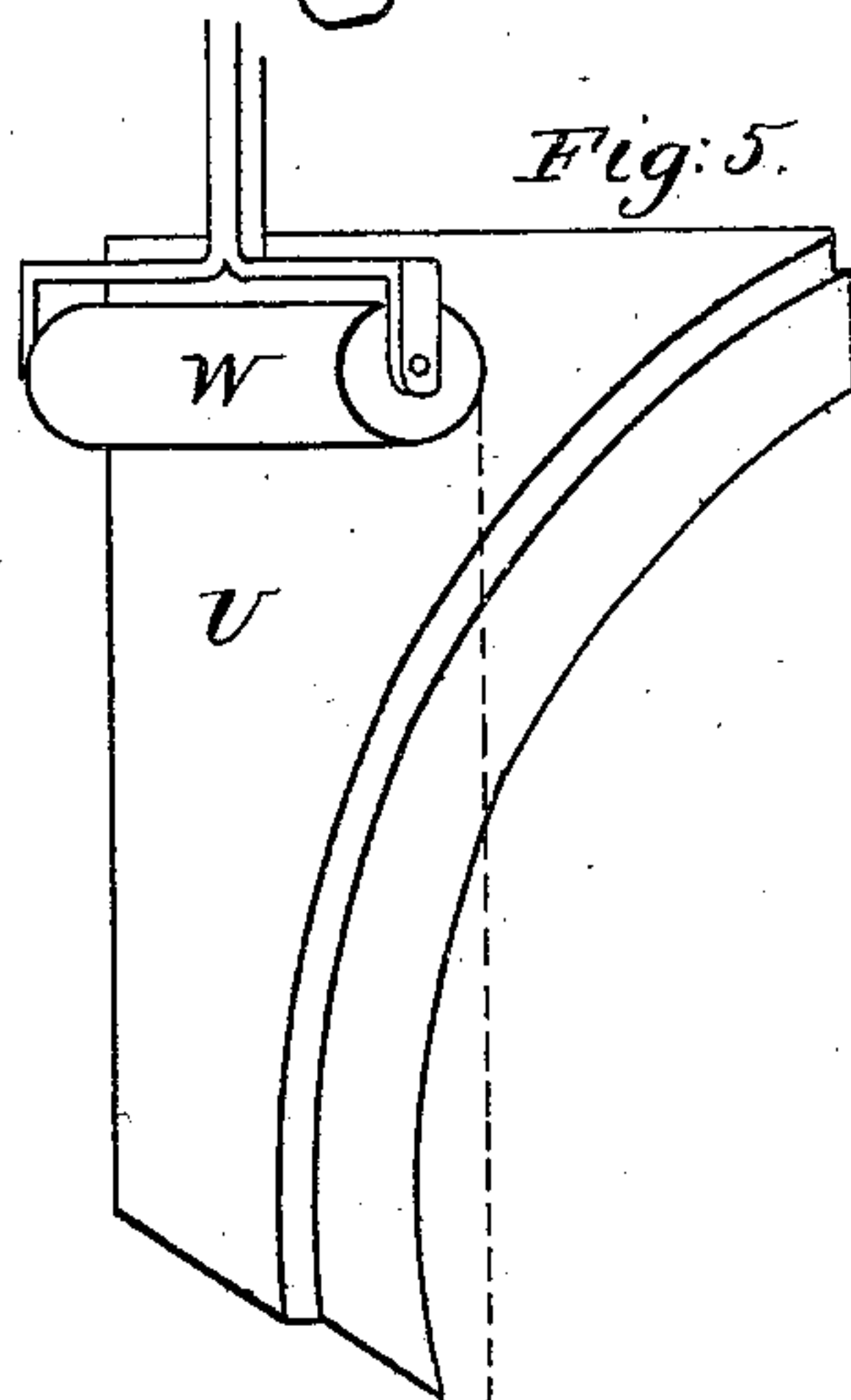
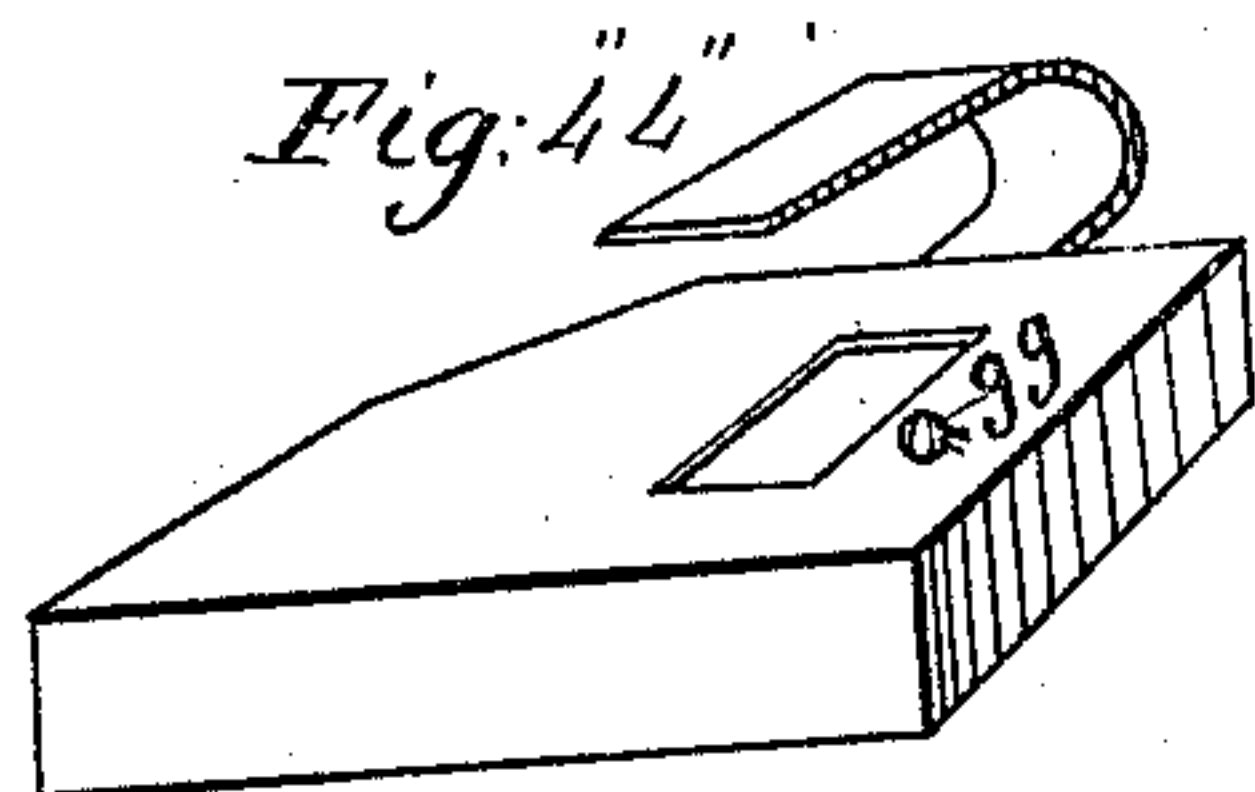
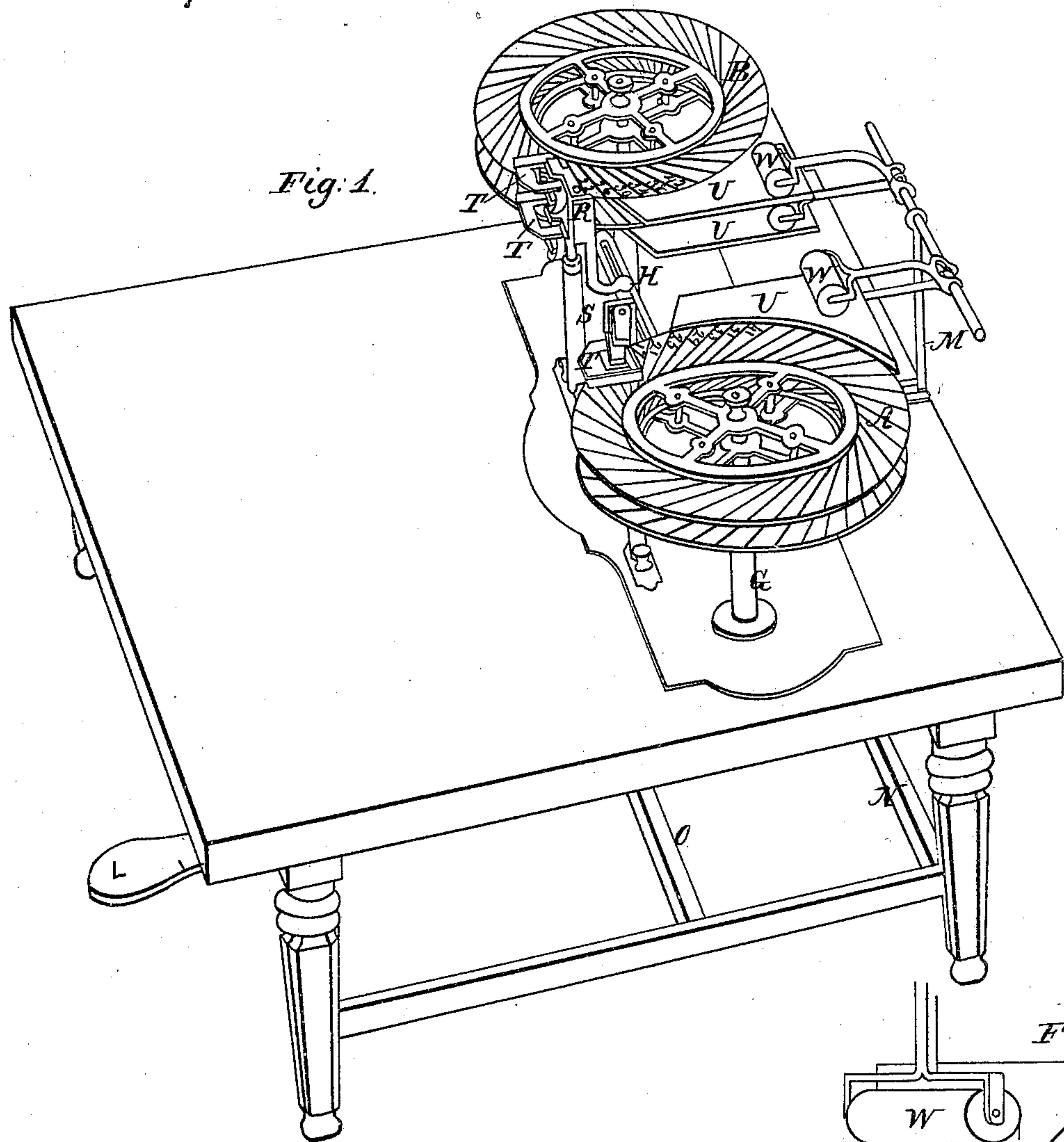


R. M. Leslie. Sheet 1. 2 Sheets.
Paging Mach.
N^o 9586. Patented Feb. 15. 1853.



R. M. Leslie. Sheet 2 of 2 Sheets
Paging Mach.

N^o 9586.

Patented Feb. 15. 1853.

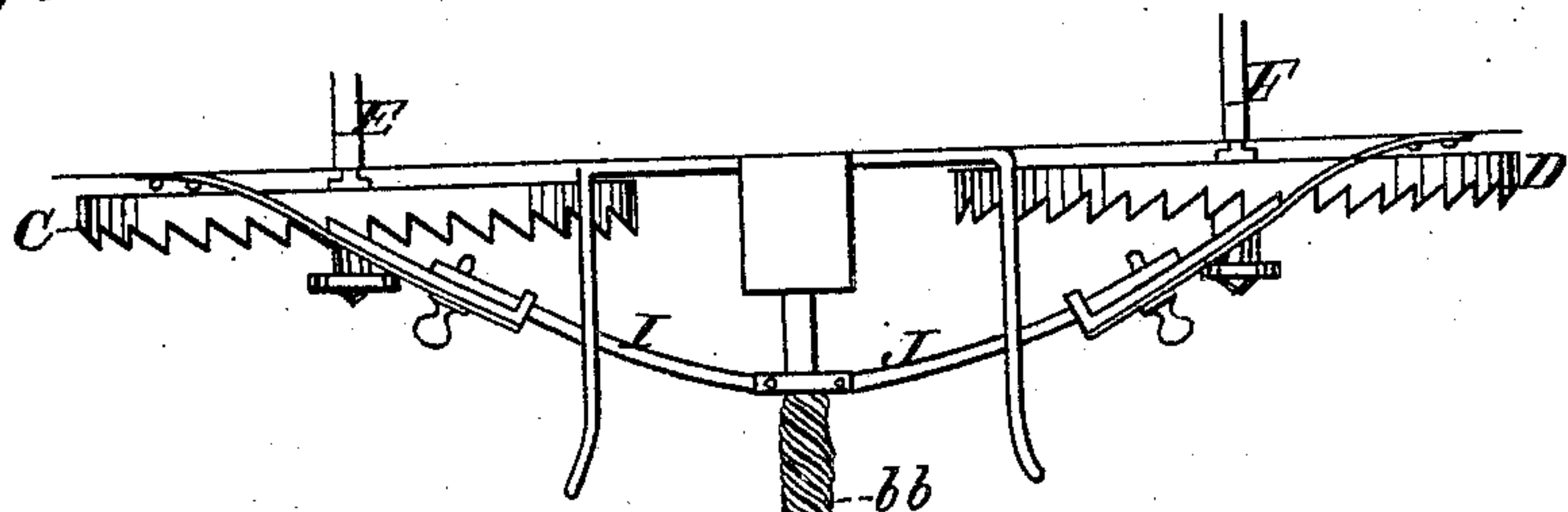


Fig. 2.

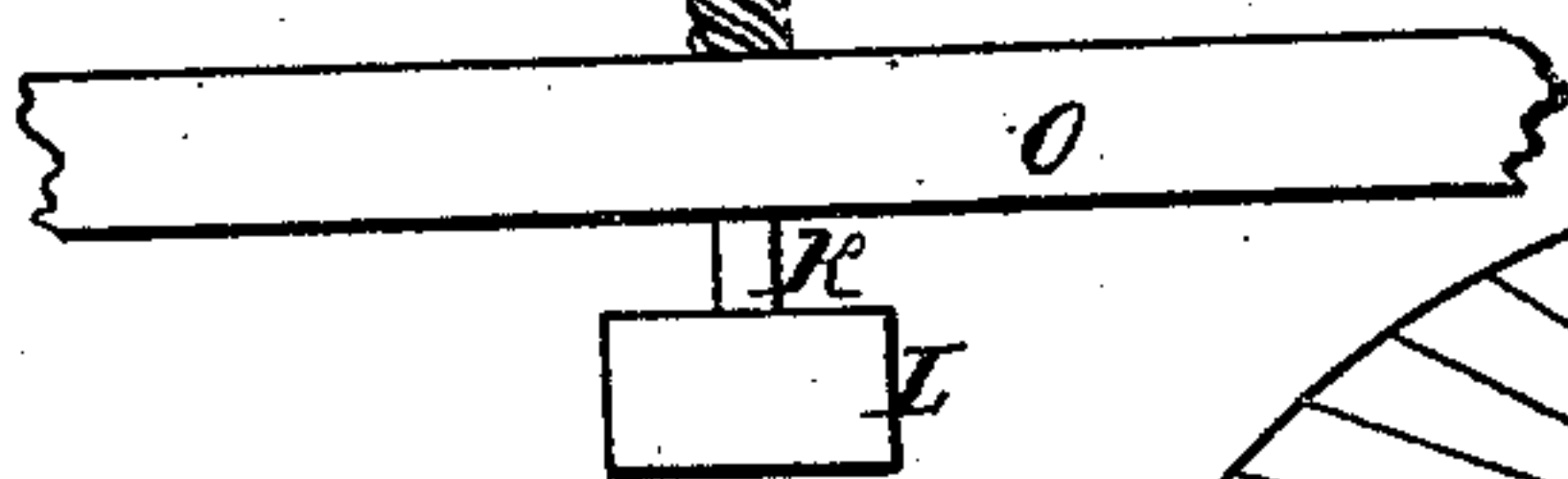


Fig. 3.

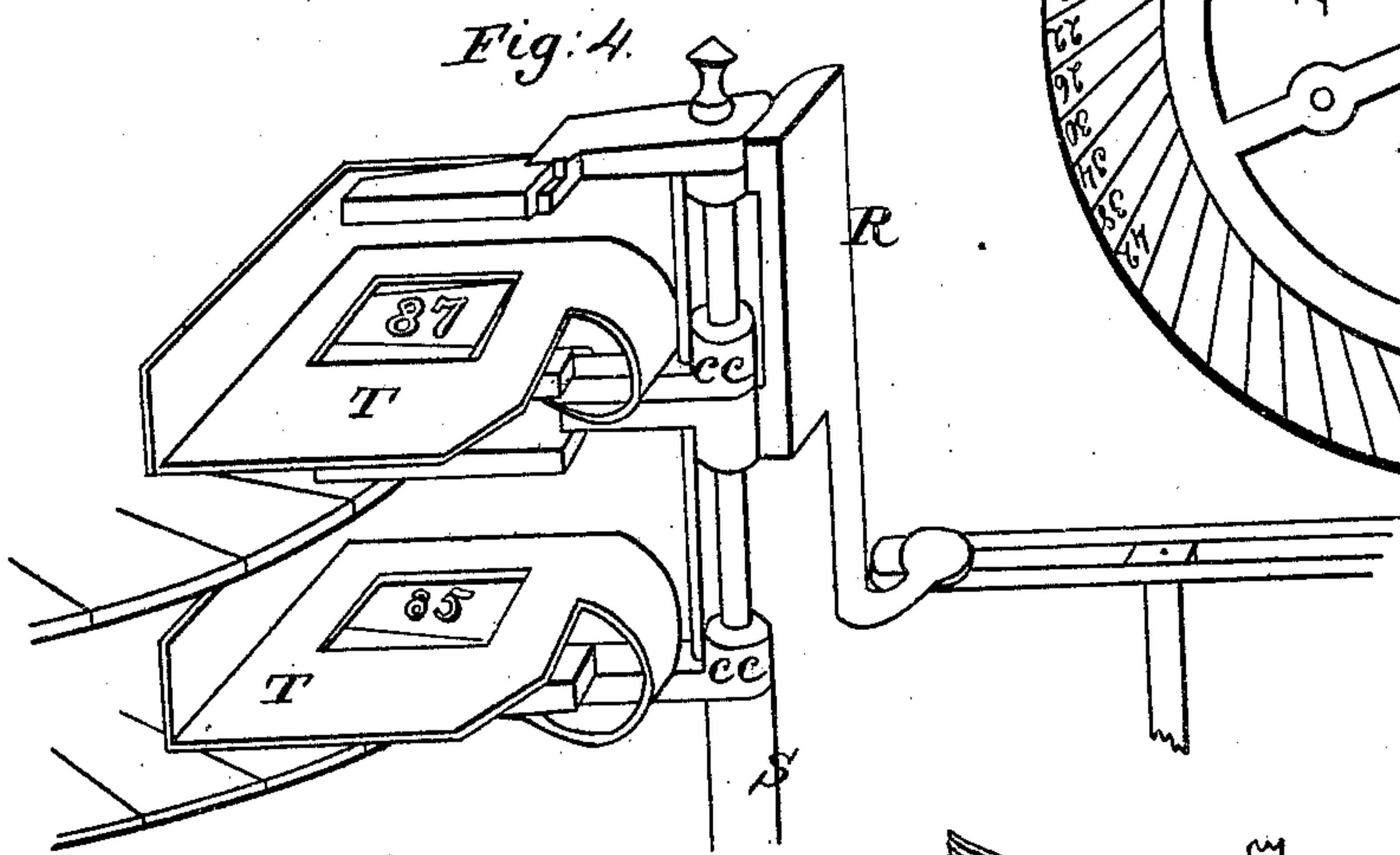


Fig. 4.

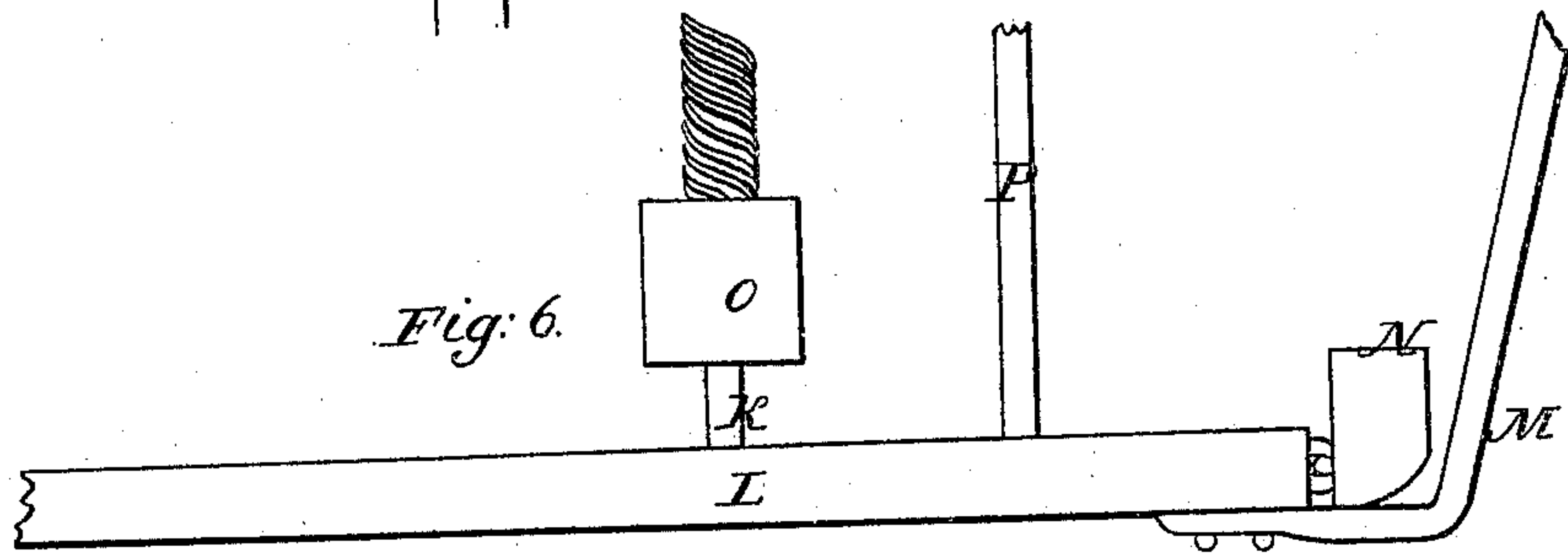


Fig. 6.

UNITED STATES PATENT OFFICE.

RICHARD M. LESLIE, OF PHILADELPHIA, PENNSYLVANIA.

PAGING BOOKS.

Specification of Letters Patent No. 9,586, dated February 15, 1853.

To all whom it may concern:

Be it known that I, RICHARD M. LESLIE, of Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented a new and useful Improvement in Machines for Printing Numbers on Pages of Blank Books and other Books and Papers; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings and to the letters of reference marked thereon.

The nature of my invention consists in two pairs of metallic wheels, each wheel having a flange of spring sheet metal from one to two inches wide and cut into slats from the outer edge of the flange in as far as the outer edge of the solid wheel, thereby cutting the entire flange from the diameter at a tangent into spring slats of uniform size. To the upper surface of each of these slats are cemented a copper type forming permanent numbers from 1 to 1500 as may be required. These wheels are supported horizontally by two metallic tubes about six inches high. The lower ends of the tubes are attached to a brass plate which lies on and is secured to a table or bench; these wheels have an axle or rod which passes through the tube to a ratchet wheel and secured to its center by a nut and screw; this ratchet wheel is propelled by a treadle under the table which revolves the slat wheels above the table the distance of the width of one of these slats. Between the two pairs of slat wheels elevated above the table are two upright metallic posts elevated at an equal distance above the table with two arms extending from each post to a position immediately under two spring slats of each wheel which are about to be pressed upon for the purpose of printing the number contained thereon and to which slats they act as rests or supports; to each of these arms there is a frame made of spring sheet metal for placing the corners of the leaves of books, &c., when about to print the numbers thereon. There is a hole in the bottom of the frame through which the type protrudes when the frame is pressed down; underneath each of those frames and fastened thereto is a knob which presses upon the slat immediately following the one in use which prevents the frame from rubbing the ink from off the type to be used; each of these metallic posts has a pair of sliding

arms for the purpose of pressing the corners of the leaves that are in the frames upon the types or numbers about to be printed from; these arms are raised or lowered by means of a rod fastened to them which passing down through the table is secured to and works by a treadle, there are two pairs of inking tables and inking rollers moving thereon located between the two pairs of slat wheels in the rear of the arm posts, each table being level with its opposite flange and having a ledge underneath each flange for supporting the slats as the inking rollers pass over them when inking the type. There are four inking rollers propelled forward and back by means of a rod attached to them running down and secured to the treadle by which it is worked as described. The metallic plate secured on the top of the table has grooves or slots for the purpose of increasing or decreasing the space between the pairs of slat wheels; there are also two slots attached to the arm posts which move on the plate when required by the changing of the position of the slat wheels, said changes being made for the purpose of accommodating the machinery to suit various sized books. But to describe my machine more fully and particularly I will refer to the accompanying drawings forming a part of this schedule, the same letters referring to the same parts wherever they occur.

Figure 1, is an elevated perspective side view of the machine. Fig. 2 is a front view of the ratchet wheel, treadle, and posts connected therewith under the table. Fig. 3, is a full view of one of the slat wheels. Fig. 4, is an elevated cut front view of one of the posts with stationary and sliding arms, and of the spring frames attached to the stationary arms for placing the corners of the leaves in. Fig. 5, is an elevated front view of one of the inking tables and inking roller. Fig. 6, is a side cut view of the treadle and parts attached thereto.

A and B Fig. 1, represent two pairs of slat wheels, the wheels of each pair being firmly secured together by 4 small upright posts riveted to the spokes of each wheel.

C and D Fig. 2, are two ratchet wheels which revolve the wheels A and B Fig. 1, by means of the two rods E and F, to which they are attached, said rods passing upward through the tubes G and H and are secured to the wheels A and B, by a nut and screw,

said wheels resting on the top of the tubes G and H.

I and J, are two ratchets having extensions with slots in each, and are pressed outward by the rod K attached to the treadle L, the rod K passes through a spiral spring b, b, which draws the treadle upward, M is a rod fastened to the back part of the treadle for propelling the inking roller forward and backward.

N, is an end view of the back stretcher or runner of the table to the middle of which the treadle L is fast by a hinge.

O, is the end of a beam through which the rod K moves, said beam extending from one to the other of the side stretchers midway from front to the back of the table.

P, is a rod fastened to the treadle L at one end, and to a pair of sliding arms R at the opposite end; these arms are for the purpose of pressing the paper upon the type or number; said type are supported by stationary arms attached to the post S, the arms being placed in a position underneath the slats, and where the slats of both pairs of wheels are parallel to each other.

T, is a metallic spring frame for placing the corners of the leaves upon when about to make the impression, it has a hole in the bottom for allowing the type to protrude through when the leaves and frame are pressed down by one of the arms R; this frame has a knob g, g, underneath it as shown in Fig. 4, for the purpose of pressing down the slat following the one in use, thus preventing the frame from rubbing the ink from off the type.

U, is one of the inking tables having a countersunk curve underneath the slats for supporting them, as the inking rollers are propelled over them, there are two pairs of these tables.

W, is one of the inking rollers which passes over the table, and the face of the type toward the front of the machine as

the treadle is pressed down, and drawn back as the treadle is raised.

The manner of operating the machine is as follows: A book is placed in front, or on the front of the table, the head of the book toward the wheels, two leaves are then taken hold of by the left hand and two by the right hand, they are held between the thumbs and second fingers, the fore fingers separating the leaves held in each hand; the leaves are then placed in the spring frames; the treadle is then pressed down with the foot which brings the sliding arms upon the corners of the leaves making an impression of four numbers on as many pages of the book. The two leaves in the right hand being printed on the left page, and those in the left hand, on the right hand page, then by transferring the leaves from the right hand to the left hand and operating as before, said leaves are then printed or numbered on both sides. After an impression is made the treadle is allowed to spring up again which revolves the wheels as far as one slat which contains a permanent number thereon, the inking rollers press forward over the type when the treadle is pressed down, and roll back as the treadle is raised.

What I claim as my invention and desire to secure by Letters Patent is—

1. The spring slat type wheels made after the manner and operating for the purposes described.

2. The combination and arrangement of the spring slat type wheels, the adjustable posts S, sliding arms R, spring frame T, inking rollers W, with their tables U, and the rod K, with its ratchet and pawls, whereby I am enabled to number one side of four pages by single movement of the treadle L as above described and set forth.

RICHARD M. LESLIE.

Witnesses:

GEORGE W. COLLADAY,
THEODORE BLACKWELL.