(No Model.) 3 Sheets—Sheet 1.

H. POLTE.

APPARATUS FOR COILING WIRE.

No. 517,964. Patented Apr. 10, 1894.

Fig. I.

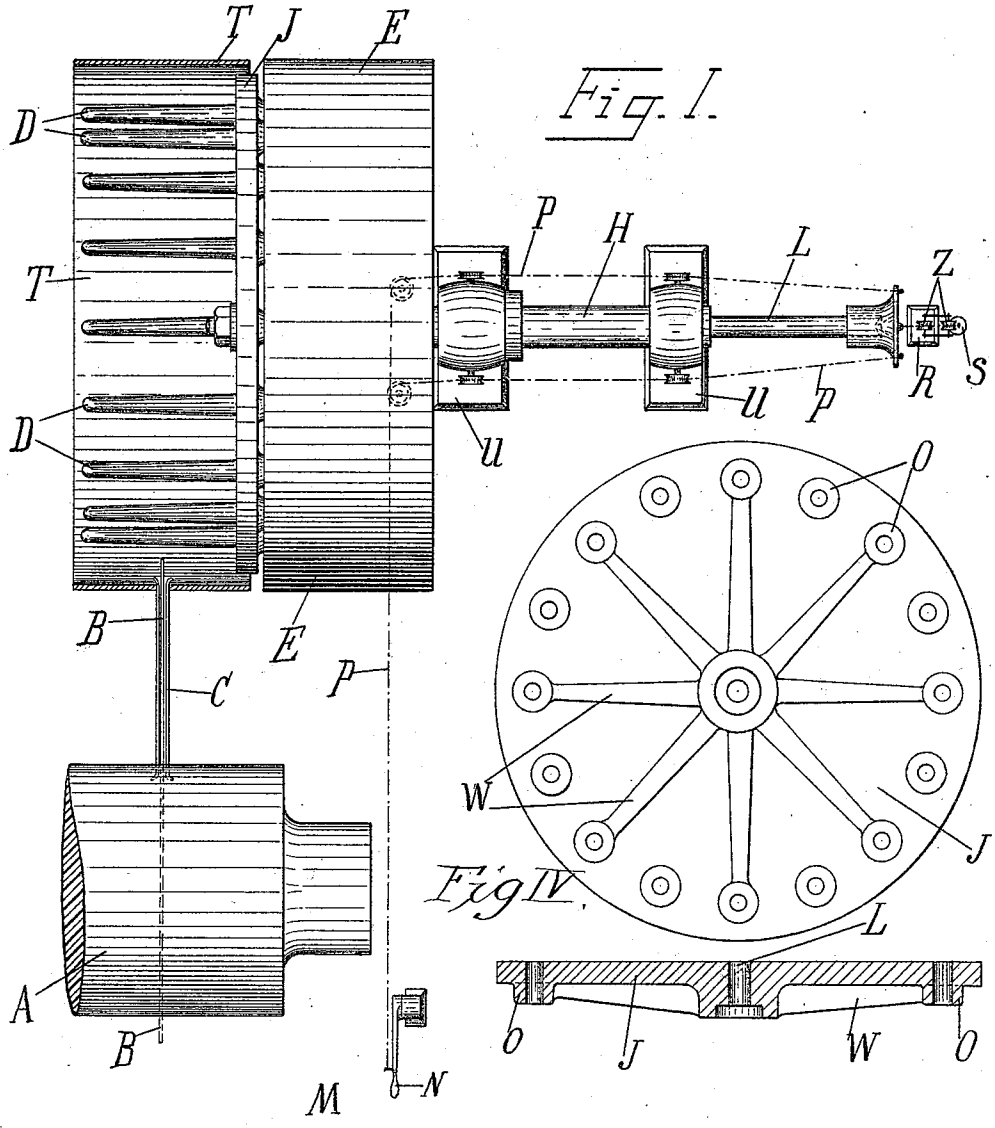

Fig IV.

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(No Model.) 3 Sheets—Sheet 2.

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Fig. II.

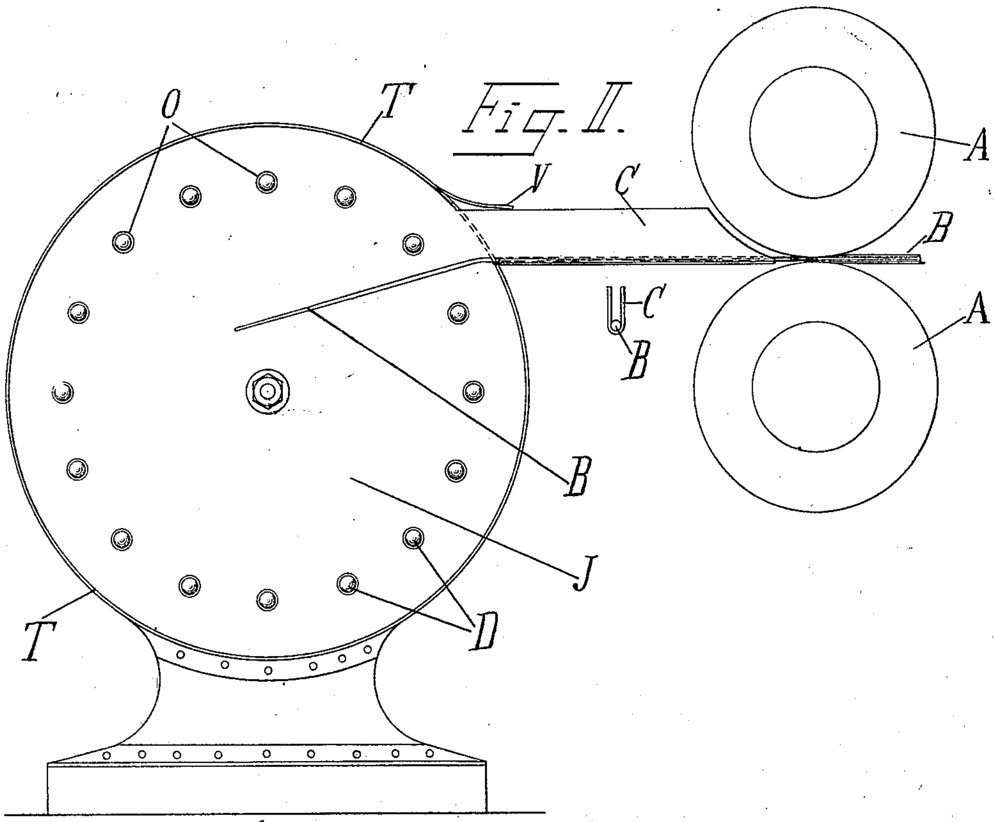
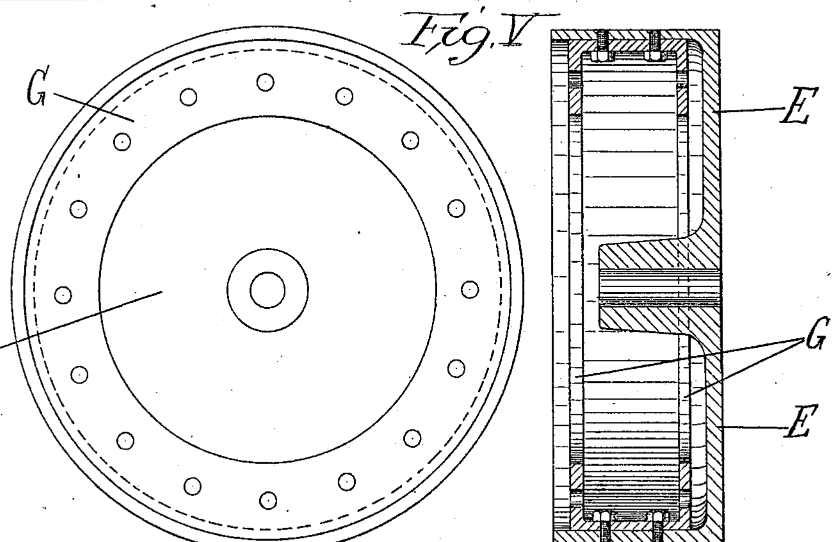


Fig. V



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(No Model.) 3 Sheets—Sheet 3.

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APPARATUS FOR COILING WIRE.

No. 517,964. Patented Apr. 10, 1894.

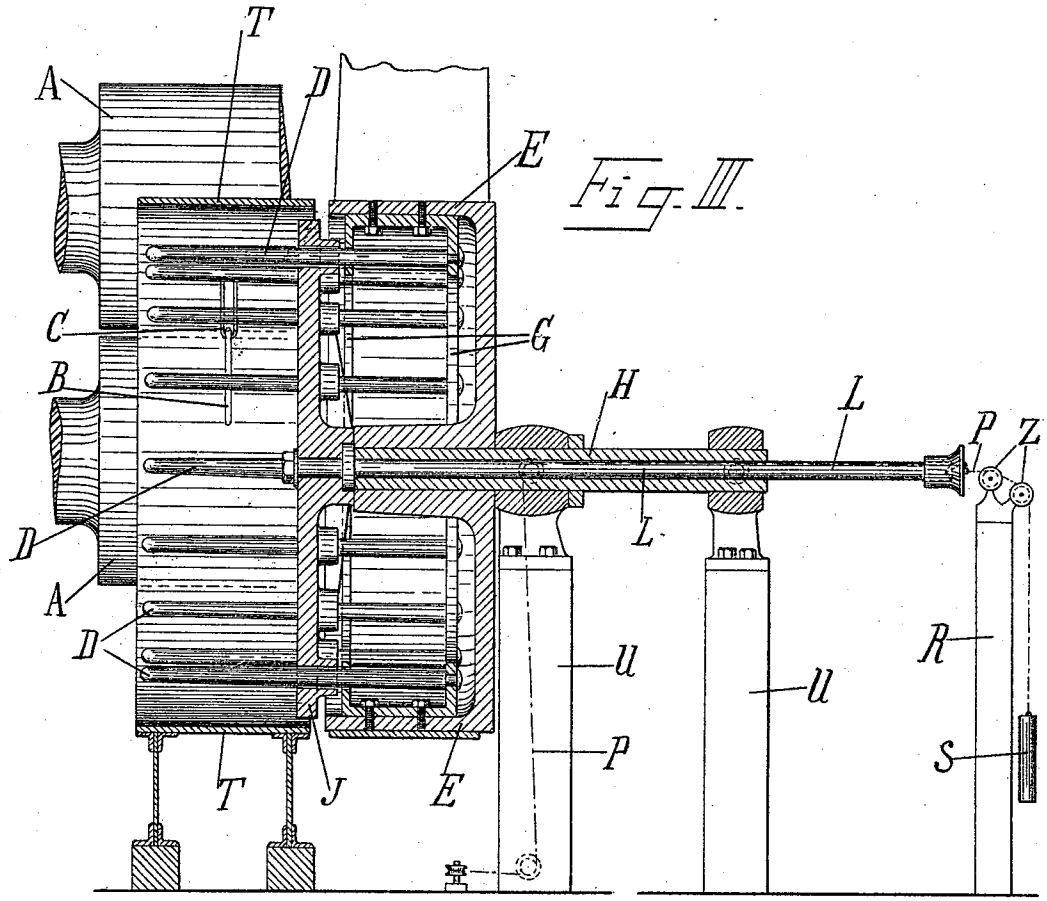

Fig. III.

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UNITED STATES PATENT OFFICE.

HUBERT POLTE, OF REMSCHEID-HASTEN, GERMANY.

APPARATUS FOR COILING WIRE.

SPECIFICATION forming part of Letters Patent No. 517,964, dated April 10, 1894.

Application filed May 24, 1893. Serial No. 475,373. (No model.)

To all whom it may concern:

Be it known that I, HUBERT POLTE, engineer, a subject of the King of Prussia, and a resident of 31 Büchelstrasse, Remscheid-Hasten, in the Kingdom of Prussia and German Empire, have invented a certain new and useful Improvement in Apparatus for Coiling Wire, of which the following is a specification.

In order to make this invention more fully intelligible, reference is made to the accompanying drawings, in which similar letters of reference are employed to denote similar parts throughout the several figures.

Figure 1 is a plan view; Fig. 2 a front view; Fig. 3 a vertical cross section of the same. Fig. 4, shows in elevation and in section the disk J. Fig. 5, shows in front elevation and section the pulley E.

The coiling device is fixed at a suitable distance of three to four yards from the pair of rollers A A. The wire B, thrown out from the pass of the rollers A A, is led through a guide C, which consists of a fixed channel with a wide mouth, against the upper part of the coiling device, which is provided with a corresponding opening V. The channel C is internally arranged in size according to the strength or diameter of the wire B proceeding from A, and must be so narrow that it is only just sufficient to permit of a free passage of the wire. The walls of the channel C must be made as high as possible to avoid the wires springing out.

The winding drum consists of a pulley E for the driving-belt and several round rods D, of between one-fourth inch and one-half inch diameter arranged at distances of from one and one-half to two inches from one another in two disks G, set in the belt-pulley E. The belt-pulley E rotates free on the shaft H, the latter being immovably set in the two standards U. A disk J is attached to an axle L. The object of this disk is to aid in the removal of the wire B when it has been wound. For this purpose the disk J is attached to an axle L, which is passed through the fixed shaft H, and is arranged so as to slide backward and forward. The openings O in the disk J, through which pass the rods D serve as guides. To effect the forward motion of the axle L, a pulley and wire arrangement is used leading to the place M where the workman, serving the rollers A, stands, and is there provided with a lever attachment N. The backward motion of the axle L is effected mechanically by means of a rope or chain attached to the same and passing over the rollers Z of the support R and by a weight S. Naturally, the mechanical backward motion of the axle can be effected by means of a spring or by any other suitable arrangement. The rotation of the drum is continuous. The speed, however, is to be made nearly approaching that of the rollers A, as the circumferential speed of the drum, that is of the rods D, must be a trifle less than that of the rollers A in order to prevent the wire B tearing while being wound. A casing T covers the rods D in order to prevent a throwing of the wire on the commencement of the operation and more especially when the end leaves the rollers. An opening V is provided at the upper part of this casing at the side nearest to the rollers, through which the wire B passes to the drum.

The following is the procedure of winding the wire on the drum:—Wire B, proceeding with great force and speed from the last set of rollers A, at once enters the channel C and shooting through this is caught onto the rods D of the continuously rotating winding-drum and is automatically wound upon the same, entirely excluding any chance of disconnection. In the further course of the winding a small quantity of the wire B will collect in the channel C, the speed of the rollers being somewhat greater than the speed of the drum. This evil is, however, soon obviated by the gradually enlarging coil of wire causing an increased circumferential speed. Further, the formation of loops in the wire is utterly impossible from the nature of the channel, which is made of just sufficient width to allow of the free passage of the wire; and any wire collecting in the same can merely overlap. When the wire B is completely wound, which occurs only a few seconds after the end of the wire has left the last pair of rollers, the coil is detached from the rods D by the workman serving the rollers A, pulling the lever

N and thus effecting the forward motion of the disk J. The rods D are, for this purpose, preferably of slightly conical form. The coil of wire can be made to slide down a suitably prepared slide onto the floor of the shop whence it can be transported by any suitable mechanical means.

Having now described my invention, what I claim as new, and desire to secure by Letters Patent, is—

In combination with a driving pulley E, disks G secured within the pulley E, rods D passing through openings in said disks with their front ends extending through a movable disk J, means for giving horizontal movement to said disk J, a casing T inclosing the rods D, feed rolls and an elongated channel C between the feed rolls and the casing, substantially as described.

In witness whereof I have hereunto signed my name in the presence of two subscribing witnesses.

HUBERT POLTE.

Witnesses:
EVA HAUSEN.
SOPHIE NAGEL.