

(No Model.)

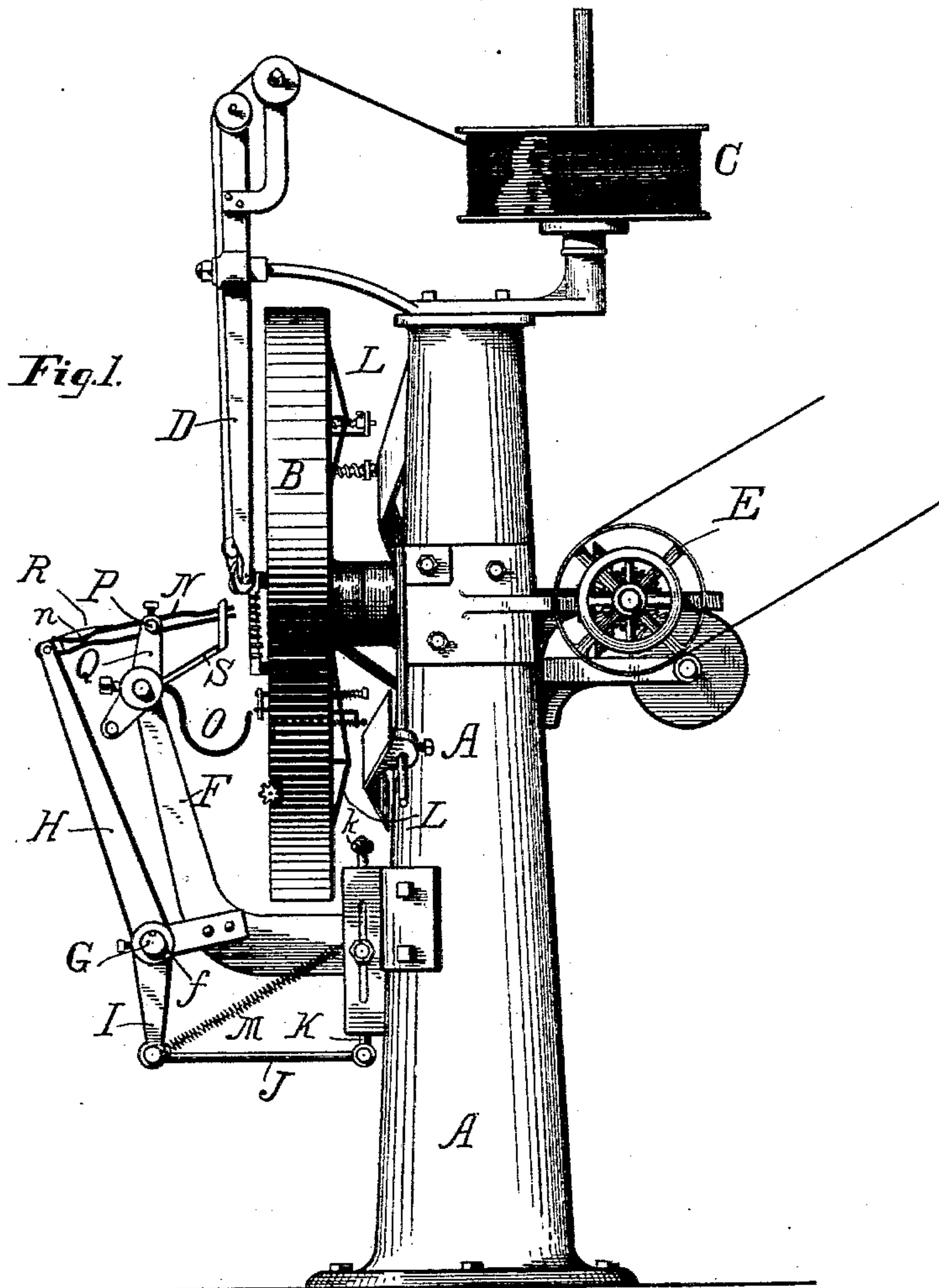
3 Sheets—Sheet 1.

W. WILSON, Jr.

ATTACHMENT FOR RECEIVING AND COLLECTING LOOPED AND CUT WIRE.

No. 300,547.

Patented June 17, 1884.



WITNESSES:

A. H. Culver
John D. Lutz

Wm. Wilson Jr.

INVENTOR

By his Attorneys
Wm. C. Strawbridge -
Bonsau Taylor -

(No Model.)

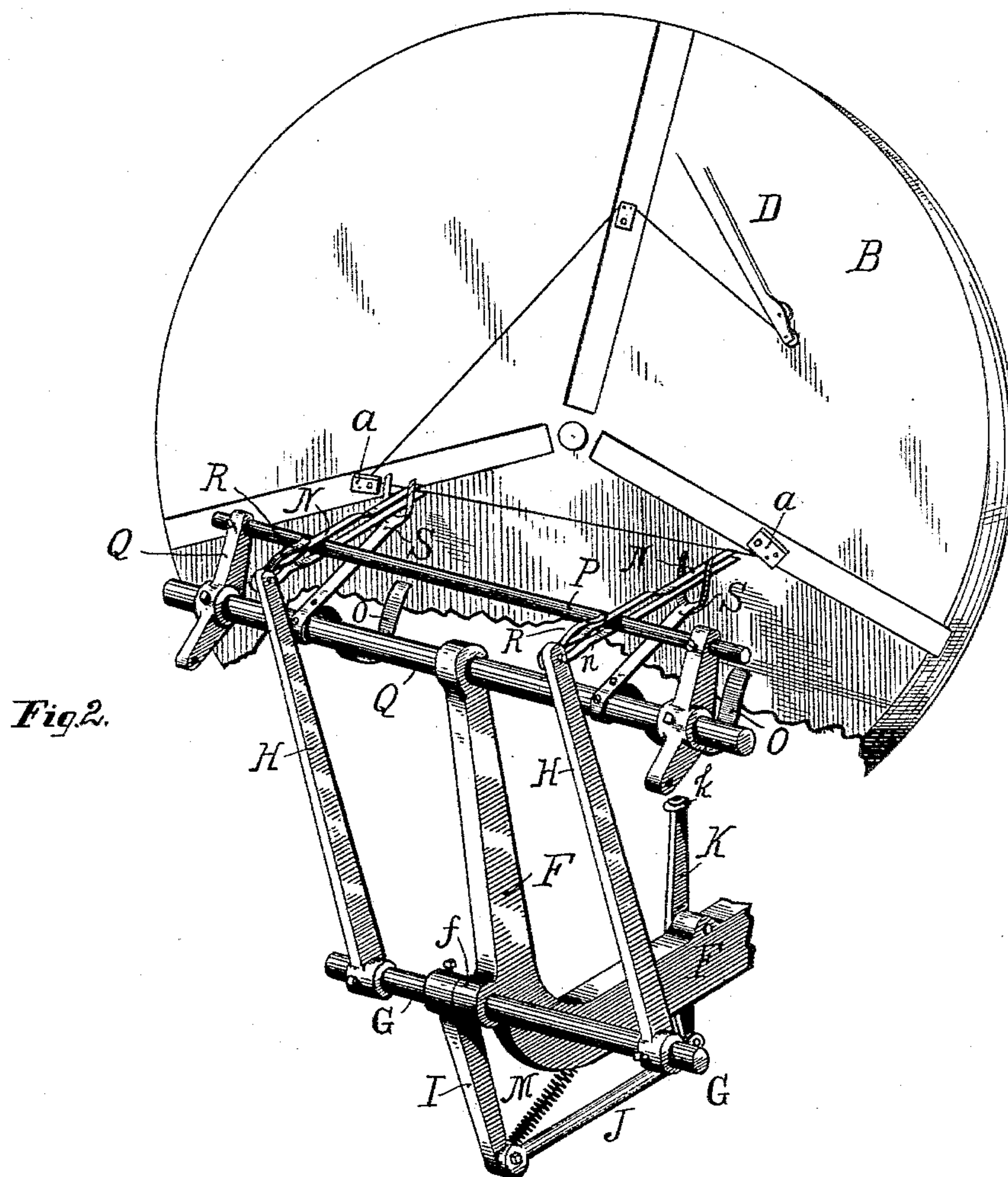
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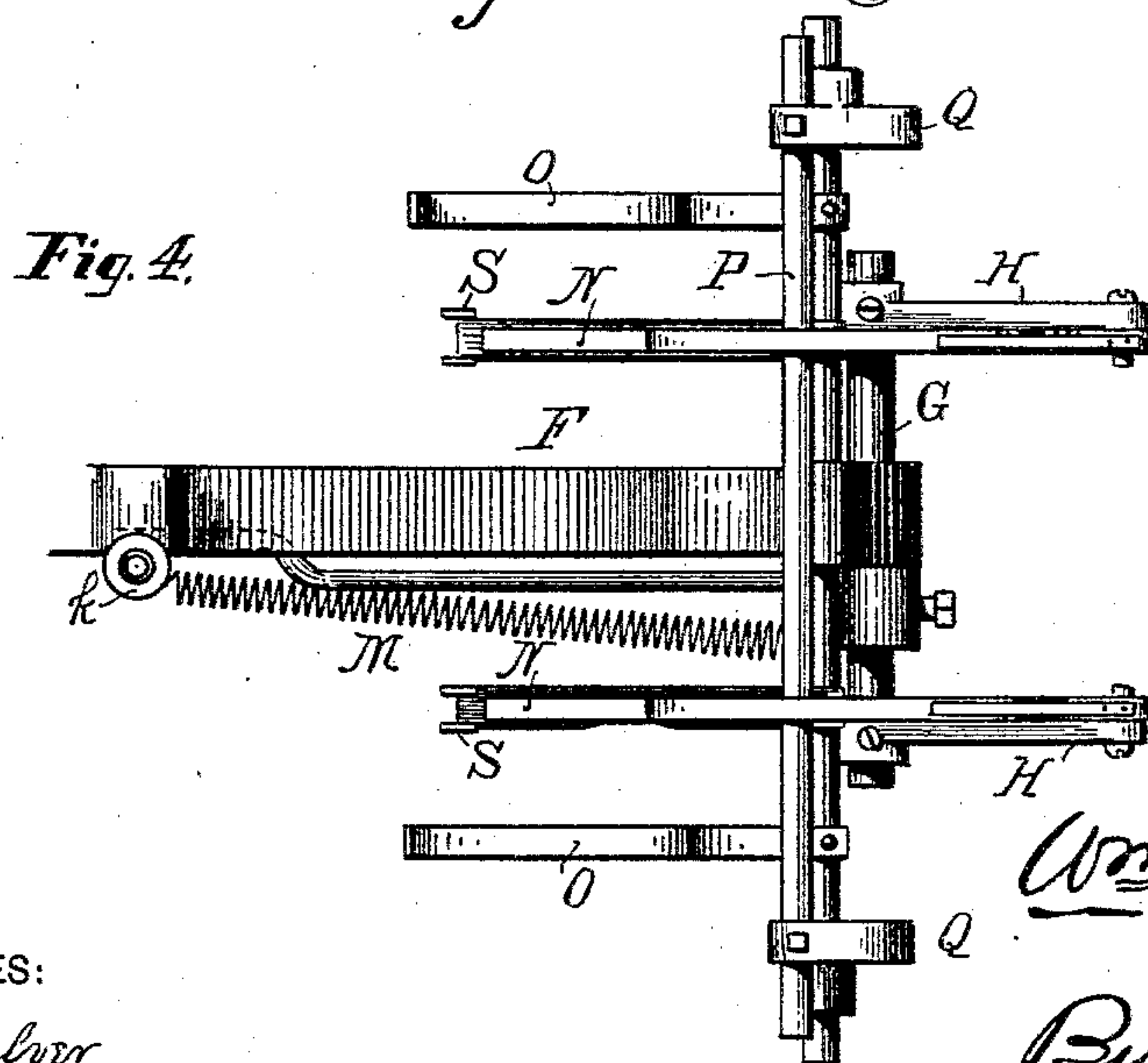
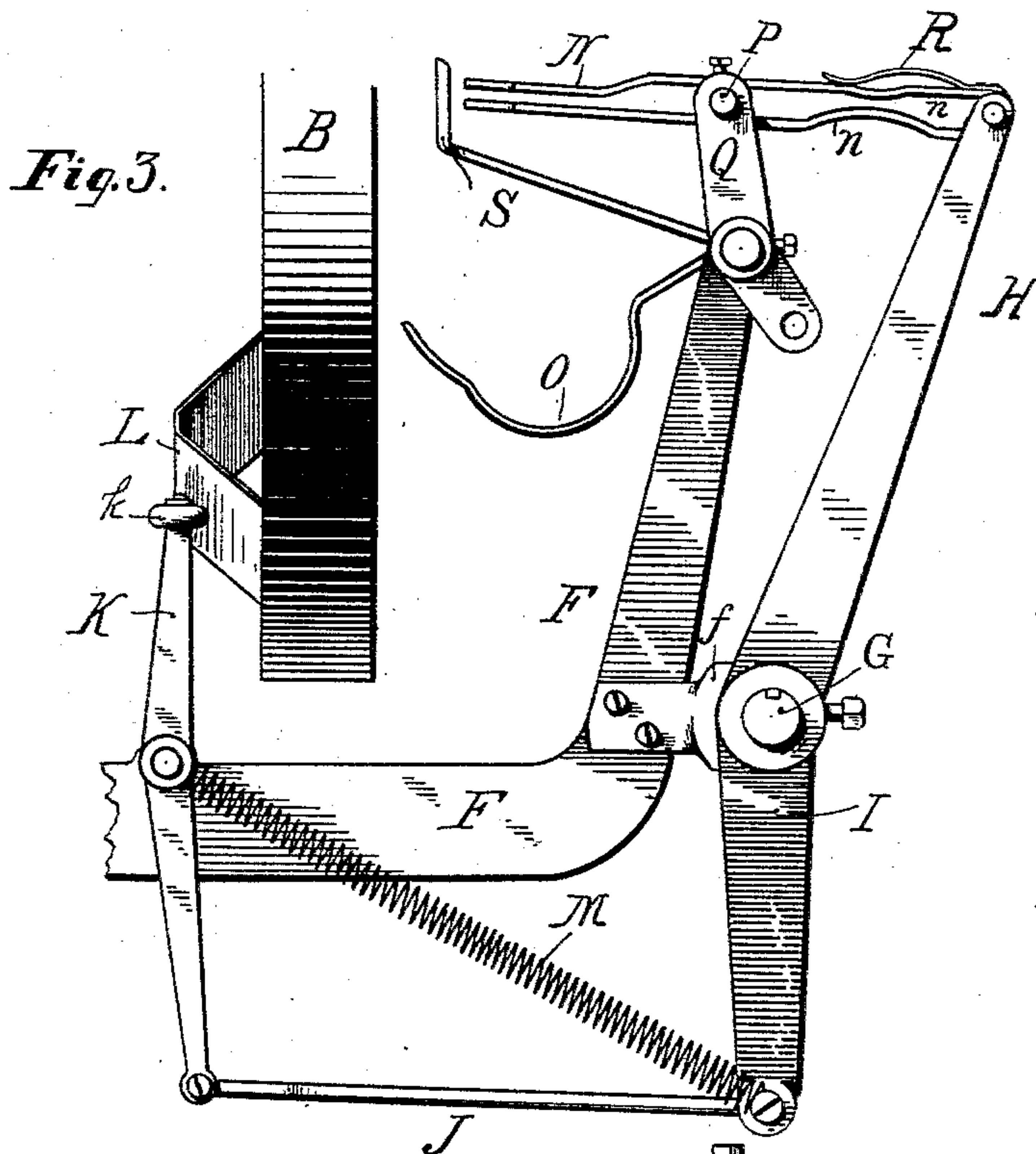
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John D. Leary

Wm Wilson Jr.

INVENTOR

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Wm E. Strawbridge
Bonsau Taylor

UNITED STATES PATENT OFFICE.

WILLIAM WILSON, JR., OF GREENVILLE, DELAWARE, ASSIGNOR OF ONE-HALF TO CHARLES GREEN, OF SAME PLACE.

ATTACHMENT FOR RECEIVING AND COLLECTING LOOPED AND CUT WIRE.

SPECIFICATION forming part of Letters Patent No. 300,547, dated June 17, 1884.

Application filed October 29, 1883. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM WILSON, Jr., of Greenville, in the county of New Castle and State of Delaware, have invented an Improved Attachment for Receiving and Collecting Looped and Cut Wires, of which the following is a specification.

My invention is intended for use in connection with a class of machines which are used to twist a loop upon wire and to cut the looped wire to a given length, and which have for their object the rapid manufacture of looped sections of wire; and it is an attachment especially designed for use in connection with a particular machine for looping and cutting wire invented by me, and patented to me in and by Reissued Letters Patent No. 9,404, dated October 12, 1880, the same having been originally patented April 29, 1879.

My attachment is in the accompanying drawings shown applied to my patented machine for looping and cutting wire, represented as constructed with its circular table which carries the twisting-hooks operating in a vertical and not in a horizontal plane.

Looped wire is used for various purposes in the arts—for instance, as an opening device for metallic cans, as a means for securing tags, and for the baling of cotton, grain, and kindred substances.

My former patented invention consists, essentially, of a frame (in the particular organization of that machine represented the standard A) which supports for revolution a circular table or head which carries a series of twisting-hooks operated by pinions secured thereto, which at stated intervals engage with racks supported from the frame, so as to revolve said hooks and twist the wire fed to them, and which also carries a corresponding series of cutting devices employed to cut the looped wire to given lengths.

In that improved form of my patented apparatus which is represented in the drawings the frame-work is, as stated, constituted by the standard A, while the table (or "head," as it is more properly termed) B is set for revolution in a vertical plane, and the twisting-hooks and cutting devices are slightly modified in their application thereto, as are also the wire feeding or supplying contrivances.

None of the above-named elements require to be particularly described in order to a comprehension of my improvements. A further description of them would, moreover, be foreign to the purposes of this specification, as the devices themselves, in their modified construction and arrangement, properly constitute the subject-matter of a separate application for a patent of improvement filed February 8, 1884, as serial number 120,129.

In the accompanying drawings, which represent my improved attachment applied to a wire looping and cutting machine embodying in its arrangement a vertically-disposed revolving head, Figure 1 is a side elevation of the entire apparatus. Fig. 2 is a perspective detail of the attachment for disengaging, seizing, or discharging and receiving the severed sections of looped wire, the head being represented as partially broken away, as removed from the machine, and as devoid of the various contrivances which form the loops upon the wire and cut the sections of looped wire, none of the latter being essential for the comprehension of my improvements. Fig. 3 is a side elevational detail of my improvements and of a portion of the head. Fig. 4 is a top plan view of the same, the head being supposed removed.

Similar letters of reference indicate corresponding parts.

In the drawings, A, as stated, represents the standard or supporting frame-work proper, and B the revolving head which carries the wire looping and cutting devices.

C is the reel upon which the wire to be looped is coiled, D the wire-feeding devices, and E the various gears employed to impart motion to the head.

F is an angle arm or bracket affixed to the standard, and serving to support the several members which in their assembled relationship compose my improvements.

G is a horizontal rock-shaft, journaled in a horizontal plane and parallel with the face of the head in the bearing *f*, which is formed as a part of or connected with the bracket F.

H H are two upwardly-projecting rock-shaft arms, which are carried and adapted to be vibrated by the rock-shaft.

I is a downwardly-projecting rocker, also

carried by the rock-shaft, and adapted to be oscillated through the instrumentality of a link, J, and a pivoted lever, K, the upper extremity of which lever is equipped with a friction-pulley, *k*, adapted to encounter and be deflected by camways L upon the rear face of the head in the revolution of the latter.

M is a spring, connected between the lower extremity of the rocker I and a fixed support, the resilience of which adapts it to return the rocker, rock-shaft, rock-shaft arms, link, and lever to their former position after each deflection of these parts due to the action of the camways.

NN are two pairs of spring-controlled jaws, pivotally connected one pair with the upper extremity of each rock-shaft arm H, and in the lateral vibratory movement imparted to said rock-shaft arms designed to seize the cut sections of looped wire and effect their disengagement and discharge into the receiving-frames O O.

P is a wedge-bar, preferably parallel with the rock-shaft, and supported from the bracket F through the instrumentality of the frame Q. The upper and lower jaws of each respective set or pair of jaws N pass upon opposite sides of the wedge-bar, as represented in the drawings, so that the neighboring jaws of each pair are separated by the wedge-bar. One or both of the jaws of each pair are curved to form an internally-projecting incline or cam-surface, *n*, as represented in Fig. 3, the office of which is to cause the spreading apart of the jaws as the rock-shaft arms advance to carry the latter toward the head-plate for the seizing of the wire. In the set up of the machine the location of the wedge-bar is such with respect to the position of these inclines upon the jaws that the inclines are brought into contact with the wedge-bar, so as to cause the spreading apart of the jaws just before the advance or seizing extremities of the jaws reach the wire. The upper jaw of each pair is controlled by a spring, R, which imparts the necessary clamping force to the jaws.

S are strippers connected with and rigidly carried by the frame Q, which supports the wedge-bar. These strippers are bifurcated to straddle the respective sets of jaws, and their office is to strip the wire seized by the jaws from the jaws and occasion its gravitative fall into the receiving-frames O. When the severed sections descend into the receiving-frames, which are preferably made of semi-circular contour, they lie in a bundle, so to speak, and can be readily tied and removed from the machine.

Such being a description of a preferred form of apparatus embodying my invention, its operation will be readily understood when it is explained that the spring-jaws are thrown forward and caused to seize that portion of

the wire which in Fig. 2 is seen stretched between the two points *a a*, and which section of wire is the advance section, or that which has had a loop formed upon one end, and which my machine is constructed and timed to cut or sever synchronously with the seizing of the said section by the jaws. The jaws are spread at the instant when they inclose the wire, but spring together and seize it so soon as they commence to retreat.

Having thus described my invention, I desire to state that the form and mechanical arrangement of the parts may be varied and the same elements be combined in essentially the same way and operated to the same purpose without a literal adherence to the precise form and arrangement hereinbefore described. It is also quite possible for a mechanic so to vary the form and arrangement of this attachment as to adapt it for use with precisely the form of machine described in my Reissued Letters Patent hereinbefore referred to.

Having thus described my invention, I claim and desire to secure by Letters Patent—

1. In a machine for cutting and looping wire, the following instrumentalities in combination: first, a rotating head provided with devices which are suitably operated to automatically form loops upon wire and to automatically cut off a given section of looped wire; second, an automatically-operating wire-seizing device for grasping the severed sections of looped wire; third, devices for removing or stripping the sections from the grip of the wire-seizing device; fourth, means for operating the wire-seizing device; and, fifth, a receiver for receiving the severed sections.

2. The combination of the head-plate provided with devices which are suitably operated to automatically form loops upon wire and to cut the looped wire to predetermined lengths, jaws, strippers, receiving-frames, suitable mechanism for causing the advance and retreat of the jaws, and mechanism for causing the opening and closing of the jaws.

3. The combination of the jaws, the wedge-bar, and the jaw-springs, substantially as and for the purposes specified.

4. The combination of the head, provided with devices for forming loops upon wire and for cutting the looped wire to given lengths, and provided also with a series of camways, the pivoted lever, the link, rocker, rock-shaft, rock-shaft arms, and spring-jaws, the whole combined and operating substantially as set forth.

In testimony whereof I have hereunto signed my name this 16th day of October, A. D. 1883.

WM. WILSON, JR.

In presence of—

J. BONSALE TAYLOR,
JOHN JOLLEY, Jr.