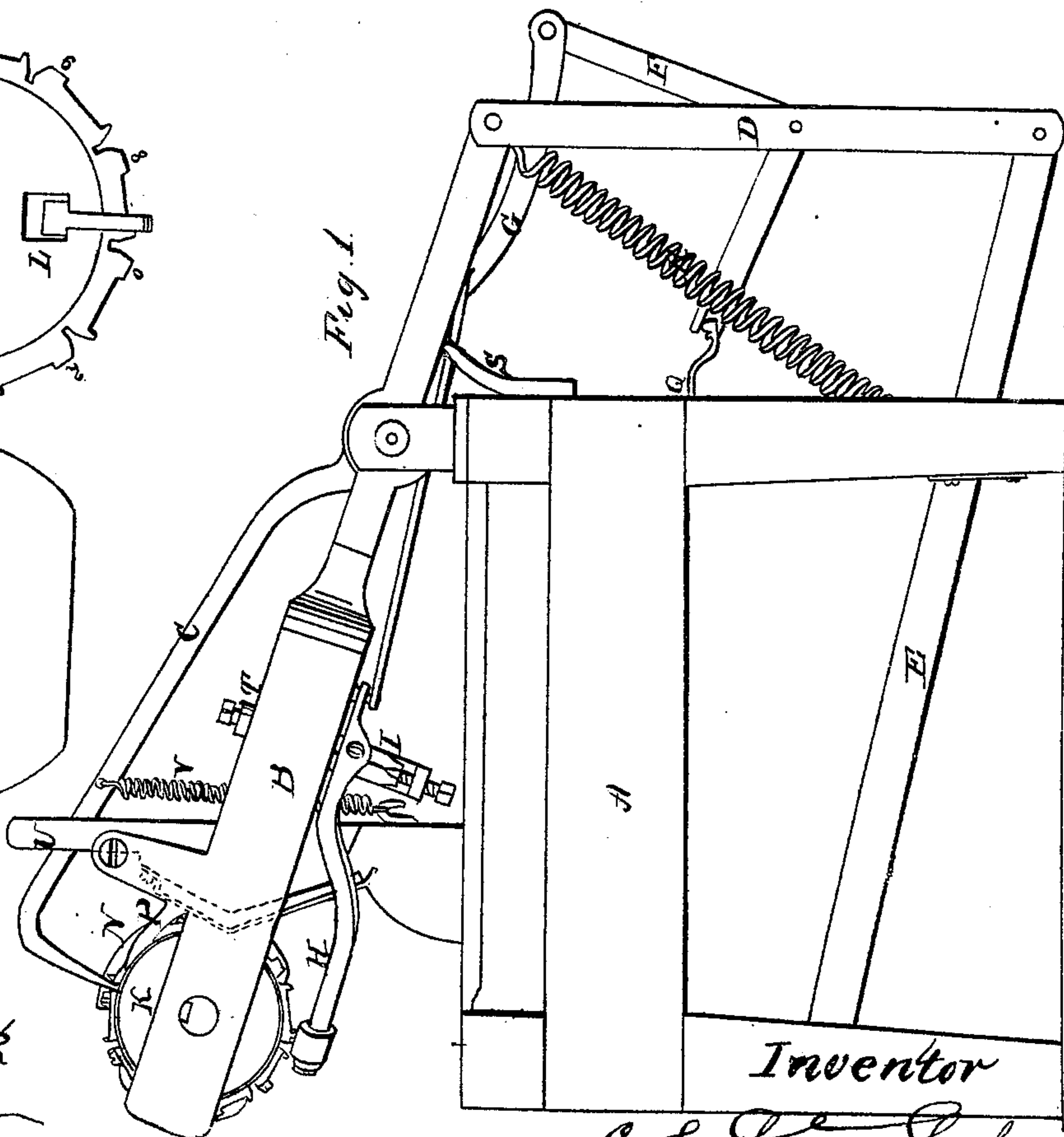
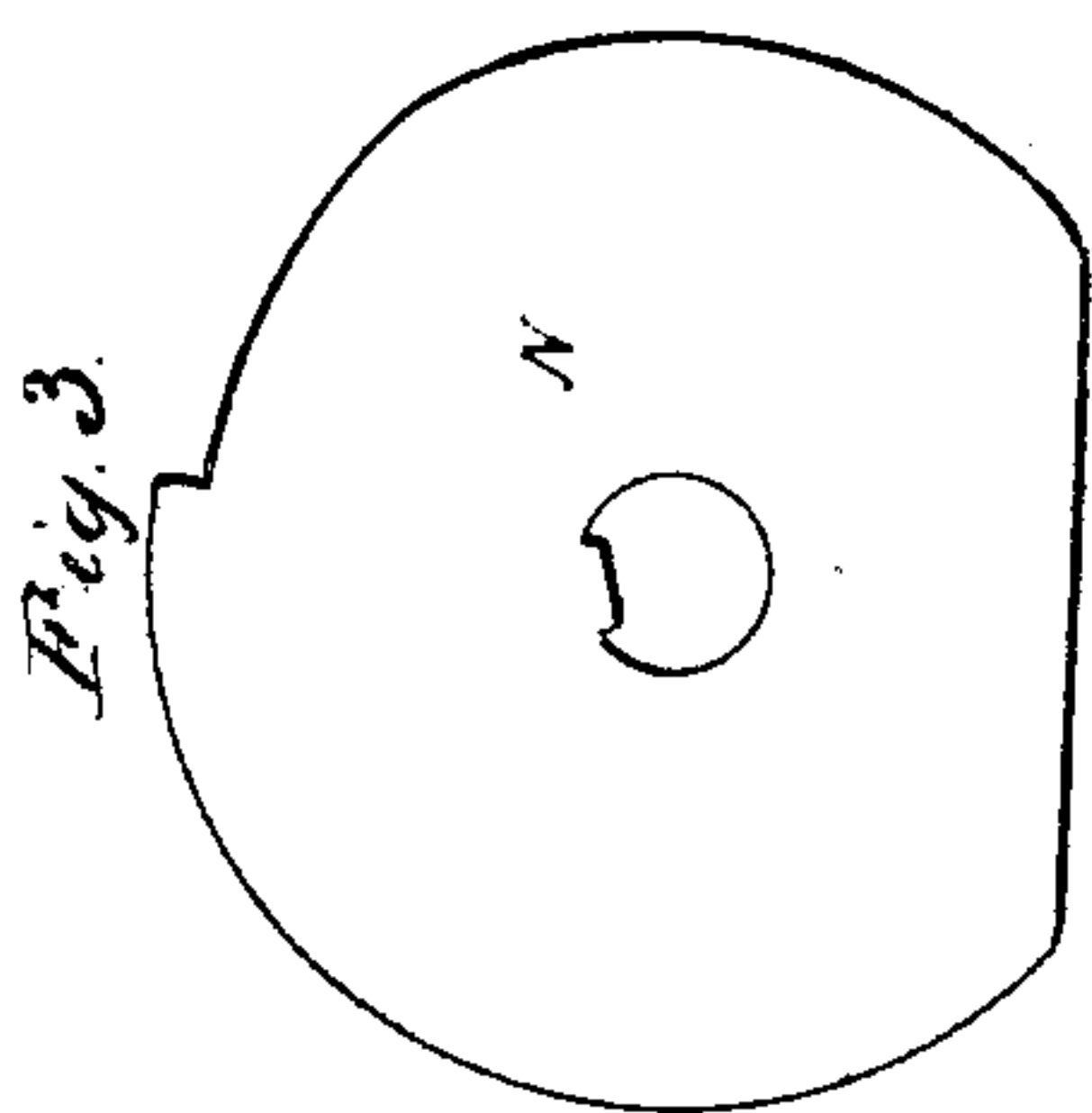
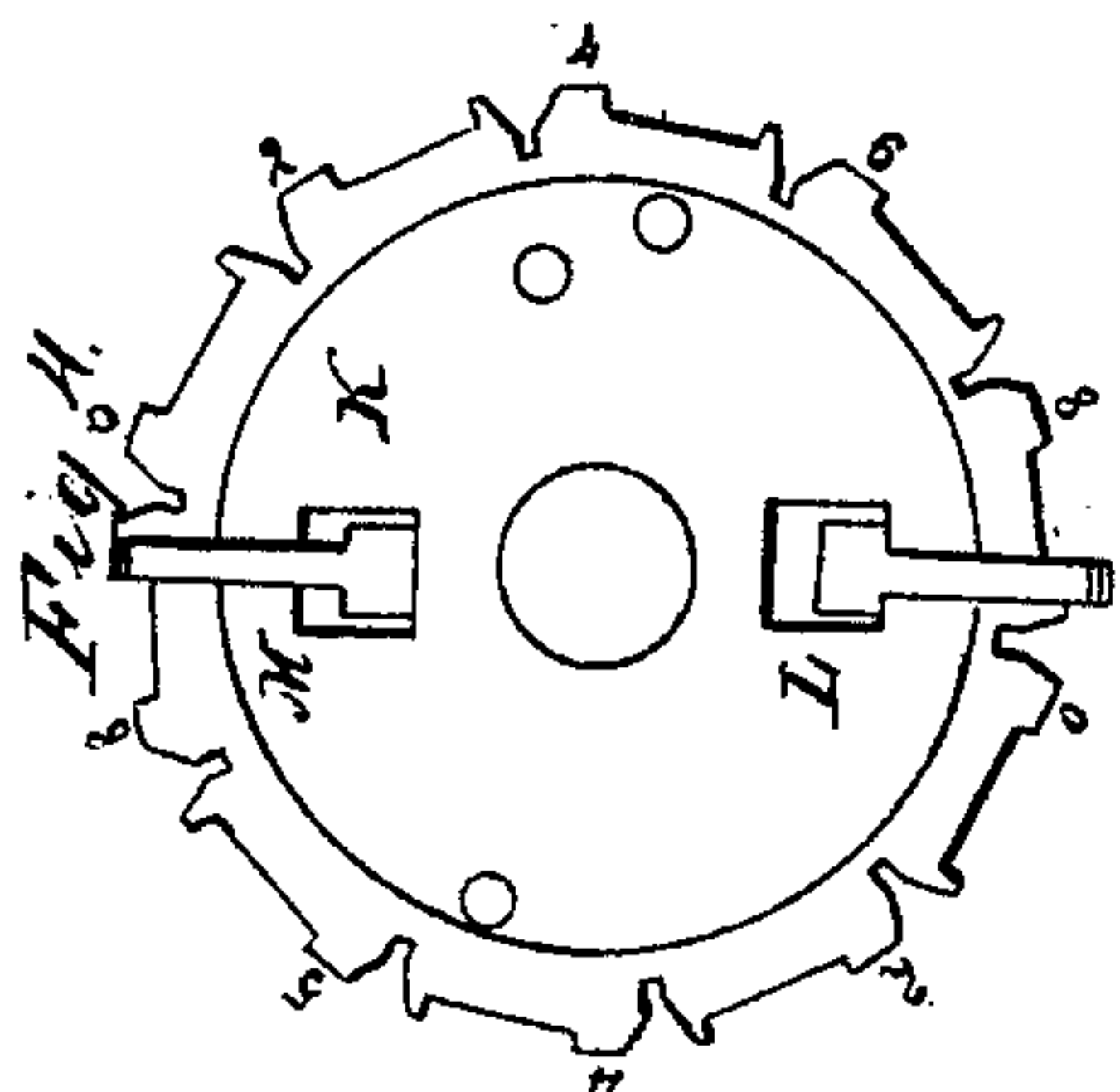
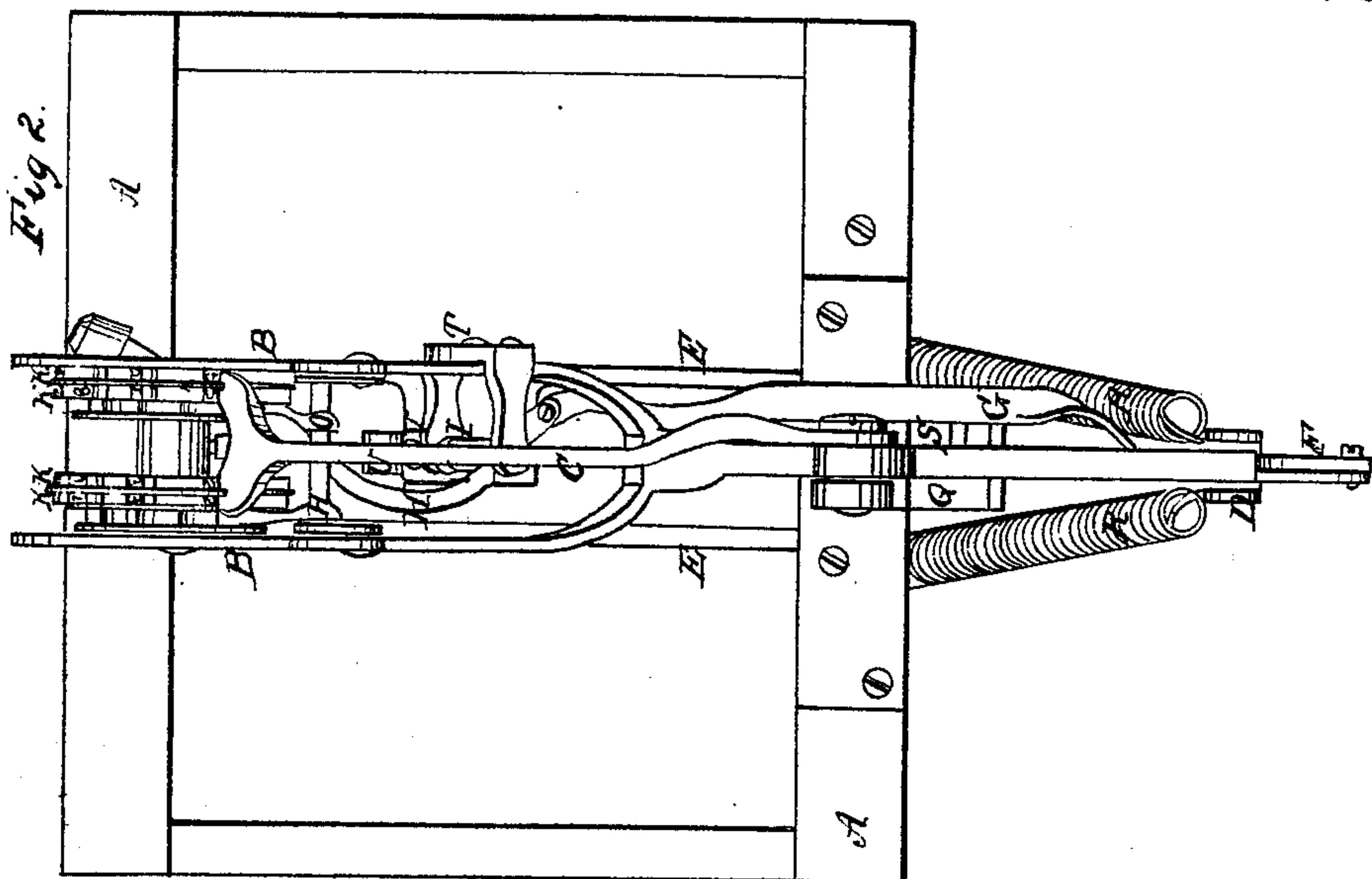


C. L. Sholes.
Paging Mach.

N^o 91277. Patented Jun. 15. 1869.



Witnesses.
Godsmith
er Drumer

Inventor
C Latham Sholes.

United States Patent Office.

C. LATHAM SHOLES, OF MILWAUKEE, WISCONSIN.

Letters Patent No. 91,277, dated June 15, 1869; antedated June 4, 1869.

IMPROVEMENT IN PAGING-MACHINES.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, C. LATHAM SHOLES, of the city and county of Milwaukee, and State of Wisconsin, have invented a new and useful Improvement in Machines for Printing Numbers; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable those skilled in the art to make and use the same, reference being had to the accompanying drawing, forming part of this specification, in which—

Figure 1 is a side view of the machine;

Figure 2, a top plan view;

Figure 3, a view of the cam; and

Figure 4, a view of one of the printing-disks.

Similar letters of reference in each of the figures indicate corresponding parts.

The object of my invention is to produce a machine by which two pages of a blank-book may be numbered at one impression, or two different numbers printed at one impression, on any object; which numbers may be printed in consecutive order, or in any regular series desired by the operator, all of which is done by the use of two series of disks, each of which series may consist of two or any greater number of disks, the unit-disk of each series being arranged to contain, one the even, and the other the odd figures of the ten units, these even and odd figures being repeated on the respective disks, with machinery to actuate the same, compact in form and easily operated.

A is the frame of the machine.

B, the moving arm, to which all the machinery is attached.

C, bar for adjusting or aligning the figures of each impression, hung at the point where the arm B oscillates, and working in a slot on the top of standard U, which keeps it in place, which slot has a rest or stop for said bar, holding it from following the disks in their downward motion, and in their upward motion giving them the opportunity to make their necessary movements before performing its work of aligning the figures. Said bar C is drawn down to its rest by the spring V attached, and again lifted by the impingement against it of the disks in their upward movement, by which impingement and the resistance of the spring V, the alignment is effected.

D, connecting-rod, which connects the arm B to the foot-treadle.

E, foot-treadle, with which the machine is worked.

F, a crooked lever, which operates the inking-arm.

G, connecting-rod from lever F to inking-arm H.

H, inking-arm, with an inking-roller on its end, which inks the numbers on the disks.

This roller-arm moves back in the segment of a circle at each stroke of the arm B, and receives its ink from rollers attached to side of said arm B, which ink-rollers are not shown.

I, a fulcrum-shaft, standing up inside of a loop attached to arm B, to which fulcrum-shaft is attached inking-arm H. This shaft oscillates on pointed screws, which pass through the ends of the loop and engage said shaft.

K, printing-disks, which are but two in each series, but which may be increased to any number required.

The unit-disks are numbered—the one on the left, 1, 3, 5, 7, 9, the one on the right 0, 2, 4, 6, 8, whilst the other disks are numbered consecutively from 0 to 9.

L and M are dogs, which set loosely in the disks, and have their outer ends bent at right angles, so that at the proper moment they may take hold of and actuate the adjoining disk, by which the regular printing of the numbers in their regular order is obtained.

N is a cam placed between the disks, by means of which the dogs L and M are operated at the right moments to move the adjoining disks.

O and P are levers, or dogs hung on a shaft, the ends of which work in swinging arms attached to the arm B, which dogs move the unit, or first disk of each series, the movement of the shaft being obtained by its working in the cam attached to the standard U, shown by the red dotted lines in fig. 1.

Q, a stop on frame A, which a slot in the end of lever F fits. This stop holds the end of the lever F, so that when connecting-rod D is raised, the inking-arm H is operated.

R, spring which brings arm B back to its position.

S, stop on frame A, to regulate the stroke of arm B.

T, loop attached to arm B, in which works fulcrum-shaft I.

U, central standard, the top of which is slotted to guide the aligning-lever C, and which also is faced as a cam, (shown by the dotted red line,) which cam moves the shaft on which are the dogs O and P, which dogs by such movement turn the unit-disk of the series, said cam being so shaped that the movement of the disks by means of the dogs is completed before the inking-roller touches them in the process of inking, and also such movement completed before the disks impinge on the aligning-bar.

V, spring which draws lever C down to the stop, holding it there until the disks impinge on it in their upward movement, in the aligning-process.

Operation.

In paging a book, adjust or set the disks so the figure 1 in the odd series, and the 2 in the even series will be in a position to first print. Then print the "2" on the page where it properly belongs, not presenting a page to the figure 1. As the arm B rises after printing "2" in its proper place, lift the dog which would move the disk having on it "1," so that the disk shall not move on that occasion. By this means "1" on the

odd wheel and "4" on the even wheel will next be presented for impression. Then feed in the leaves of the book to properly receive this impression, and thereafter in the same manner until the book is finished, which it will be correctly, the respective series of disks working through, as in the case of "1" and "4," three units separated. In other numbering, place your sheet appropriately on the platen under the disks, setting the disks to number in such order as may be desired, and proceed. As the arm B comes down, the shaft holding the dogs O and P is drawn back by the plate properly bent and fastened on to the face of the cam on standard U, by which means the dogs fall into the next notch back of the ratchets of the unit-disks, and being thrown forward by the operation of the cam on the shaft, as the arm B rises, correspondingly moves the unit-disks, and actuate properly all the disks. As the treadle E is depressed, arm B will come down, bringing the disks with it, and making the print. Lever G will be operated by lever F, and arm H will be brought round from the disks to the inking-rollers. As the arm B rises, inking-arm H will be thrown forward, and ink the figures to be next printed.

The aligning-wedge, or bar of rod C will be thrown into the V-shaped notches of the disks, and the figures of the disks thereby properly aligned.

When the disks have printed nine numbers, the stops or pins L and M (either of them, the machine having been set at 1 and 2) will have arrived at that point of cam N when it can drop down, take hold of the projecting spur in the adjoining wheel, move that adjoining wheel one number forward, and riding out again on to the face of cam N, perform the same func-

tion appropriately and regularly, in all its revolutions, whereby the various combinations of two or more wheels are regularly and correctly carried forward, similar pins (two where the unit wheel is divided into odd and even figures, and those repeated on each wheel, and one where the wheel is consecutive from "0" to "9") being employed in all the wheels, except the last of the series, which needs none.

Having thus described my invention, and its operation,

What I desire to secure by Letters Patent in numbering and paging-machine, and claim as my invention, is—

1. Cam U, in combination with moving dogs O and P, which, turning the unit-disks K, as they rise from the bed-piece, after having printed, so as to print other figures, substantially as described.

2. Stationary cam N, between the disks, for carrying and operating the dogs L and M, substantially as described.

3. The dogs L and M, setting loosely in radial slots in the disks, in combination with cam N, to properly move the disks.

4. Unit-disks K, divided so as to contain, one the even, the other the odd figures of the ten units, these even and odd figures being repeated on the respective disks, and being moved by any suitable device, and controlled by the dogs L and M, or any other suitable arrangement for moving the other disks, substantially as and for the purpose described.

O. LATHAM SHOLES.

Witnesses:

J. B. SMITH,
LEVI BROWNELL.