

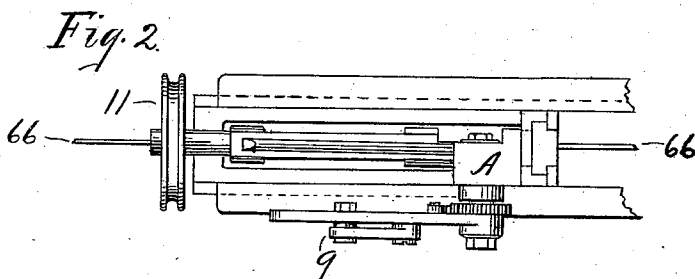
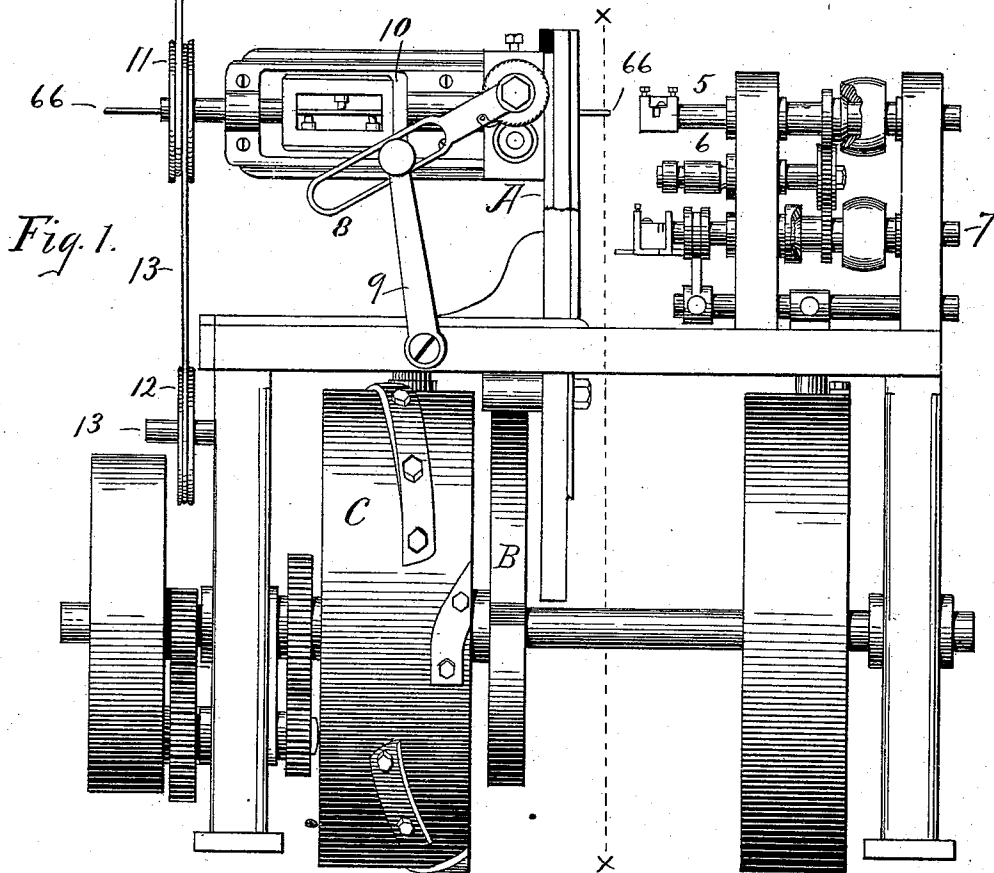
(No Model.)

2 Sheets—Sheet 1.

C. M. SPENCER.
SCREW MACHINE.

No. 532,106.

Patented Jan. 8, 1895.



Witnesses

G. M. Stippek
C. Durwin Loomer for

Inventor,

Christopher M. Spencer
By James Shepard.
Atty.

(No Model.)

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Fig. 3.

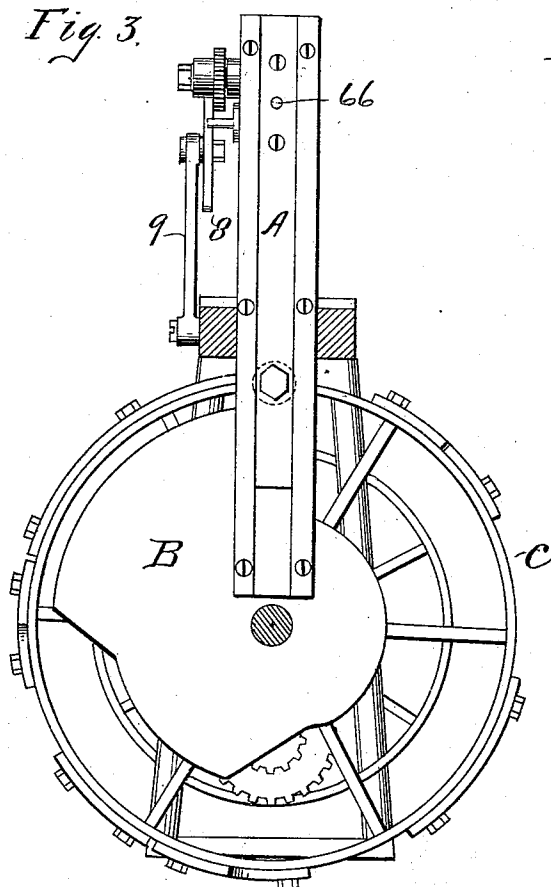
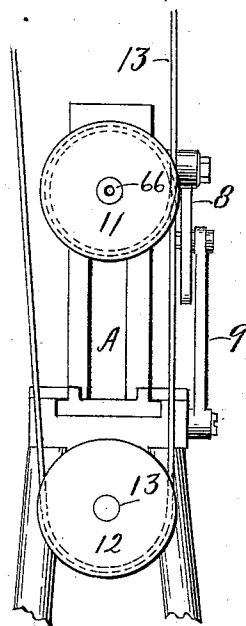


Fig. 4.



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UNITED STATES PATENT OFFICE.

CHRISTOPHER M. SPENCER, OF WINDSOR, ASSIGNOR TO THE SPENCER AUTOMATIC MACHINE SCREW COMPANY, OF HARTFORD, CONNECTICUT.

SCREW-MACHINE.

SPECIFICATION forming part of Letters Patent No. 532,106, dated January 8, 1895.

Application filed May 9, 1894. Serial No. 510,611. (No model.)

To all whom it may concern:

Be it known that I, CHRISTOPHER M. SPENCER, a citizen of the United States, residing at Windsor, in the county of Hartford and State of Connecticut, have invented certain new and useful Improvements in Screw-Machines, of which the following is a specification.

My invention relates to improvements in screw machines, and the chief object of my improvement is to provide an efficient wire straightener for the movable carriage of an automatic screw machine.

In the accompanying drawings: Figure 1 is a front elevation of my machine. Fig. 2 is a plan view of a portion of said machine. Fig. 3 is a vertical section of the same on the line xx of Fig. 1, and Fig. 4 is a side elevation showing a part of one end of my machine.

The machine in its general features is the same as patented to me February 27, 1891, No. 447,017, in which a series of revolving spindles 5, 6 and 7 are arranged one over the other for carrying various tools, while the wire 66 from which the screws are made is held in the carriage A and moved vertically to bring the wire into alignment with the various spindles by means of the cam B while it is moved horizontally to and from the spindles by means of the cam wheel C. At the same time, the wire is fed along the proper distance by means of the lever 8 and connected link 9 which operates the feed as the carriage is raised and lowered, all substantially as shown and described in said patent.

In the frame of the carriage A, I arrange a revolving wire straightener 10 of any ordinary construction in its general features. On the end of its hollow shaft, I arrange a driving pulley 11 having a wide groove and immediately underneath said pulley I arrange on the frame of the machine an idle pulley 12 having a narrower groove, said idle pulley 12

being mounted loosely upon the pin 13 so that it may work longitudinally on said pin. A driving belt 13 is extended from a suitable pulley to the pulley 11 making one complete turn about said pulley as shown in Fig. 1 and as indicated by broken lines in Fig. 4. This belt then extends down over the idle pulley to keep it taut as shown, and up to the main driving pulley. As the carriage is raised and lowered, the driving pulley 11 and wire straightener rise and fall with it without any interference in the revolving motion of the straightener, the pulley and the coil about it freely moving from one position to the other. As the carriage moves longitudinally with the machine, the idle pulley 12 may move also longitudinally on its pin, the belt being long enough to permit its movement without any corresponding movement upon the driving pulley proper at the farther end of the belt. By this arrangement, I am enabled to employ a revolving wire straightener and continually drive it during all the various movements of the carriage, thereby more effectually straightening the wire and preparing it for being made into screws than it is possible to do by simply passing it between rollers as in the aforesaid patent.

I claim as my invention—

In a screw machine, the combination of the rising and falling and longitudinally moving carriage with a revolving wire straightener mounted on said carriage, and carrying a driving pulley 11, the belt 13 extending from a suitable main driving pulley with one coil about the pulley 11 and the sliding idle pulley 12 for the end of said belt, substantially as described and for the purpose specified.

CHRISTOPHER M. SPENCER.

Witnesses:

A. H. EDDY,
JAMES SHEPARD.