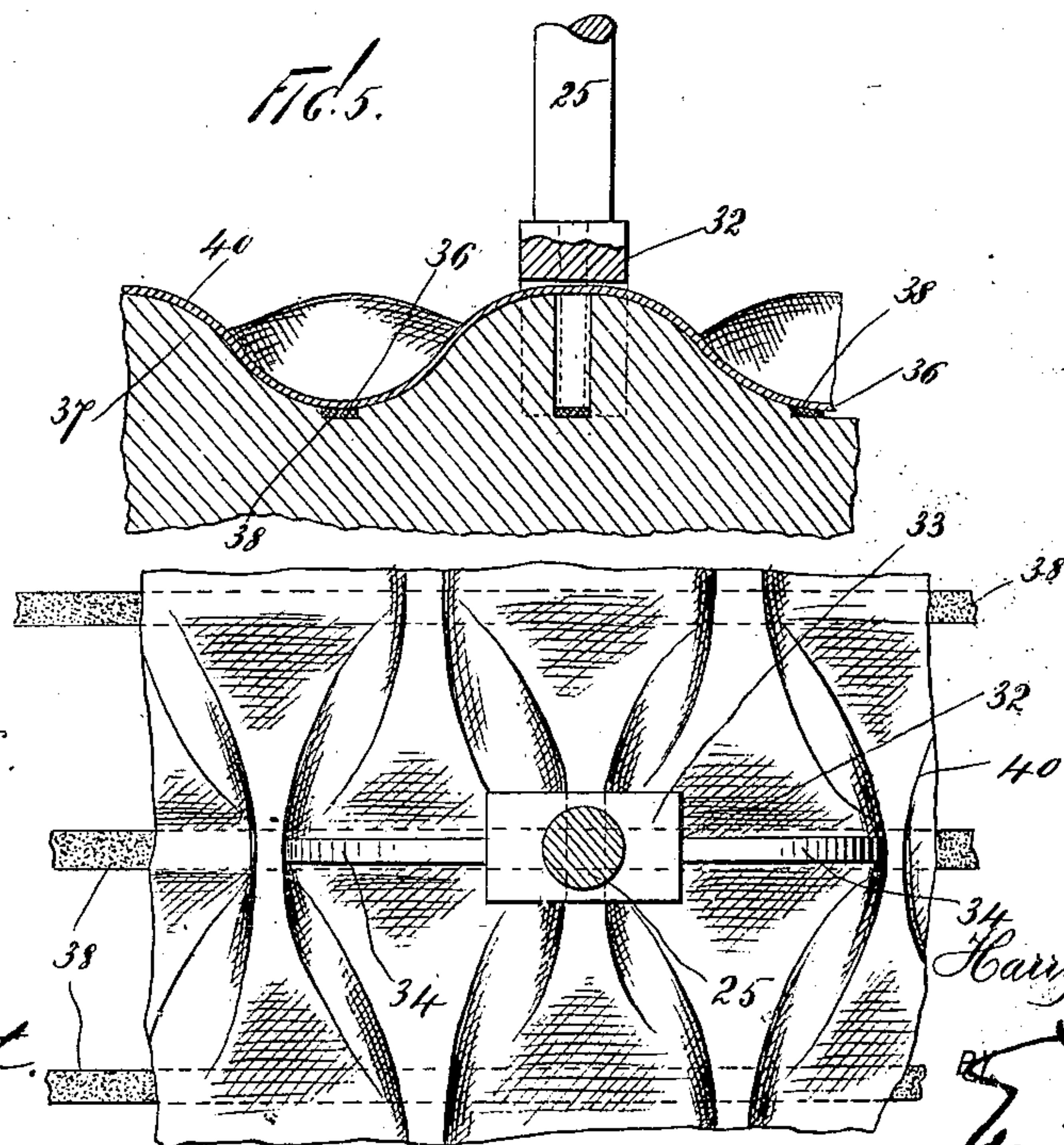
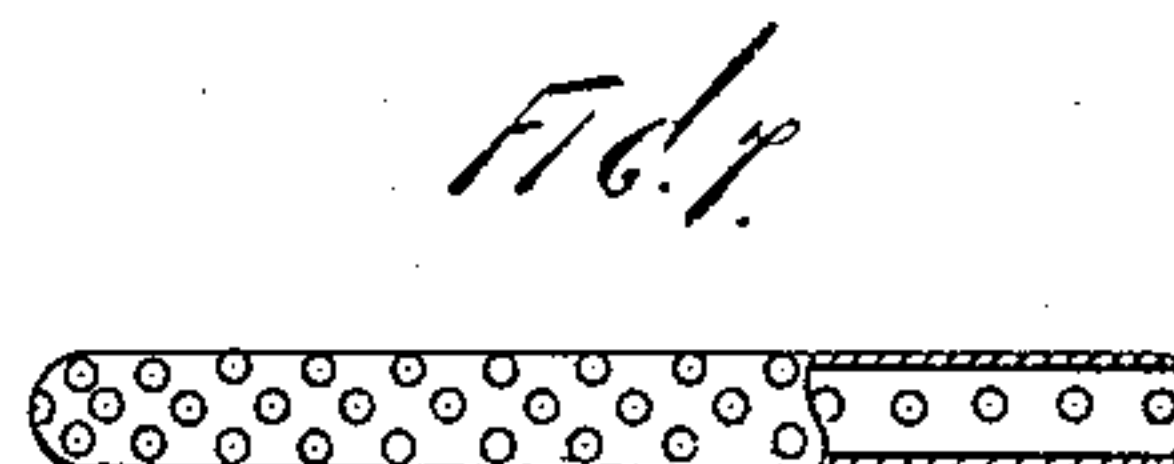
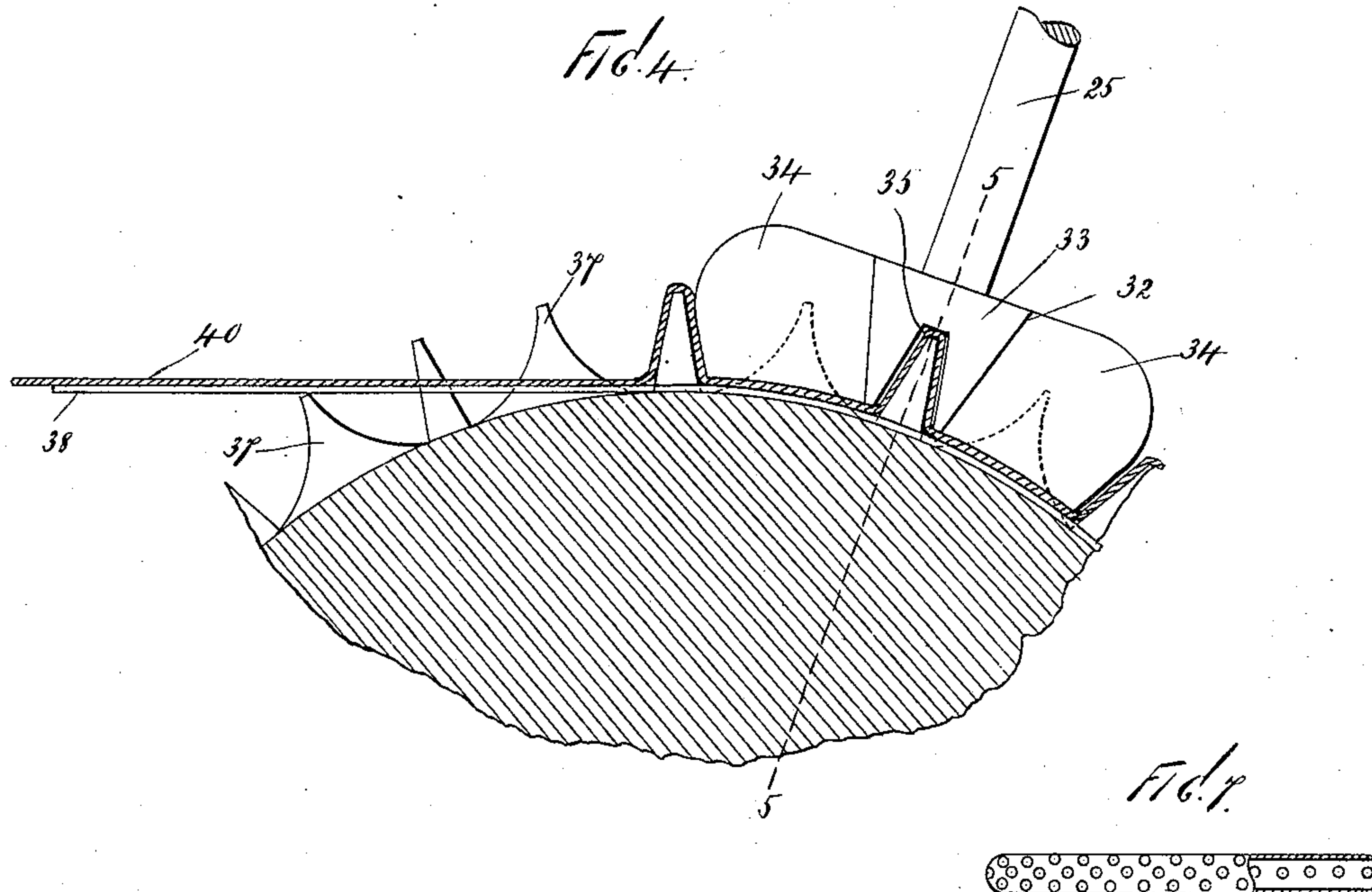
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4 Sheets—Sheet 4.



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# UNITED STATES PATENT OFFICE.

HARRY TAYLOR LOOMIS, OF NEW YORK, N. Y., ASSIGNOR TO MORRIS FRANK  
AND JULIUS J. LAMBERT, OF SAME PLACE.

## MACHINE FOR MAKING TRIMMINGS.

SPECIFICATION forming part of Letters Patent No. 629,451, dated July 25, 1899.

Application filed September 20, 1898. Serial No. 691,414. (No model.)

*To all whom it may concern:*

Be it known that I, HARRY TAYLOR LOOMIS, a citizen of the United States, residing at New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Machines for Smocking Cloth, of which the following is a full and complete specification, such as will enable those skilled in the art to which it appertains to make and use the same.

This invention relates to machines for crimping, "smocking," or "honeycombing" cloth, so as to prepare it for use in lining caskets and for various other purposes; and the object thereof is to provide an improved machine of this class which is simple in construction and operation and by means of which the cloth may be crimped, smocked, or honeycombed, as desired, and retained in this condition after it has been removed from the machine.

The invention is fully disclosed in the following specification, of which the accompanying drawings form a part, in which—

Figure 1 is an end view of my improved machine; Fig. 2, a side view thereof; Fig. 3, an end view opposite to that shown in Fig. 1; Fig. 4, a sectional detail; Fig. 5, a section on the line 5 5 of Fig. 4; Fig. 6, a plan view showing the cloth as it appears after treatment and showing also a part of the operative mechanism, and Fig. 7 a detail view of a gas-burner tube which forms a part of the machine.

In the drawings forming part of this specification the separate parts of my improvement are designated by the same numerals of reference in each of the views, and in the practice of my invention I provide a frame comprising vertical sides 7, connected at the top and bottom by cross-pieces 8, and mounted centrally of this frame is a cylinder 9, the shaft 10 of which projects at one side and is provided with a ratchet-wheel 11. Secured to the shaft 10 outside of said ratchet-wheel is an arm 12, which projects downwardly and is normally drawn to the right by a spring 13, and pivotally connected with said arm is a pawl 14, operated on by a spring 15, and said pawl operates in connection with the ratchet-wheel 11 to turn the cylinder 9 in the required direction; as hereinafter described.

Directly below the shaft 10, near the bottom of the main frame, is mounted a power-shaft 16, and at each side of said power-shaft and in the same horizontal plane therewith is a supplemental shaft 17.

The power-shaft 16 is provided at one end with a pinion 18, (best shown in Fig. 1,) and the adjacent ends of the supplemental shaft 17 are each provided with a corresponding gear-wheel 19, and by means of this construction the supplemental shafts 17 are revolved by the main power-shaft 16.

Each of the shafts 17 is provided outside of the sides 7 of the main frame with a cam 20, and in the normal position of these shafts the cams 20 are turned substantially in the same direction, the cams on one shaft in the operation of said shafts being slightly in advance of those on the other.

The end of one of the shafts 17 adjacent to the ratchet-wheel 11 on the shaft 10 of the cylinder 9 is provided with a cam-wheel 21, provided at one side thereof with a cam-shaped projection 22, which operates in connection with the cam 12 on the shaft 10 of the cylinder 9 and which at each revolution of the shafts 17 forces the arm 12 to the left and turns the cylinder 9 through a partial revolution, the spring 13 operating at all times to return the arm 12 to the position shown in Fig. 3.

The sides of the main frame are provided at or near the top with outwardly and upwardly inclined slots or openings 23, and mounted therein are vertically-movable cross-heads 24, and mounted in each of these cross-heads are a plurality of spring-depressed plungers 25, and passing through each of said cross-heads is a shaft 26, the ends of which project through the slots or openings 23 in the sides of the main frame, or said shafts may consist of tenons secured to the ends of said cross-heads, and connected with each of the ends of said shafts, outside of the sides of the main frame, by means of collars 27, are downwardly-directed operating-bars 28, which pass through guides 29, pivotally connected with the sides 7 of the main frame and adapted to turn on their connections, and the lower end of each of said operating-bars 28 is provided with a friction-roller 30,



said rollers 30 being carried by bearing-sleeves 31, secured to the lower ends of said operating-bars.

Each of the spring-depressed plungers 25 carries at its lower end a crimping or smocking head 32, which comprises a central portion 33, into which the plunger-rod 25 passes, and side wings 34, which project transversely of the cylinder 9, and the crimping or smocking heads 32 are also provided in the bottom and transversely of the central portion thereof with a V-shaped notch or recess 35, as shown in Fig. 4.

The cylinder 9, which, together with the crimping or smocking heads 32, determines the style of the crimping, smocking, or honeycombing to which the cloth is subjected, is provided in the perimeter thereof with a plurality of annular grooves 36, between which the material of said cylinder is cut out or cut away to form triangular projections 37, the points or narrower ends of which are directed alternately in opposite directions and the sides and outer surfaces of which are curved or segmental in form and by means of which elliptical spaces 38 are formed between said triangular projections, this construction being best shown in Figs. 2, 4, and 6. The forms of the projections 37 may, however, be varied, as desired, the form of these projections 37 and the form of the crimping or smocking heads 32 depending upon the style of crimping, smocking, or honeycombing which it is desired to give to the cloth.

In practice the cloth to be treated is provided with narrow strips of adhesive material or of tape provided with adhesive material, said strips being designated by the reference-numeral 38 in Fig. 6, and these strips are secured to the reverse side of the cloth or connected therewith loosely, and in practice the shafts 26 of the movable cross-heads 24 are made hollow and provided with gas-tubes 39, a detail view of which is given in Fig. 7 and which are perforated and serve as burner-tube and by means of which said movable cross-heads and the plungers 25, together with the crimping and smocking heads 32, which are made of metal, are heated. These parts may be heated to any desired extent, and in the operation of the machine, as hereinafter described, the crimping or smocking heads 32, after crimping, smocking or honeycombing the cloth, force it into contact with the strips or tapes 38 and cause it to adhere thereto, which holds the cloth in the form given it by the machine.

The operation will be readily understood from the foregoing description when taken in connection with the accompanying drawings and the following statement thereof.

The main power-shaft 16 is operated by hand or in any desired manner, and said power-shaft operates the supplemental shafts 17, and at each revolution of the said supplemental shafts the cross-heads 24 are forced upwardly and descend by their own weight.

This operation of said cross-heads is substantially simultaneous; but in the vertical movement of said cross-heads one is slightly in advance of the other, this operation being accomplished by reason of the fact that in the operation of the shafts 17 the cams on one of said shafts are slightly in advance of those on the other, it being understood, of course, that the cross-heads 24 are raised by the operation of the cams 20 on the rollers 30 at the lower ends of the bars 28, and as the machine is thus operated a strip of the cloth to be crimped, smocked or otherwise treated, and which is indicated at 40 in Figs. 4 and 5, is passed over the cylinder 9. In this operation the strips or tapes 38 pass through the grooves 36 in the cylinder, and the wings 34 of the crimping or smocking head 32, which is operated by the plungers 25, descend into said grooves and crimp or smock the cloth, as will be readily understood, and at the same time force it into contact with said strips or tapes, and the heat of the crimping or smocking heads causes the cloth to adhere to said strips or tapes. The cloth thus treated will retain the shape given it by the machine any desired length of time and may be used for any purpose for which cloth treated in this manner is desired.

From the foregoing description it will be seen that the cylinder 9 is given an intermittent motion and that the cross-heads 24 are raised by the operating-bars 28 and descend by gravity, as hereinbefore described, and in this operation the cloth to be treated is passed over the cylinder, as hereinbefore described, and as it comes from the machine may be folded and stored in any desired manner.

My improved machine is simple in construction and operation and perfectly adapted to accomplish the result for which it is intended, and it will be apparent that changes in and modifications of the construction herein described may be made without departing from the spirit of my invention or sacrificing its advantages.

Having fully described my invention, I claim as new and desire to secure by Letters Patent—

1. A machine for crimping, smocking or similarly treating cloth, comprising a frame, a crimping or smocking cylinder mounted therein, a power-shaft mounted thereunder, vertically-movable cross-heads mounted in said frame above said cylinder, spring-depressed plungers mounted in said cross-heads and provided at the lower ends with crimping or smocking heads which operate in connection with said cylinder, means for heating said cross-heads and the parts connected therewith, supplemental shafts mounted at the opposite sides of the main power-shaft and geared in connection therewith, and devices operated by one of said supplemental shafts for giving said cylinder an intermittent movement, and devices operated by said supplemental shafts for alternately raising said



cross-heads, substantially as shown and described.

2. A machine for crimping, smocking or similarly treating cloth, comprising a frame, a crimping or smocking cylinder mounted therein, vertically-movable cross-heads mounted over said cylinder, spring-depressed plungers mounted in said cross-heads and provided at their lower ends with crimping or smocking heads which operate in connection with said cylinder, means for heating said cross-heads and the parts connected therewith, a main power-shaft mounted beneath said cylinder, a supplemental shaft mounted at each side of said main power-shaft and geared in connection therewith, devices connected with one of said supplemental shafts, and with the shaft of said cylinder for giving said cylinders an intermittent movement, depending operating-bars connected with said cross-heads and provided at their lower ends with rollers, and cams connected with said supplemental shafts and operating in connection with said rollers for raising said cross-heads alternately, substantially as shown and described.

3. A machine for crimping, smocking, or similarly treating cloth, comprising a frame, an intermittently-rotatable cylinder mounted in said frame, vertically-movable cross-heads mounted above said cylinder, spring-depressed plungers mounted in said cross-heads, and provided at the lower ends with heads which operate in connection with said cylinder, the lower side of the heads of said plungers and the surface of said cylinder being so formed as to crimp, smock, or otherwise treat the cloth, means for heating the vertically-movable cross-heads and the parts connected therewith, consisting of perforated gas-tubes passed through said cross-heads, and means for operating said cylinder and said cross-heads, substantially as shown and described.

4. In a machine of the class described, a frame, an intermittently-rotatable cylinder mounted therein, a main power-shaft mounted thereunder, vertically-movable cross-heads mounted above said cylinder, spring-depressed plungers mounted in said cross-heads and provided with heads at their lower ends which operate in connection with said cylinder, the lower side of the plunger-heads and the surface of the cylinder being so formed as to smock, crimp, or otherwise treat the cloth, means for heating said cross-heads and the parts connected therewith, supplemental shafts mounted at the opposite sides of the main power-shaft and geared in connection therewith, and devices operated by one of said supplemental shafts for giving said cylinder an intermittent movement, and devices operated by said supplemental shafts for alternately raising said cross-heads, substantially as shown and described.

5. A machine for crimping, smocking, or similarly treating cloth, comprising a frame, a cylinder mounted therein, vertically-movable cross-heads mounted above said cylinder,

spring-depressed plungers mounted in said cross-heads and provided at their lower ends with heads which operate in connection with said cylinder, the lower side of said heads and the surface of said cylinder being so formed as to crimp, smock or similarly treat the cloth, means for heating said cross-heads and the parts connected therewith, a main power-shaft mounted beneath said cylinder, a supplemental shaft mounted at each side of said main power-shaft, and geared in connection therewith, devices connected with one of said supplemental shafts for operating the said cylinder, depending operating-bars connected with said cross-heads and provided at their lower ends with rollers, and cams connected with said supplemental shafts and operating in connection with said rollers for raising and lowering said cross-heads, substantially as shown and described.

6. In a machine for crimping, smocking, or similarly treating cloth, a frame, an intermittently-rotatable cylinder mounted in said frame, vertically-movable cross-heads mounted above said cylinder, spring-depressed plungers mounted in said cross-heads and provided at their lower ends with heads which operate in connection with said cylinder, the lower side of the heads of said plungers and the surface of said cylinder being so formed as to give the cloth the desired configuration, means for heating the vertically-movable cross-heads and parts connected therewith, and devices for operating said cylinder and said cross-heads, substantially as shown and described.

7. In a machine for crimping, smocking, or similarly treating cloth, an intermittently-rotatable cylinder, vertically-movable cross-heads mounted above said cylinder, spring-depressed plungers mounted in said cross-heads and provided at their lower ends with heads, the surface of the lower side of said heads and of the cylinder being so formed as to give the cloth the desired configuration, said cylinder being also provided with peripheral grooves, and means for heating said cross-heads and flanges, and devices for operating said cylinder and said cross-heads, substantially as shown as described.

8. A machine for crimping, smocking, or similarly treating cloth, comprising a frame, a cylinder mounted therein, vertically-movable spring-depressed plungers mounted in said frame and provided with heads at their lower ends which operate in connection with said cylinder, the lower side of the heads of said plungers and the surface of said cylinder being so formed as to crimp, smock or similarly treat the cloth, and said cylinder being also provided with peripheral grooves, means for heating said plungers, devices for holding the cloth in the crimped or smocked condition, and devices for intermittently rotating said cylinder and operating said plungers, substantially as shown and described.

9. A machine for crimping, smocking, or



similarly treating cloth, provided with an in-  
termittently-rotatable cylinder, spring-de-  
pressed and vertically-movable plungers  
mounted over said cylinder and provided with  
5 heads at their lower ends, the lower side of  
the heads of said plungers and the surface of  
the said cylinder being so formed as to give  
the cloth the desired configuration, said cyl-  
inder being also provided with peripheral  
10 grooves, and means for operating said cylin-  
der and said plungers, and for retaining the

cloth in the crimped or smocked condition,  
substantially as shown and described.

In testimony that I claim the foregoing as  
my invention I have signed my name, in pres- 15  
ence of the subscribing witnesses, this 19th  
day of September, 1898.

HARRY TAYLOR LOOMIS.

Witnesses:

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A. C. McLOUGHLIN.