(No Model.) 2 Sheets—Sheet 1.

G. I. STARK.

BED SPRING COILING MACHINE.

No. 489,550. Patented Jan. 10, 1893.

Fig. 1.

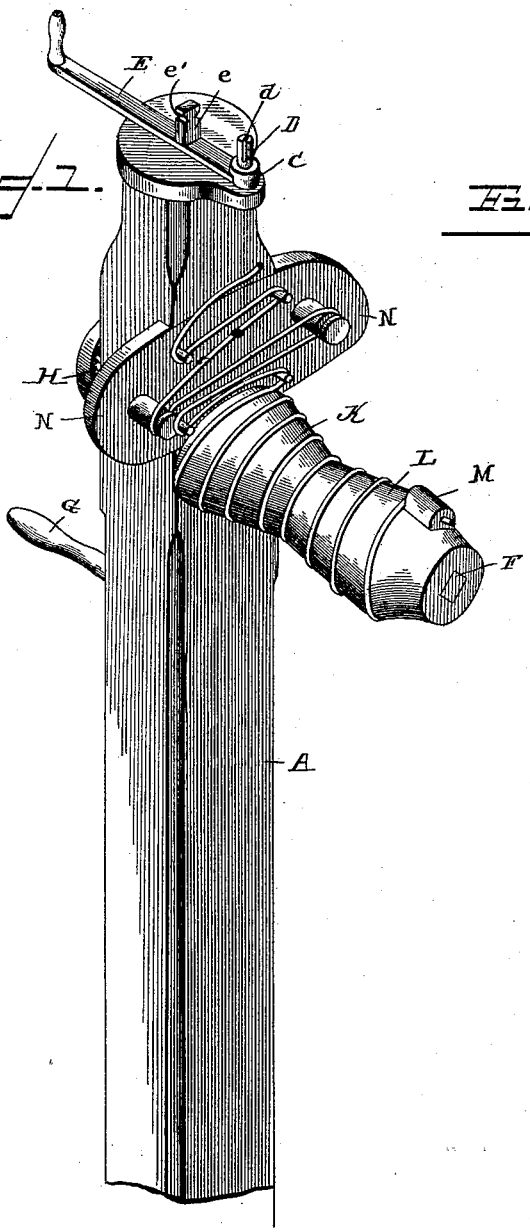
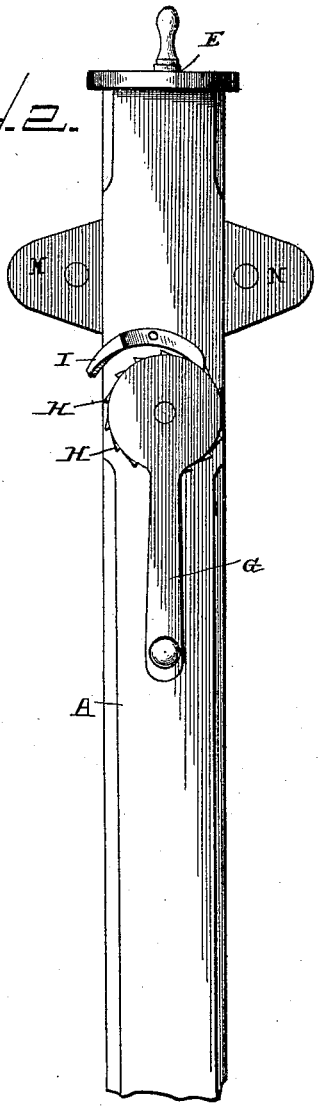


Fig. 2.



Witnesses
W. E. Schneider.

Inventor
G. I. Stark.

By his Attorneys,
C. A. Snow & Co.

(No Model.) 2 Sheets—Sheet 2.

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Fig. 3.

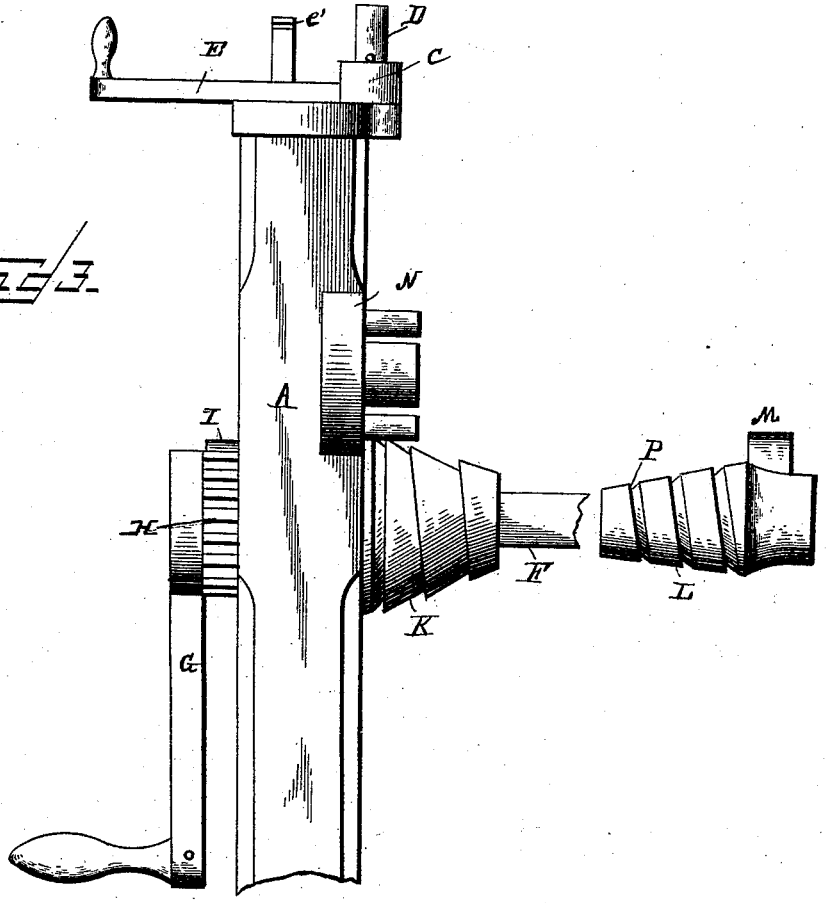
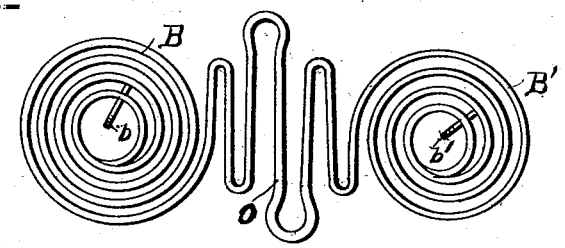


Fig. 4.



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UNITED STATES PATENT OFFICE.

GEORGE I. STARK, OF McKINNEY, TEXAS, ASSIGNOR OF TWO-THIRDS TO CHARLEY H. STARK AND THOMAS J. STARK.

BED-SPRING-COILING MACHINE.

SPECIFICATION forming part of Letters Patent No. 489,550, dated January 10, 1893.

Application filed August 4, 1892. Serial No. 442,152. (No model.)

To all whom it may concern:

Be it known that I, GEORGE I. STARK, a citizen of the United States, residing at McKinney, in the county of Collin and State of Texas, have invented a new and useful Coiling-Machine, of which the following is a specification.

My invention relates to a coiling machine, designed, especially, for coiling twin bed-springs in a simple, rapid, and satisfactory manner, and providing them with the necessary means of attachment to the bed, and my improvement consists in a certain novel construction and combination of devices which will be described in connection with the drawings, the novel features being particularly pointed out in the appended claims.

In the drawings, Figure 1 is a perspective view of a coiling machine embodying my invention; Fig. 2 is a rear view; Fig. 3 is a side view, showing the removable cone detached. Fig. 4 is a view of a pair of twin coils such as are formed upon my improved machine.

A represents the standard, provided at its top with the bending mechanism, for forming the points or detents upon the extremities of the wire forming the springs, said points or detents being provided for the attachment of the springs to the bed, and being indicated at *b b'*, Fig. 4, at the lower ends of the springs, B B'. Said bending mechanism, C, comprises a vertical, stationary pin, D, provided with a vertical slot, *d*, of a size to receive the wire, and a lever, E, fulcrumed upon said pin, and provided at an intermediate point with a vertical bending stud, *e*, rigidly attached to the lever and provided at its upper end, upon each side, with a notch, *e'*, also adapted to engage the wire. By placing one extremity of the wire of which the coils are formed in the slot in the upper end of the vertical pin D, and extending it therethrough far enough to engage the notch in one side of the stud carried by the lever, and then swinging the lever to the right or left according to which notch is engaged by the wire, and according to whether a right or a left hand bend is desired, the end of the wire may be bent to the form shown in the point or detent upon the extremities of the springs, in Fig. 4.

F represents a horizontal shaft mounted in bearings in the standard, at an intermediate point, and provided at its rear end with an operating crank, G, the hub of said crank being provided with a ratchet, H, engaged by a gravity pawl, I. The shaft is extended beyond the front side of the standard and carries a permanent coiling-cone, K, which tapers outwardly, or from the standard, the portion of the shaft which extends beyond said cone being squared, as shown, to receive a removable, oppositely-disposed coiling cone, L. This removable, or adjustable, cone is provided with a squared bore to fit the squared shaft, the smaller or reduced inner end of the removable cone fitting close to the outer reduced end of the permanent cone, as shown. The removable cone also carries an engaging eye, M, to receive the end of the wire which is being coiled upon the cones, to hold the same in position. Above the shaft, upon the front side of the standard, is arranged a bracket, N, provided with a series of forwardly projecting studs, of various sizes, and arranged in any desired fanciful design, the object of the same being to provide a former for the intermediate or connecting portion of the wire, between the spiral springs, said intermediate or connecting portion being indicated in Fig. 4 by O.

In operation, one end of the wire, which is to form a pair of twin coils, is bent by means of the bending mechanism in the manner above described, after which said bent end *b* is inserted in the eye which is carried by the removable cone, and the shaft is rotated by means of its crank to cause the wire to be reeled upon the outer and inner cones, successively. The cones are provided with spirally arranged grooves or channels, P, in which the wire is designed to lie when reeled thereupon. When the wire is properly arranged in these spiral grooves and extends from the outer end of the removable cone to the inner end of the permanent cone, the shaft is held from turning by the pawl and the wire is cut leaving sufficient material for the other coil B' and the intermediate connecting portion O. The portion of wire adjacent to the inner end of the spiral coil B is now passed around the

studs upon the former, after which the removable core, with the portion of the spring already formed, is removed from the shaft, and the operation, as above described, is repeated, to form the other spring B′.

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

1. In a machine of the class described, the combination with a standard, a rotatable shaft carrying coiling cones, and means to operate the same, of a vertical bracket N disposed upon the standard above said shaft and provided with forward projecting studs around which to form the intermediate portions of the springs, substantially as specified.

2. In a machine for the purpose named, the combination with a standard, and a rotatable shaft mounted in bearings thereon and provided with oppositely disposed coiling cones, one of which is removable, of the bending mechanism, comprising a permanent vertically-slotted pin, and a lever fulcrumed upon said pin and carrying a stud provided at its opposite sides with notches to engage the wire, all substantially as specified.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

GEORGE I. STARK.

Witnesses:
J. A. EVANS,
G. M. D. WILLIAMS.