J. MOSCINI.

COMB DECORATING MACHINE.

APPLICATION FILED NOV. 21, 1918.

1,299,852. Patented Apr. 8, 1919.

Fig. 1.

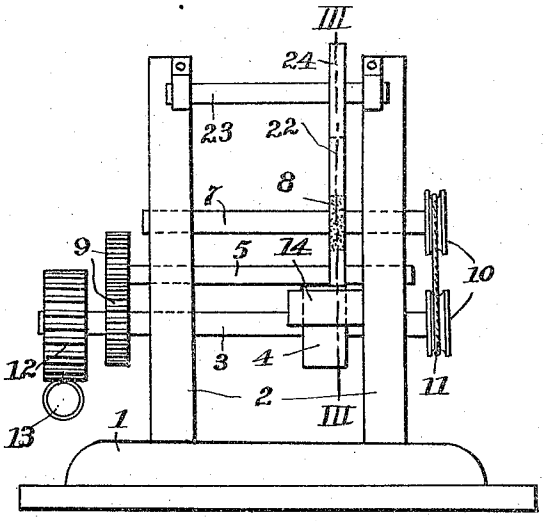


Fig. 2.

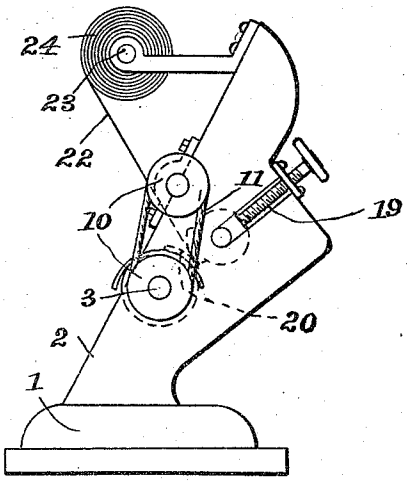


Fig. 3.

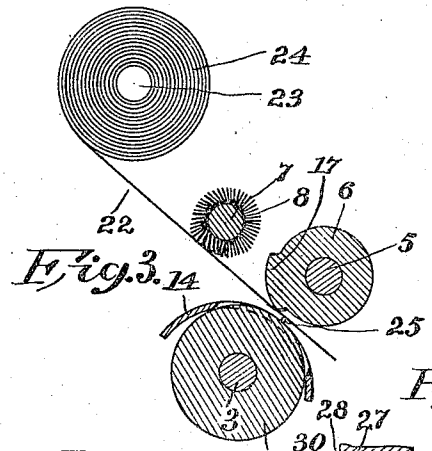


Fig. 5.

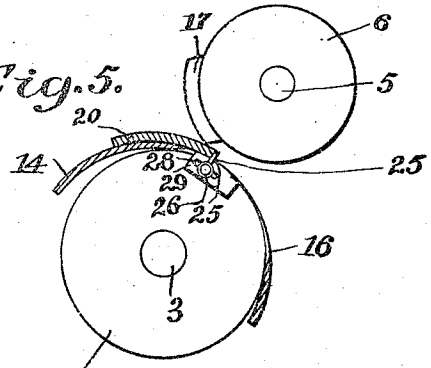


Fig. 4.

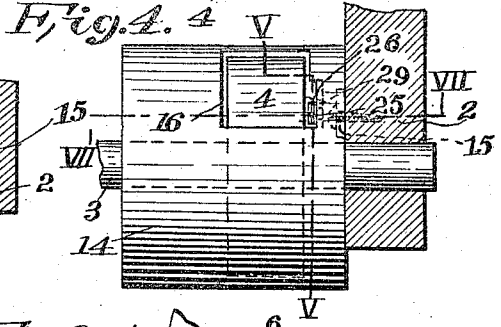


Fig. 7

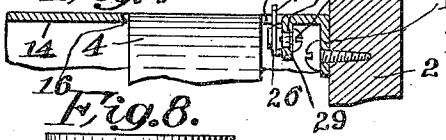


Fig. 8.

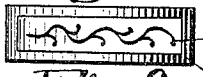


Fig. 9.

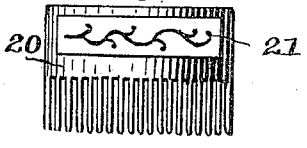
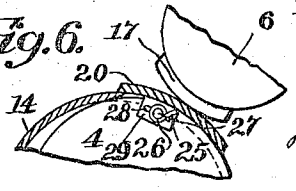


Fig. 6.



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UNITED STATES PATENT OFFICE.

JOHN MOSCINI, OF NEW YORK, N. Y.

COMB-DECORATING MACHINE.

1,299,852. Specification of Letters Patent. Patented Apr. 8, 1919.

Application filed November 21, 1918. Serial No. 263,610.

To all whom it may concern:

Be it known that I, JOHN MOSCINI, a citizen of the United States, residing at New York, in the county and State of New York, have invented certain new and useful Improvements in Comb-Decorating Machines, of which the following is a full, clear, and exact specification.

This invention relates to a machine especially designed for decorating curved combs such as are commonly worn in ladies' hair, and it has for its object to provide means for performing this work economically and without danger of breaking the combs.

It is the aim of the invention to apply gold or gilt decorative designs to the backs of curved or bent celluloid combs by impressions from rolled gold paper transferred by means of a heated die without changing or destroying the shape of the combs, and to perform this work much more rapidly than has been possible with previous machines. Another object is to provide means for accommodating combs of different thicknesses, so that combs of various thicknesses may be decorated with equal facility and excellent results. It is also the object of the invention to provide means for determining with certainty the position of the decorative design on the back of the comb so that said design may be properly centered on each comb and the danger of a misprint is avoided in case a comb should be fed a little late to the die. Other objects will appear as the description proceeds.

The invention will be first hereinafter described in connection with the accompanying drawings, which constitute part of this specification, and then more specifically defined in the claims at the end of the description.

In the acompanying drawings, wherein similar reference characters are used to designate corresponding parts throughout the several views:—

Figure 1 is a front elevation of a machine constructed substantially in accordance with this invention.

Fig. 2 is a side elevation of the machine.

Fig. 3 is a section on the line III—III of Fig. 1.

Fig. 4 is a plan view of the table over which the combs are fed to the die, and the roller below said table for feeding said combs, a portion of the frame of the machine to which the table is connected for support being shown in section.

Fig. 5 is a section on the line V—V of Fig. 4 and also showing the die in position to engage a comb as it is fed into the machine.

Fig. 6 is a fragmentary section of the feed roller, die roller and table, similar to Fig. 5 except that the comb is shown about half way through its passage below the die and the spring stop or gage is shown depressed.

Fig. 7 is a section on the line VII—VII of Fig. 4.

Fig. 8 is a detailed face view of a die such as may be used on the machine, and

Fig. 9 is a detailed front elevation of a comb which has been decorated from said die in the machine.

The operating parts of the machine are supported by side pieces or standards 2 rising from a base 1. In said standards are journaled a shaft 3 carrying the feeding roller 4, a shaft 5 carrying the die roller 6, and a shaft 7 carrying a brush 8. The shafts 3 and 5 are geared together to rotate in opposite directions by meshing gears 9 at one side of the machine, and the shafts 3 and 7 carry sheaves 10 at the other side of the machine over which sheaves runs a driving belt or cable 11, so that when the shaft 3 is rotated the shafts 5 and 7 are also revolved. Said shaft 3 carries another gear 12 for driving it, and said gear 12 is preferably a worm gear and driven by a worm 13 actuated by any suitable source of power (not shown).

Arranged over the feeding roller 4 is a curved table 14 which is preferably secured at 15 to the adjacent standard 2 and has a slot 16 up through which the periphery of the feeding roller extends opposite the die roller 6. Said die roller carries a projecting peripheral die section 17 which is designed to be heated in any suitable manner (not shown) and which may bear on its face any desired design such for instance as the one indicated at 18 in Fig. 8. The journals of the shaft 5, which carries the die roller, are adjustable toward and away from the feeding roller by means of the set screws 19, to accommodate different thicknesses of combs, it being understood that said die roller should be set so as to make the die 17 grip the comb to be decorated as it passes by the adjacent portion of the periphery of the feeding roller which extends through the slot in the table 14, whereby said comb is drawn through between said rollers while the die is impress-

ing the design on the back of said comb as indicated in Fig. 6, the finished design being shown on the back of the comb 20 at 21 in Fig. 9.

The design is colored from a strip of colored paper 22, preferably rolled gold paper, a roll of which is carried on a shaft 23 journaled in the standards 2 and from which roll 24 the paper strip 22 is passed over the table 14 and between the feeding roller and die roller. The brush 8 keeps the face of the paper strip which is to be engaged by the die always clean so as to insure a clear and perfect impression on the comb. The comb 20 is fed over the table below the paper strip, as shown in Fig. 5, and the heat of the die transfers the portion of the colored surface corresponding to the design on said die to the impression made by the die on the comb.

In order to insure the proper positioning of the comb as it passes below the die, so that the design will be properly centered on the back of the comb, a gage or stop 25 is provided. This gage consists of a finger which projects above the table 14 at one side of the intake end of the slot 16, and which is carried by a coiled spring 26 fastened to a suitable clamping bolt 27 adapted to be adjusted along a slot 28 in a depending flange 29 preferably cut and turned down from the side of the slot in the table, as best shown in Fig. 7. The offset slot 30 thus formed at the side of the slot 16 is made long enough to allow for the adjustment of the gage finger 25 along the slot 28 in said flange 29 so as to properly center the design on the back of the comb according to the length of the comb to be decorated.

In operation, the comb is placed on the table with one end against the gage finger or stop 25 while the die 17 is making its circuit of the die roller away from the table and feeding roller, so that when said die comes down to the position indicated in Fig. 5, the comb will be gripped by the die and drawn through between said die and feeding rollers as already described, the comb passing below the colored paper strip 22. Inasmuch as the table 14 and feeding roller substantially conform to the curvature of the comb, there is no danger of said comb being broken or its original curvature changed by the decorating operation, as would be the case if an attempt were made to feed it through on a flat table. As the comb is drawn along by the die and feeding rollers, the spring gage finger 25 is turned over and down out of the way, but owing to the resilient coil 26 which carries said finger the latter is returned to its initial position, where it projects above the table ready for the next comb, as soon as the first comb passes beyond it. A comb may, therefore, be decorated each revolution of the die.

While this machine has been especially designed for decorating curved combs, it is obvious that other curved objects may also be decorated by it with equal success, so the invention is not limited to the decoration of combs.

Having thus described my invention, what I claim as new and desire to secure by Letters Patent of the United States is:—

1. In a machine of the character described, the combination with a curved table, of a rotary die to operate upon a curved object on said table, means for supporting a roll of colored paper to be led between said die and table above the object to be decorated, and a rotary brush to keep the face of the paper next to the die clean for the purpose specified.

2. In a machine of the character described, the combination with a curved table, having a slot therein, of a feeding roller arranged below the table and extending up through said slot, a rotary die arranged above the table and adapted to engage an object placed on the table over the feeding roller, a depending flange on the table at one side of the slot therein, said flange having an arcuate slot parallel to the curved surface of the table, and a resiliently mounted swinging gage for centering the object below the die, said gage having its fulcrum adjustable along the arcuate slot.

In testimony whereof I have signed my name to this specification.

JOHN MOSCINI.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."