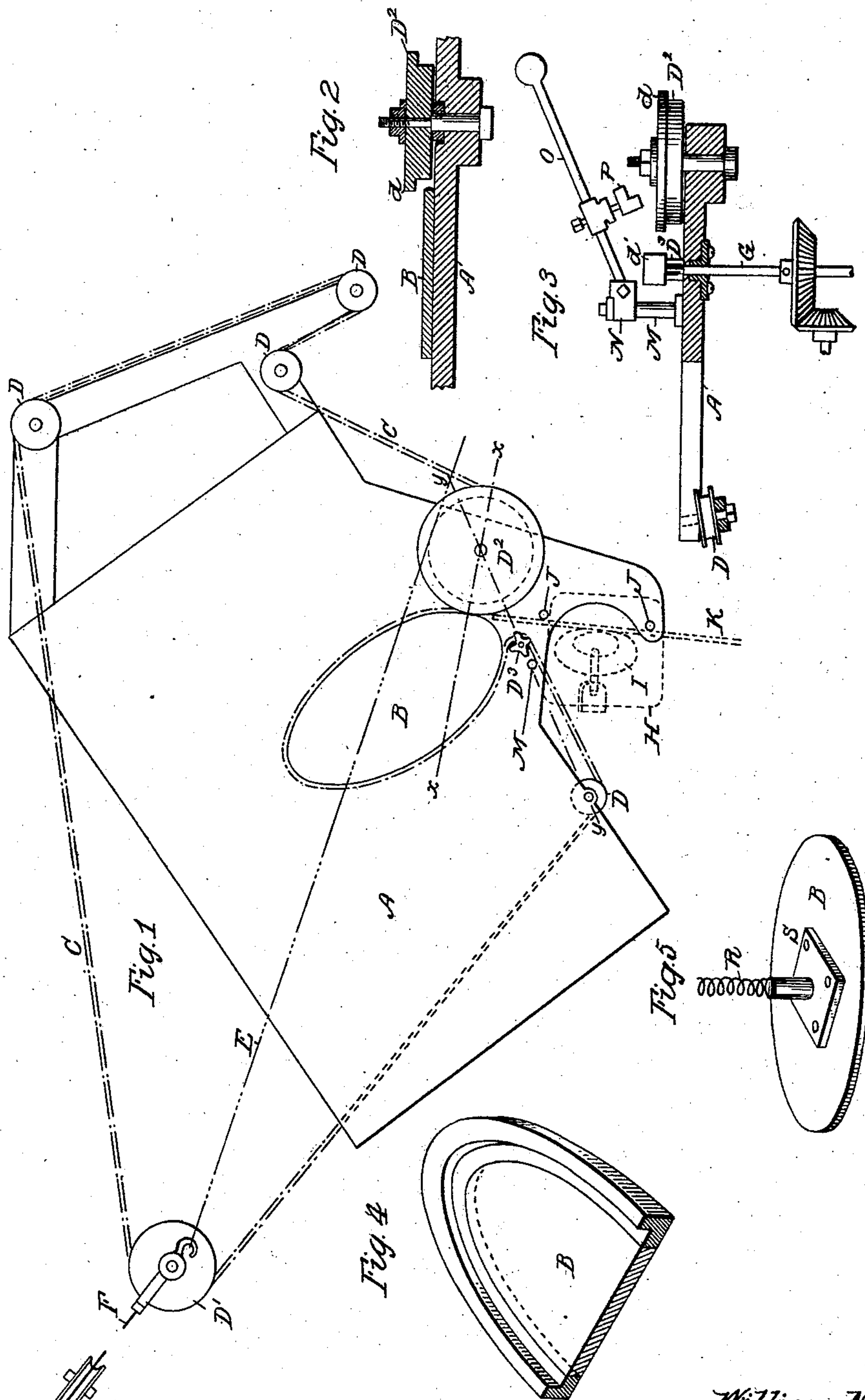


No. 849,803.

PATENTED APR. 9, 1907.

W. M. MEHLING.  
MACHINE FOR MAKING PICTURE FRAMES.

APPLICATION FILED JUNE 14, 1906.



WITNESSES:

Oliver B. Shumway  
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BY *[Signature]*  
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# UNITED STATES PATENT OFFICE.

WILLIAM M. MEHLING, OF DETROIT, MICHIGAN.

## MACHINE FOR MAKING PICTURE-FRAMES.

No. 849,803.

Specification of Letters Patent.

Patented April 9, 1907.

Application filed June 14, 1906. Serial No. 321,666.

*To all whom it may concern:*

Be it known that I, WILLIAM M. MEHLING, a citizen of the United States of America, residing at Detroit, in the county of Wayne and State of Michigan, have invented certain new and useful Improvements in Machines for Making Picture-Frames and the Like from Strips of Veneer, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates more particularly to the art of making picture or mirror frames and the like from strips of veneer or pasteboard by coiling the same on a form of the desired shape, the strips of veneer being held together by applying glue thereto.

My invention is designed to supply a machine which is specially adapted to make elliptical or oval frames of this character, but is equally well adapted for making circular frames; and the invention consists in the novel construction and arrangement of parts whereby the desired object is accomplished by a machine of very simple construction and adapted to do perfect work, all as more fully hereinafter described, and shown in the accompanying drawings, in which—

Figure 1 is a diagrammatic plan of my machine. Figs. 2 and 3 are vertical sections thereof in planes  $xx$  and  $yy$ , respectively, as indicated in Fig. 1. Fig. 4 is a section of the work as it comes from the machine, and Fig. 5 is a modification specifically referred to hereinafter.

In the drawings, A represents the work-table; B, an elliptic coiler-head upon which the frame is to be formed by coiling strips of veneer (or pasteboard) thereon.

C is an endless chain passing around the coiler-head and around the guide-wheels D, D', D<sup>2</sup>, and D<sup>3</sup>.

F is a chain or cable connected to the guide-wheel D' and carrying a weight (not shown) for the purpose of keeping the chain under tension.

E is a pull rope or cable arranged to enable the operator to relieve the tension upon the chain by pulling on the rope.

G is a vertical shaft carrying the guide-wheel D<sup>3</sup>, which is provided with sprocket-teeth for driving the chain, the shaft being provided with any suitable means for applying power thereto.

H is a glue-pot.

I is a rotatably-secured wheel dipping into

the glue-pot, and J J are guide-pins for guiding the strip of veneer K (shown in dotted lines) to the coiler-head and holding it also in contact with the gluing-wheel.

The coiler-head is a mere pattern of the desired shape. It has no connection with the table, being merely held thereon by the chain, the tension of which draws it up against the proximate guide-wheels D<sup>2</sup> D<sup>3</sup>, leaving only a small open interval between the two through which the veneer strip is fed to the coiler-head. The proximate guide-wheels D<sup>2</sup> D<sup>3</sup> turning on fixed centers thus form abutments against which the coiler-head is pressed, and when proper motion is imparted to the chain both the coiler-head and the proximate guide-wheel will be in rolling contact with the chain, and the strips of veneer fed to the coiler-head will be drawn in and coiled around the head by the tension on the chain.

The guide-wheel D<sup>2</sup> is preferably made with a pressure-flange  $d$  of larger diameter than the portion of the wheel which guides the chain, and this pressure-flange is intended to form an abutment for veneer strips of greater width than the thickness of the coiler-head, which corresponds to the width of the chain, and the sprocket-wheel D<sup>3</sup> is correspondingly provided with a pressure-flange  $d'$ , extending above it.

The guide-wheel D<sup>2</sup> is removably secured in position, so that different guide-wheels may be used, or instead of that the flange  $d$  may be made higher or lower by the addition or removal of disks.

In feeding the strips the lower edge thereof is held against the table by the use of a suitable pressure-foot pressing upon the upper edge, and I arrange this pressure-foot preferably for manual operation. To this end I pivotally secure upon a post M the head N, to which is pivotally secured the hand-lever O, which adjustably carries the pressure-foot P, all so arranged that the operator holding and guiding the lever O with one hand and placing the pressure-foot on the top edge of the strip in close proximity to the coiler-head can by suitable manipulation hold down the strip and guide it in its proper path.

The endless chain is made of suitable length to take in from the smallest to the largest coiler-head, so that the same machine without the least change may be adapted to work within very wide limits, the work-table



being left free and unobstructed by suitably guiding the chain, the latter being preferably of the kind used on bicycles.

It will be understood that the coiler-head  
5 after the coiling of the strips is completed (the end of the last strip being fastened by the use of a suitable clamp) is removed by releasing the tension of the chain by pulling on the cord E, and a new coiler-head is placed  
10 into the fold of the chain.

It is obviously a great advantage to revolve the coiler-head by imparting movement to the chain, since by this arrangement the coiler-head has at all times the same peripheral speed; but it is quite feasible to revolve the coiler-head by applying power in a  
15 suitable manner to the coiler-head itself—as, for instance, shown in Fig. 5, where R is a flexible drive-shaft provided with a driving-head S, which by means of spurs engages with  
20 and imparts motion to the coiler-head, causing the chain to revolve with it.

It is obvious that the power for driving the chain may be applied to any one of the different  
25 guide-wheels. There is, however, a great advantage in making the guide-wheel D<sup>3</sup> the driver, since this permits of making it a wheel of very small diameter, and placing it close to the other guide-wheel D<sup>2</sup>, so that the  
30 chain infolds a large portion of the coiler-head. The wheel D<sup>2</sup> is made of relatively larger diameter, so that the chain will pass freely around it.

From the foregoing description it will be  
35 seen that there is a characteristic difference between my machine and hoop-coilers in which the coiler-head revolves on a fixed center and is an organized part of the machine itself. To differentiate my invention there-  
40 from I use the term "independent coiler-head" in the claims, and my invention relates wholly to a machine in which such independent coiler-heads are used.

Having thus fully described my invention,  
45 what I claim is—

1. The combination with a wholly independent coiler-head of an endless chain supported in guide-wheels around which the chain is adapted to travel under tension and  
50 partially infold the coiler-head in a portion of the chain between two proximate guide-wheels, said last-named guide-wheels forming abutments for the coiler-head adapted to hold it in position in the fold of the chain  
55 against the tension of the chain.

2. The combination with a wholly independent coiler-head, of an endless chain supported in guide-wheels around which the chain is adapted to travel under tension and  
60 partially infold the coiler-head between two proximate guide-wheels adapted to form abutments for the coiler-head against the tension of the chain and guide the same in its movements in the travel of the chain.

65 3. The combination with a wholly inde-

pendent coiler-head, of an endless chain supported in guide-wheels around which the chain is adapted to travel and partially infold a coiler-head with a portion of the chain  
70 between two of the guide-wheels, said guide-wheels being fixed and proximate to each other and adapted to guide the coiler-head in the travel of the chain, the chain being under tension adapted to change the size of the fold within wide limits for coiler-heads of different  
75 sizes and forms.

4. The combination with a wholly independent coiler-head of an endless chain supported in guide-wheels around which the chain is adapted to travel under tension and  
80 partially infold the coiler-head in a portion of the chain between two proximate guide-wheels, said last-named guide-wheels being fixed and providing a limited opening between them for feeding the veneer strips to  
85 the coiler-head.

5. The combination with wholly independent coiler-heads of an endless chain supported in guide-wheels around which the chain is adapted to travel, two of said guide-wheels  
90 being fixed and in proximity to each other, a tension device adapting the chain to travel in a fold of varying size between said proximate guide-wheels, a coiler-head being placed in the fold of the chain, and means for re-  
95 volving the coiler-head in traveling contact with the chain and proximate guide-wheels.

6. The combination with wholly independent coiler-heads of an endless chain supported in guide-wheels two of which are fixed and  
100 proximate to each other and adapted to form abutments for a coiler-head, the chain provided with a tension device adapting it to be guided in a fold around the coiler-head and revolve the same said tension device adapted  
105 to vary the size of the fold within wide limits for accommodating coiler-heads of various sizes and forms and provided with means under control of the operator for throwing the tension device into and out of operation.  
110

7. The combination with independent coiler-heads of an endless chain, guide-wheels around which the chain is adapted to travel under tension in a circuitous path and infold  
115 a coiler-head within a variable portion of the chain between two of the guide-wheels adapted to guide the coiler-head in the fold of the chain, one of said guide-wheels adapted to impart motion to the chain and each provided with an outwardly-extending rim or  
120 flange extending above the portion which travels in contact with the chain.

8. In a machine for the purpose described, the combination with independent coiler-heads, of a work-table, an endless chain and  
125 guide-wheels around which said chain is adapted to travel, two of the guide-wheels being proximate to each other and adapted to guide the chain over the work-table and form abutments for a coiler-head, the chain  
130



being under tension and adapted to infold  
coiler-heads of different sizes and forms with-  
in a variable portion of the chain between  
said proximate guide-wheels, and means for  
5 revolving the coiler-head in frictional contact  
with the chain, the coiler-head being held in  
position by the proximate guide-wheels.

9. In a machine for the purpose described,  
the combination with independent coiler-  
10 heads, a work-table, of an endless chain and  
guide - wheels around which said chain is  
adapted to travel under tension, two of said  
guide-wheels being fixed and proximate to  
each other and adapted to guide a coiler-head

upon the work-table in a fold of the chain be- 15  
tween said guide-wheels the chain provided  
with a tension device adapting it to infold  
coiler-heads of different sizes and forms and  
revolve the same by the travel of the chain,  
one of the proximate guide-wheels adapted 20  
to impart motion to the chain.

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

WILLIAM M. MEHLING.

Witnesses:

OTTO F. BARTHEL,  
OLIVER E. BARTHEL.