No. 801,737. PATENTED OCT. 10, 1905.

C. A. MONNIER.

MACHINE FOR FORMING COILS OF WIRE.

APPLICATION FILED MAY 15, 1905.

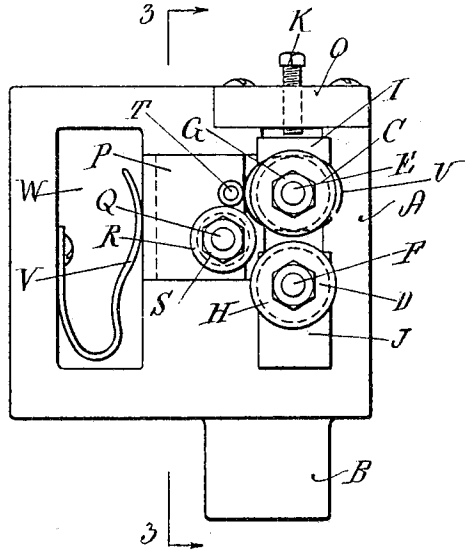


FIG. 1.

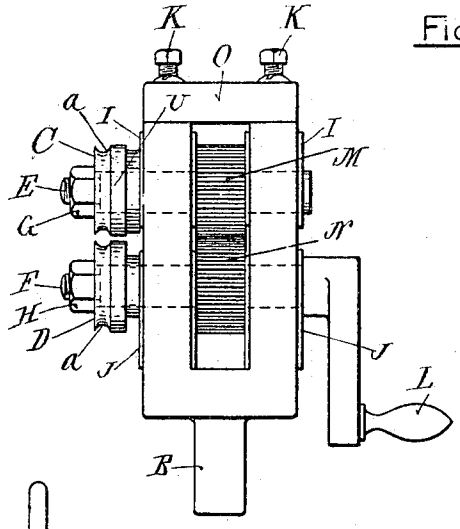


FIG. 2.

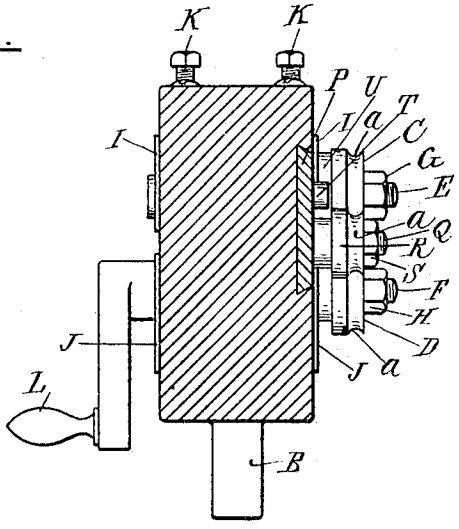


FIG. 3.



FIG. 6.

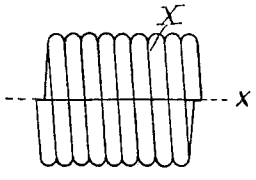


FIG. 4.

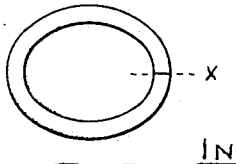


FIG. 5.

WITNESSES.

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MACHINE FOR FORMING COILS OF WIRE.

No. 801,737. Specification of Letters Patent. Patented Oct. 10, 1905.

Application filed May 15, 1905. Serial No. 260,584.

To all whom it may concern:

Be it known that I, CHARLES A. MONNIER, a citizen of the United States, residing at Attleboro, in the State of Massachusetts, have invented a new and useful Improvement in Machines for Forming Coils of Wire, of which the following is a specification.

My invention consists in the improved construction of a machine for forming coils of wire whereby rings of desirable shapes may be produced for the construction of bracelets and similar articles.

In the accompanying drawings, Figure 1 represents a side elevation of the machine. Fig. 2 represents a front view of the same. Fig. 3 represents a section taken on the line 3 3 of Fig. 1. Fig. 4 represents a coil of hollow wire rolled up in suitable form for the construction of bracelets. Fig. 5 represents an end view of the said coil. Fig. 6 represents an edge view of a single coil when separated from the others by means of a saw cut made longitudinally of the wound coils.

In the drawings, A represents the housing-frame of the machine provided with the downwardly-extending lug B, by means of which the frame is to be held in the jaws of a vise. The grooved wire-turning rolls C and D are secured to the shafts E and F by means of the nuts G and H, respectively, the said shafts being held for rotation in the bearing-boxes I and J, the upper bearing-boxes I being made adjustable in height by means of the set-screws K K, which are threaded in the cap O of the housing-frame. To the lower shaft F is secured the crank L, by means of which the said shaft is to be rotated, simultaneous rotation being imparted to the upper shaft E by means of the connecting-gears M and N.

At the side of the frame A is placed the slide P, provided with a fixed stud Q, upon which is placed the loosely-revolving grooved roll R, which is held upon the said stud by means of the nut S, and upon the side of the slide P is placed the roller-stud T, which engages with the cam U, secured to the shaft E at the rear of the grooved roll C, whereby upon the rotation of the rolls C and D reciprocating movement will be imparted to the said slide P, and hence to the roll R. The roller-stud T is actuated toward the periphery of the cam U by means of the spring V, which is secured to the frame A in the opening W, The grooves *a a a* of the several rolls C, D. and R are formed near the extreme edge of the peripheries of the said rolls, as shown in Fig. 3, and lie in the same plane.

In forming up the series of coils X, shown in Fig. 4, the wire from which the said coils are to be formed is to be first passed between the rolls C and D in the grooves *a a*, and then either over the top of the roll R or under the same in its groove *a*. Then upon the continued rotation of the rolls C and D the wire will first be turned over in the plane of the grooves *a a a* of the rolls until the end of the turned wire strikes against the incoming wire, and then by forcing the end of the turned wire to one side out of the plane of the said grooves by the hand of the operator the coils may be formed as represented in said Fig. 4, the action of the cam U upon the slide P serving to impart to the said coils the desired oval form, as shown in Fig. 5, and then upon sawing the several coils apart, as shown by the line *x* in Figs. 4 and 5, the ends of separated single coils will spring automatically to the same plane, as shown in Fig. 6, and will not require to be bent to the same plane, as heretofore required in making such coils of wire for rings or bracelets. The grooves *a a* are formed at the outer edge of the rolls C and D, so as to allow the turned wire to be forcibly deflected from the plane of the said grooves, as above described. The wire employed may be of any desired form of cross-section and the cam U be made of the proper form for turning the said wire into coils of the oval shape required, the ends of the cut coils springing resiliently in opposite directions to the same plane. When the cam U is changed to a circular form, the wire will be correspondingly coiled in a true circle, and various shapes may be imparted to the coils by varying the shape of the cam.

I claim as my invention—

In a machine of the character described, the combination of the geared grooved rolls, the cam upon the shaft of one of the said rolls, the spring-actuated slide, the grooved roller carried by the slide, and the stud upon the slide for engagement with the cam, substantially as described.

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Witnesses:
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