(No Model.)

O. R. CHAPLIN.

SPOOL FOR HOLDING WIRE.

No. 263,682. Patented Sept. 5, 1882.

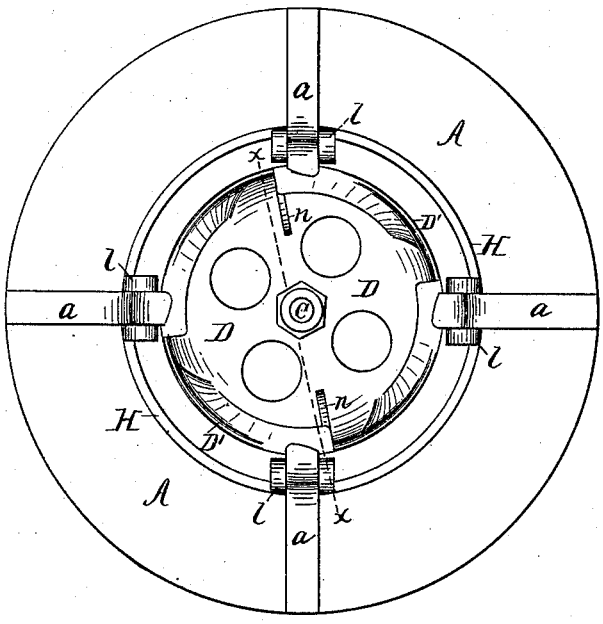

Fig. 1

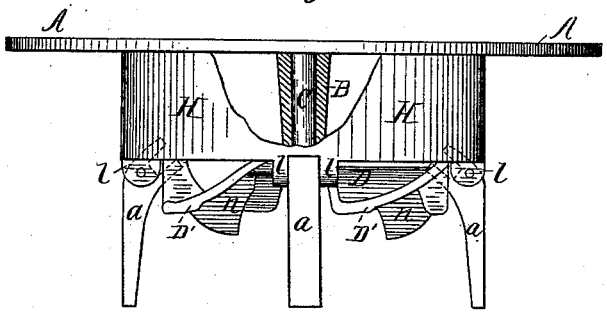

Fig. 2.

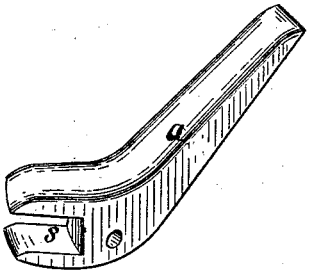

Fig. 4.

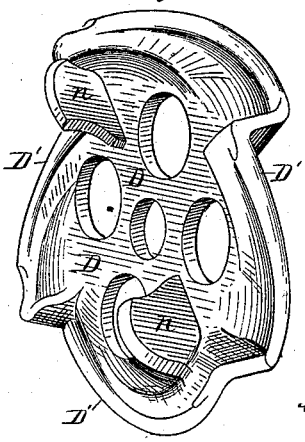

Fig. 3.

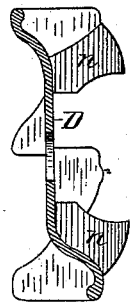

Fig. 5

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UNITED STATES PATENT OFFICE.

ORRIL R. CHAPLIN, OF BOSTON, MASSACHUSETTS, ASSIGNOR TO THE FLEXIBLE SHOE NAIL COMPANY, OF SAME PLACE.

SPOOL FOR HOLDING WIRE.

SPECIFICATION forming part of Letters Patent No. 263,682, dated September 5, 1882.

Application filed November 10, 1881. (No model.)

To all whom it may concern:

Be it known that I, ORRIL R. CHAPLIN, of Boston, in the county of Suffolk and State of Massachusetts, have invented a new and useful Improvement in Spools for Holding Wire, of which the following is a full, clear, concise, and exact description, reference being had to the accompanying drawings, in which—

Figure 1 is a plan showing the arms *a* extended. Fig. 2 is a side view, showing the arms *a* thrown back. Fig. 3 is a perspective of the center piece, D, showing the cam-shaped periphery. Fig. 4 is a detail view of an arm. Fig. 5 is a section on line *x x*, Fig. 1.

My improved spool or reel is designed especially for use on the machine for driving sole-fastenings for which I obtained Letters Patent of the United States, dated August 17, 1880, numbered 231,149, but is adapted for use wherever a spool is required from which wire is being drawn and onto which it is desirable to place new coils of wire with ease and rapidity.

Hitherto spools of wood, and also of metal, made in one piece, or made with one of the heads capable of being detached when the spool was being filled with a coil of wire, have been used on machines for nailing boots and shoes which cut the nails used from continuous wire. In all these spools known to me it is necessary when the spool is empty either to remove the spool, if it be a solid spool, and replace it by a full one, or, if it be a separable spool, to detach the head by a more or less lengthy process, fill the spool, and then replace the head. The first of these methods is objectionable, because of the expense for spools and transportation, the second because of the additional delay when the wire runs out, which is a considerable expense in a rapidly-working machine. To obviate these objections I have devised a spool consisting of several parts so arranged that by a simple movement of the thumb and finger it may be at once opened for the reception of a coil of wire and may be as rapidly closed. The peculiar construction of one head of the spool, more fully described below, which renders this possible, is the essential feature of my invention.

My spool is constructed as follows: The head A (which forms what may be termed the "back" of the spool as it is in position on the supporting-spindle) I make of a thin circular plate of metal, of the required diameter, according to the capacity of the spool. At the center of this head a light hub, B, is cast, projecting from one side of the head, and through which the supporting-spindle C passes. A proper distance from the hub, and on the same side of the head A, a cylinder or drum, H, is also cast, which bears the wire. The head, which I may term the "front head," which is now required to complete the spool, consists of a center piece, D, and movable arms *a*. The center piece, D, is circular with a cam-shaped periphery, D′, and is placed against the end of the hub B, and receives through its center the spindle C, provided with a nut on its free end, which holds the center piece in position against the hub. This center piece, D, is of a diameter a little less than the cylinder or drum H, and bears on its outer face two lugs or thumb-pieces, *n*, by which it may be moved or partially rotated on the spindle independently of the rest of the spool. On the front end of the cylinder H are pivoted between lugs *l* the arms *a*, arranged to swing on the pivots from a position parallel with the axis of the spindle when the spool is open to receive the wire (see Fig. 2) to a position at right angles to said axis when the spool is shut. (See Fig. 1.) These arms are slotted at their inner ends, which project inside the drum, with slots S cut parallel to the flare of the cam on the periphery of the center piece, D. The cam-shaped periphery D′ acts in these slots S, and as the center piece, D, is moved or partially rotated the slots follow the cams on the periphery, and the slotted ends of the arms are depressed or raised, which causes the free ends of the arms to be thrown back or out, thus opening or closing the spool instantly at the will of the operator.

The entire operation of filling the empty spool is very simple. The operator, placing his thumb and finger against the lugs *n* on the face of the center piece, D, turns the center piece to the left, thus throwing back the arms *a* ready for reception of the coil of wire. The wire being placed on the drum, the center piece

is again turned, but in the opposite direction, thus throwing the arms *a* out in a position to retain the wire on the drum. The arm *a* is held securely in its extended position by a slight shoulder, *b*, on the cam, over which the slotted end of the arm passes.

What I claim is—

1. The above-described spool, constructed with an adjustable head composed of center piece, D, and projecting arms *a*, arranged and operating together as set forth.

2. The combination of the hub B, the drum H, the movable center piece, D, and arms *a*, as shown and described.

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Witnesses:

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