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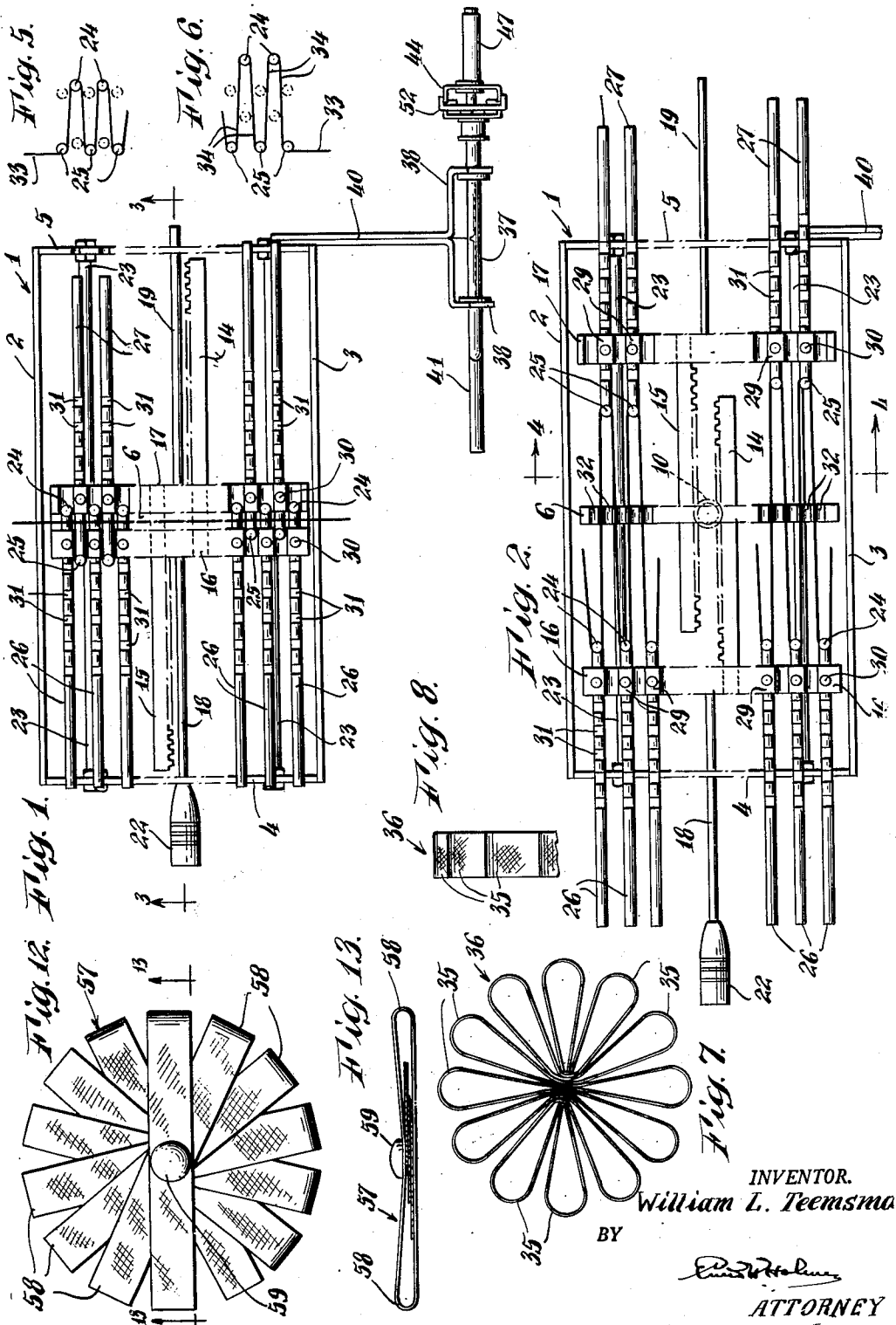
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MACHINE FOR FORMING ROSETTES

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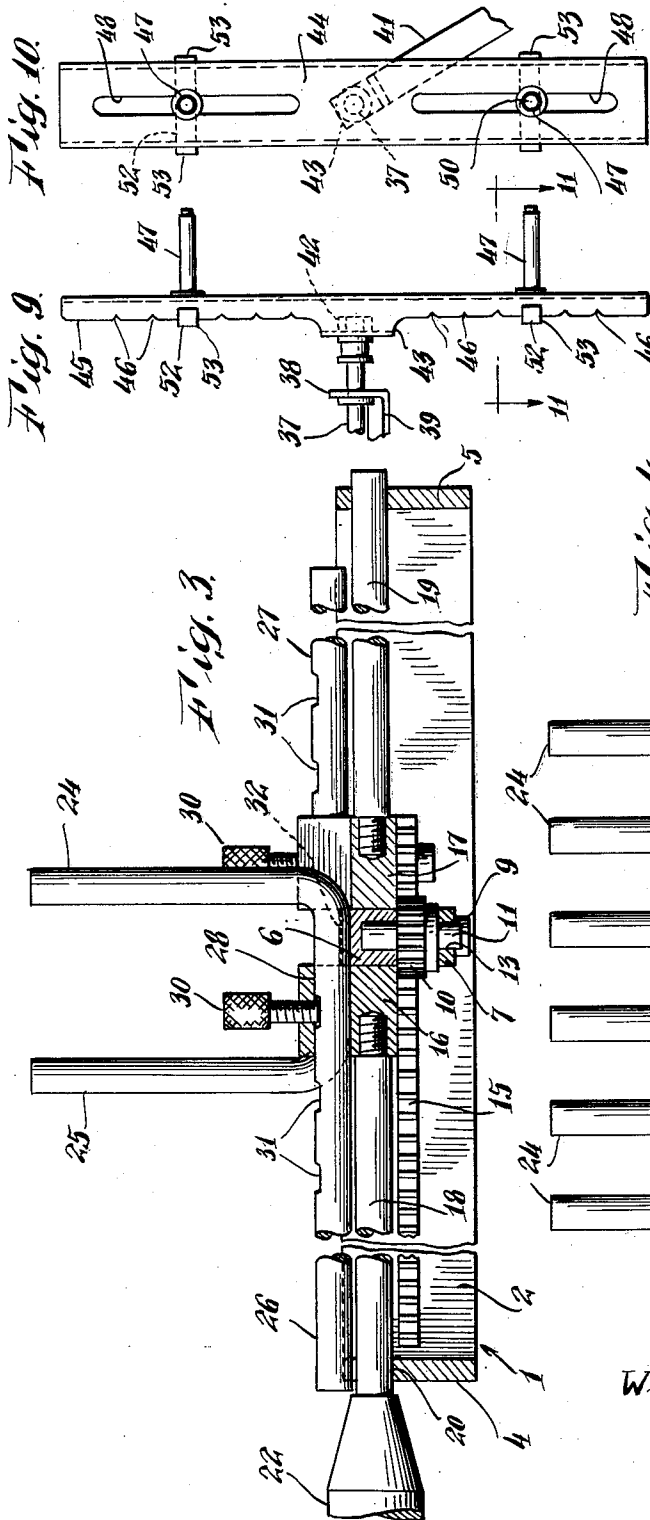
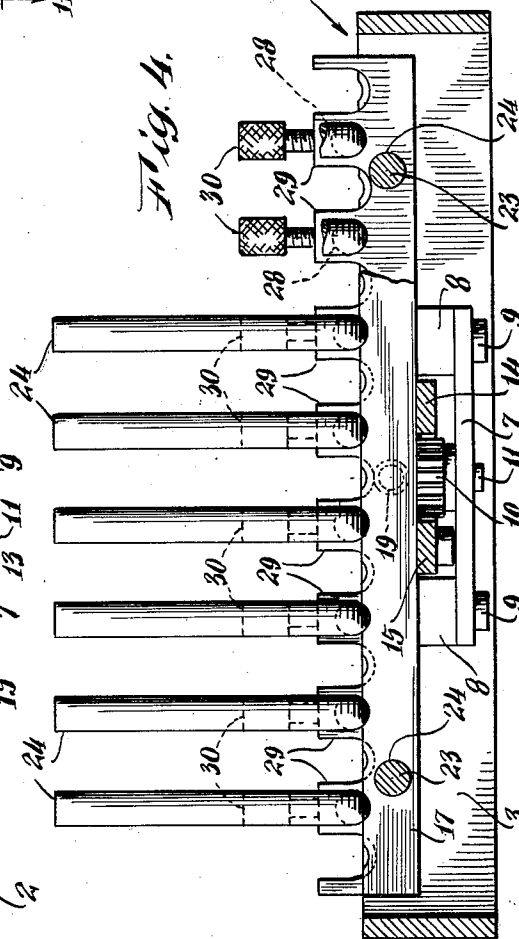


Fig. 4.



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MACHINE FOR FORMING ROSETTES

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This invention relates to a machine for forming rosettes and it is one object of the invention to provide a machine of such construction that a ribbon may be applied to the machine and engaged with pins which are then moved transversely of the ribbon and move portions of the ribbon in opposite directions and form portions which are then brought together and secured to form loops which are spread and form a rosette having radiating arms or rays.

Another object of the invention is to provide a rosette forming machine in which ribbon-engaging pins are carried by rods so mounted that they may be slid longitudinally and thus cause rows of pins to move in opposite directions and cause the undulations to be all formed at the same time.

Another object of the invention is to so mount and arrange the pin-carrying rods that bars carrying rows of pins will be moved in opposite directions an equal distance and thus cause companion portions of undulations formed in a ribbon to project the same distance from opposite sides of a center bar of the machine and thereby cause a rosette of symmetrical outline to be formed when portions of the undulations crossing the center bar are brought together and secured to each other.

Another object of the invention is to provide a rosette-forming machine wherein bars carrying rods from which the pins project have shanks projecting from them and toothed to form racks which mesh with a pinion or gear so that when a handle carried by one bar is grasped and shifted longitudinally, the two bars will be simultaneously moved towards or away from each other according to the direction in which the handle is moved.

Another object of the invention is to provide a rosette-forming machine wherein a machine for forming rosettes has associated with it an auxiliary machine by means of which rosettes having flat arms or rays may be formed instead of rosettes having their edges disposed against a surface to be ornamented.

Another object of the invention is to provide a rosette-forming machine which is of light weight, simple in construction, and very easy to operate.

With these and other objects in view, the invention consists of a special construction and arrangement of parts, one embodiment of the invention being illustrated in the accompanying drawings wherein:

Figure 1 is a top plan view of the improved rosette-making machine;

Figure 2 is a view similar to Figure 1 showing the ribbon-engaging pins shifted away from each other;

Figure 3 is a sectional view upon an enlarged

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scale taken longitudinally through the machine along the line 3—3 of Figure 1;

Figure 4 is a transverse sectional view upon an enlarged scale taken along the line 4—4 of Figure 2;

Figure 5 is a diagrammatic view showing pins in their initial position and a ribbon applied to the pins;

Figure 6 is a view similar to Figure 5 showing the pins shifted away from each other to form loops of a desired size;

Figure 7 is a front view of a rosette formed with the machine;

Figure 8 is a view looking at an edge of a portion of the rosette shown in Figure 7;

Figure 9 is a side elevation of an auxiliary rosette-forming device;

Figure 10 is a front view of the rosette-forming device, shown in Figure 9;

Figure 11 is a transverse sectional view, taken along the line 11—11 of Figure 9;

Figure 12 is a front view of a rosette formed by use of the device shown in Figures 9, 10 and 11; and

Figure 13 is a view taken along the line 13—13 of Figure 12.

The improved rosette-forming machine has a main frame 1 which may be formed of metal, wood, or other suitable material, and has side bars 2 and 3 and end bars 4 and 5. A cross bar 6 extends transversely of the frame midway the length thereof and has its ends spaced from the side bars, as shown in Figures 2 and 4. A short strip 7 is disposed under the cross bar longitudinally thereof and is held in spaced relation to the cross bar by blocks 8, the strip and the spacing blocks being held in place by screws 9 which pass upwardly through them and into the cross bar. Since the strip is spaced downwardly from the cross bar, there is space to accommodate a gear or pinion 10 which has its shaft 11 rotatably mounted in a socket 12 formed in the cross bar and an opening 13 formed through the strip. Therefore, the strip serves as a bearing for the gear and as a guide for rack bars 14 and 15 and holds the teeth of the rack bars in mesh with the teeth of the gear, as shown in Figure 4. The rack bars carry cross heads or bars 16 and 17 and from these cross heads project rods or handles 18 and 19 which extend towards opposite ends of the frame and slidably pass through openings 20 and 21 formed through the end bars 4 and 5 and at all times project outwardly therefrom, as shown in Figure 3. One of the rods or handles has been shown provided with a knob by means of which it may be readily grasped and shifted longitudinally, it being understood that the other rod may also be provided with a similar knob, if so desired.

When the rod 18 is grasped by its knob and

drawn outwardly, the gear is rotated by action of the rack bar 14 and as the gear turns the rack bar 15 will be shifted longitudinally. Therefore, the two cross heads or bars 16 and 17 will be shifted away from each other when the rod 18 is drawn outwardly and when this handle is shifted inwardly, the cross heads will be moved towards each other and simultaneously make contact with opposite side faces of the cross bar 6. Rods 23 which are mounted longitudinally of the frame 1 in spaced parallel relation to the side walls pass through openings 24 formed through the cross heads and prevent tilting of the cross heads transversely of the frame.

In order to form undulations or folds in a ribbon, there have been provided pins 24 and 25 formed by upwardly bent end portions of rods 26 and 27 which are passed through openings 28 formed in bosses 29 projecting upwardly from the cross heads and carrying set screws 30 which engage in selected notches 31 and secure the rods and cause the pins to move with the cross heads. Since the notches are spaced from each other longitudinally of the rods, the rods may be shifted longitudinally to adjusted positions and releasably secured in set positions. Notches or grooves 32 are formed across the upper surface of the cross bar 6 to receive portions of the rods, and upon referring to Figure 3, it will be seen that portions of the rods may also rest upon the cross heads between their upwardly projecting bosses. The pins 24 and the pins 25 are in staggered relation to each other and when the cross heads are moved away from each other they exert pull upon longitudinally spaced portions of a ribbon 33 and form undulations or loops 34 in the ribbon. Since the cross heads move simultaneously in opposite directions, the undulations or loops will be of an even length.

After the undulations have been formed, portions of the ribbon midway the pins 24 and 25 may be grasped and brought together as the undulations are lifted from the pins and sewed or otherwise secured in contact with each other. The loops 35 formed by the secured undulations may then be spread to form a circular rosette 36 shown in Figure 7 which is of true circular shape and has its loops or arms 35 extending radially from the center of the rosette. It will be understood that by properly adjusting the pins, undulations of varying length may be formed and a rosette formed which is elliptical or other shape. The loops 35 are so disposed that edges of the portions of the ribbon forming them are presented towards a person viewing the rosette.

In order to form a rosette having loops having flat surfaces presented towards a person looking at the rosette, there has been provided an auxiliary rosette-forming device shown attached to the frame 1 in Figure 1 and illustrated in detail in Figures 9, 10 and 11. This auxiliary rosette-forming device has a shaft 37 which is rotatably mounted through the arms 38 of a yoke 39 having a shank 40 projecting rearwardly therefrom midway its length. The yoke and its shank may be formed from two strips of sheet metal or from a single strip doubled to form the shank and having its end portions then bent to form the yoke and its arms. The shank is welded, riveted, or otherwise secured to an end wall of the frame 1 and projects forwardly from the frame a sufficient distance to allow the crank handle 41 of the shaft 37 to be readily turned and impart rotary movement to the shaft. The end portion of the shaft opposite from its crank handle is

threaded and screwed into a socket 42 formed in a boss midway the length of a cross head 44. This cross head is formed of sheet metal and has side edge portions bent rearwardly to form flanges 45 in rear edges of which notches 46 are formed. Fingers 47 project forwardly from the cross head with their rear or inner ends passing through slots 48 formed in opposite end portions of the cross head longitudinally thereof and the rear ends of the fingers carry nuts 49 which confront front and rear surfaces of the cross head, but are spaced from each other a sufficient distance to allow the fingers to be slid along the cross head to adjusted positions and thus disposed in desired spaced relation to each other. The fingers are of tubular formation and through each passes a pin 50 having a head 51 at its outer or front end of such size that it may enter the finger. The pins are of such length that they project from rear ends of the fingers and are passed through abutment strips 52 which extend transversely across the cross head and have ends bent to form tongues 53 which project forwardly and have overlapping engagement with the side flanges of the cross head.

A head 54 at the rear end of the pin holds the cross strip thereon. At its ends, each cross strip is formed with forwardly projecting teeth 55 for fitting into the notches 46 of the flanges 45 and in order to yieldably hold the teeth in the notches, each finger has disposed therein a spring 56 which is coiled about the pin and has its front end bearing against the head 51 of the pin and its rear end in abutting engagement with the rear end of the finger with a portion projecting inwardly thereof. By grasping the cross strips and drawing them rearwardly, the teeth will be dislodged from the notches 46 and the fingers may then be shifted longitudinally of the cross head to adjusted positions where they will be held when the cross strips are released and return to their normal position.

When the shaft 37 is turned, the cross head will be turned with it and a ribbon will be coiled about the fingers with portions extending longitudinally of the cross head between the fingers. This will form a desired number of loops which are pinched together midway the fingers and then spread to form the rosette 57 of Figure 12 having radially extending arms or rays 58. These rays or arms have their flat surfaces disposed in position to be seen by a person looking at the rosette and portions of the ribbon which cross each other at the center of the rosette may be secured against each other by an ornamental fastener 59, by stitches, or in any other manner desired.

From the foregoing description of the construction of my improved machine for forming rosettes, the operation thereof will be readily understood and it will be seen that I have provided a comparatively simple, inexpensive and efficient means for carrying out the various objects of the invention.

While I have particularly described the elements best adapted to perform the functions set forth, it is apparent that various changes in form, proportion and in the minor details of construction may be resorted to, without departing from the spirit or sacrificing any of the principles of the invention.

Having thus described my invention, what I claim is:

1. A rosette-forming machine comprising a frame, a cross bar midway the length of said

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frame, rods extending longitudinally in said frame and through the cross bar and supporting the cross bar, cross heads extending transversely of said frame and slidable along said rods towards and away from opposite sides of said cross bar, a yoke mounted under said cross bar, a gear midway the length of the yoke rotatably supported by the cross bar and the yoke, rack bars extending from said cross heads and through space between the yoke and the cross bar with their teeth meshing with said gear, handles extending from said cross heads and through ends of said frame, rods extending longitudinally of said frame with outer end portions slidably passing through openings in end bars of the frame and their inner end portions passing through openings in the cross heads and bent to form fingers projecting from the said cross heads in transverse spaced relation to each other, said rods being formed with notches spaced from each other longitudinally thereof, set screws carried by the cross heads and engaged in selected ones of the notches and holding the rods in adjusted positions, the fingers of each cross head being in staggered relation to the fingers of the other cross head and serving to engage portions of a ribbon and move the same in opposite directions to form undulations therein when the cross heads are moved away from each other.

2. A rosette-forming machine comprising a frame, a cross bar supported midway the length of the frame and extending transversely of the frame, a yoke carried by said cross bar, a gear rotatably mounted between the cross bar and the yoke, cross heads extending transversely of said frame at opposite sides of the cross bar, rack bars extending from said cross heads through said yoke and meshing with said gear, a handle extending from one cross head for shifting the said cross head longitudinally of the frame and during which movement said head is turned and causes the other cross head to be shifted in an opposite direction to movement of the first cross head, rods extending longitudinally of said frame and carried by said cross heads and having inner end portions bent to form fingers projecting from the cross heads spaced from each other longitudinally of the cross heads, the fingers of each cross head being disposed in staggered relation to the fingers of the other cross head, and said fingers constituting members for engaging portions of a ribbon and moving the same in opposite directions to form undulations adapted to be withdrawn from the fingers and secured together to form loops constituting rays of a rosette.

3. A rosette-forming machine comprising a frame, rods mounted in said frame longitudinally thereof, cross heads slidable along said rods, rack bars extending from said cross heads in opposite directions longitudinally of the frame, a gear rotatably mounted between said rack bars and meshing therewith, a handle extending from one cross head in position to be grasped and shift the said cross head longitudinally of the frame while its rack bar turns the gear and thereby shifts the other cross head and its rack bar longitudinally of the frame in an opposite direction, and pins projecting from said cross heads and constituting members engageable with spaced

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portions of a ribbon and constituting means for moving the engaged portions of the ribbon in opposite directions and thereby forming undulations in the ribbon adapted to be pinched together between the cross heads and withdrawn from the pins as a unit.

4. A rosette-forming machine comprising a frame, cross heads extending transversely of said frame and being normally disposed close to each other and movable longitudinally of the frame towards and away from each other, means for transmitting movement from one cross head to the other in opposite directions when the first cross head is moved longitudinally of said frame, and pins projecting from said cross heads in position for engaging portions of a ribbon and moving the same in opposite directions to form undulations adapted to be pinched together and secured to form loops constituting rays of a rosette.

5. A rosette-forming machine comprising a mounting member, a shaft rotatably carried by said mounting member, a cross head carried by said shaft and having end portions projecting in opposite directions from the shaft and formed with longitudinally extending slots, and fingers mounting through said slots and shiftable longitudinally thereof to adjusted positions adapting them to form an elongated coil of predetermined size when a ribbon is wrapped about the fingers, said fingers being unobstructed whereby the coil of ribbon may be pinched together midway the fingers and withdrawn from the fingers and portions of the coil then secured together midway the length of the coil to form flat loops movable transversely of each other to form rays of a rosette.

6. A ribbon forming machine comprising a mounting member, a shaft rotatably carried by said mounting member, a cross head carried by said shaft and having end portions formed with longitudinally extending slots, said cross head having side flanges formed with longitudinally spaced notches, fingers passing through said slots and projecting forwardly from said cross head, collars carried by said fingers and engaging the front face of the cross head, pins passing longitudinally through said fingers and rearwardly of the cross head, cross bars carried by rear ends of said pins with their end portions extending across the flanges and provided with teeth engageable in selected ones of the notches to hold the fingers in adjusted positions longitudinally of the cross head, and springs in said fingers coiled about said pins with their front ends abutting heads at front ends of the pins and urging the pins forwardly to and the fingers rearwardly to yieldably hold the teeth in selected ones of the notches.

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The following references are of record in the file of this patent:

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