(No Model.)

A. STALNACKE.

MACHINE FOR MAKING PENDANTS FOR WATCHES.

No. 383,326. Patented May 22, 1888.

Fig. 1.

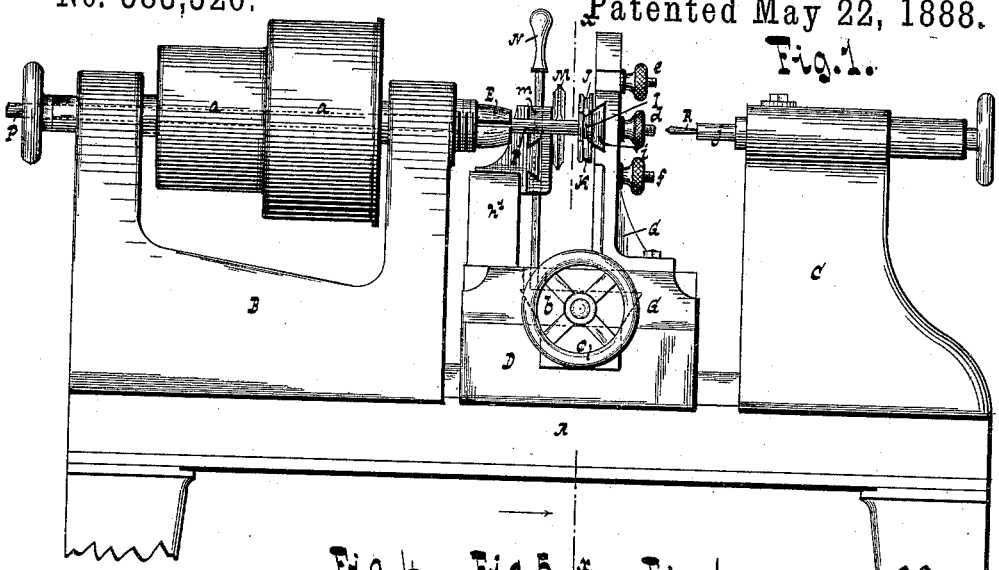


Fig. 4.

Fig. 5.

Fig. 6.

Fig. 7.

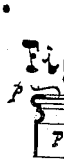


Fig. 8.

Fig. 2.

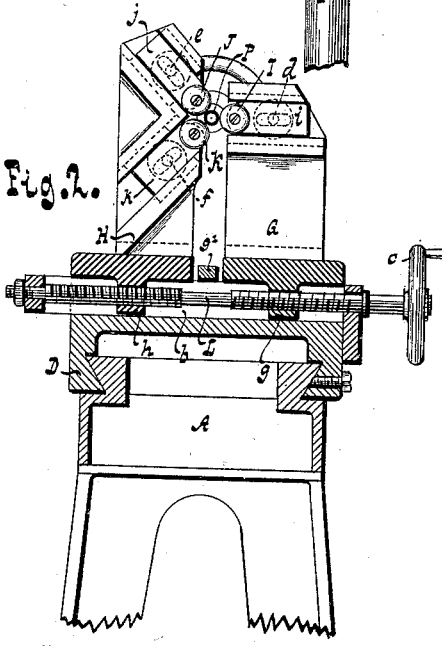
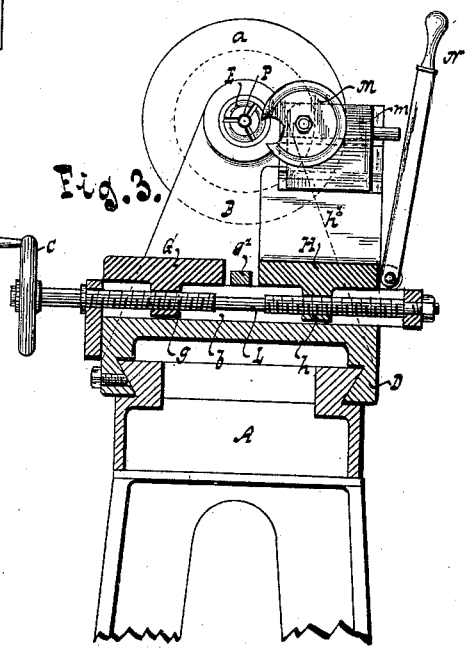


Fig. 3.



WITNESSES:

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MACHINE FOR MAKING PENDANTS FOR WATCHES.

SPECIFICATION forming part of Letters Patent No. 383,326, dated May 22, 1888.

Application filed January 26, 1888. Serial No. 261,943. (No model.)

To all whom it may concern:

Be it known that I, ALFRED STALNACKE, a subject of the King of Sweden, residing at New York, in the county and State of New York, have invented new and useful Improvements in Machines for Making Pendants for Watches, of which the following is a specification.

My invention relates to improvements in a machine for manufacturing pendants for watches; and it consists, essentially, in the combination, with a chuck or other suitable device for holding a tubular blank, of rollers mounted in supports on opposite sides of the blank and arranged to act simultaneously upon the blank, all of which is more fully pointed out in the following specification and claims and illustrated in the accompanying drawings, in which—

Figure 1 is a front elevation of a machine embodying my invention. Fig. 2 is a vertical section in the plane *x x*, Fig. 1, looking in the direction indicated by the arrow. Fig. 3 is a similar section in the plane *x x*, Fig. 1, looking in a direction opposite to that indicated by the arrow. Figs. 4, 5, and 6 show top and face views indicating the various stages through which the blank passes in forming the pendant. Fig. 7 is a vertical section of a completed pendant. Fig. 8 is a central section of a roll.

Similar letters indicate corresponding parts.

In the drawings, referring at present to Figs. 1, 2, and 3, the letter A designates the bed of the machine. B is the head-stock. C is the tail-stock, and D is a carriage, all mounted upon the bed and movable lengthwise thereon in the usual manner. The head-stock is provided with the usual cone-pulley, *a*, for imparting different speeds to the live-spindle. On the live spindle is mounted a chuck, E, for holding a blank, P, which consists of a tube of metal or other suitable material. In the example shown in the drawings the live-spindle is made hollow and the tubular blank is fed therethrough to the chuck and secured by means of the latter when properly set, such being a well-known construction in screw-cutting lathes. Any other suitable means for holding and rotating the tubular blank may be substituted for those described.

In the carriage D are formed transverse ways *b*, upon which can slide two supports, G and H, one of which, G, is provided with a roll, I, and the other with two rolls, J and K. These rolls are arranged concentrically with the tubular blank P. The roll-supports G and H have pendent nuts *g* and *h*, which are engaged by a feed-screw having bearings in the carriage D. On this feed-screw is a right-hand thread which engages with the nut *h*, and a left-hand thread which engages with the nut *g*, so that by turning the nut in one direction by means of a handle, *c*, the supports G and H are moved toward each other, and vice versa. A removable stop, *g'*, limits the motion of the supports toward each other. To adjust the rolls so that they may always be concentric with the tubular blank P, the shafts about which they turn are fixed respectively in slides *i*, *j*, and *k*, which can move in suitable ways in the respective roll-posts. The slides when adjusted are secured by set-screws *d*, *e*, and *f*, the shanks of which extend through slots in the roll-posts.

To the dead-spindle *j'* is secured a suitable reamer, R, Fig. 1, which is brought forward in the usual manner to engage with the end of the blank P after it has been acted upon by the rolls I, J, and K.

Upon the roll-supports H is mounted a suitable cutter, M, Figs. 1 and 3, which is secured to a slide, *m*, engaging a guide on a standard, *h'*, secured to the roll-post. A lever, N, engaging with the slide *m*, is used to throw the cutter into engagement with the tubular blank to sever a portion thereof from the main part. Any suitable cutter can be used for this purpose, as also any other suitable means for feeding the cutter toward the blank.

Instead of using three rolls, I J K, only two rolls arranged on the supports G and H directly opposite one another could be used; but three rolls are more effective.

It will be noticed that the rolls are so adjusted that they move in radial lines toward the tubular blank and act simultaneously upon the same when the feed-screw L is turned in the proper direction. The faces of the rolls, Fig. 8, may have any desired contour. One side of the same is provided with a closing-flange, *i'*, Fig. 8, which turns over the end of the tubular blank, Fig. 7.

In making the pendants the tubular blank

is fed forward to bring its ends in the proper position between the rolls, and then secured in the chuck E. The blank is now set in rotation and subjected to the action of the rolls I J K, which impart to it the form shown in Fig. 5. It will be observed that the end of the blank is turned over by the rolls, leaving an opening, *p*, which is subsequently reamed out by the reamer R, after which the blank is severed by the cutter M, Fig. 6.

Heretofore pendants for watches were made from circular disks or blanks by the use of dies and punches and subsequent spinning; but these operations involved considerable time, labor, and expense. By the use of my machine the pendants can be produced rapidly at a reduced cost.

What I claim as new, and desire to secure by Letters Patent, is—

1. The combination, with a rotary chuck for holding a tubular blank, of rolls concentrically arranged to receive the blank in their common center, supports for said rolls constructed to move simultaneously toward the blank, a cutter, and means, substantially as described, for imparting to the same a motion across the blank, substantially as shown and described.

2. The combination, with the rotary chuck E, of the supports G and H, arranged opposite each other, a feed-screw having a right and left hand thread engaging respectively with the supports, a roll, I, mounted in a horizontal slide, *i*, on one of the supports, and rolls J and K, mounted in inclined slides *j* and *k*, arranged on the opposite support, substantially as shown and described.

3. The combination, with a rotary chuck for holding a tubular blank, of rolls concentrically arranged to receive the blank in their common center and having the closing-flange *i'*, slides *i*, *j*, and *k*, in which said rolls are mounted, and supports for said slides arranged to move toward the blank, substantially as shown and described.

In testimony whereof I have hereunto set my hand and seal in the presence of two subscribing witnesses.

ALFRED STALNACKE. [L. S.]

Witnesses:

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E. F. KASTENHUBER.