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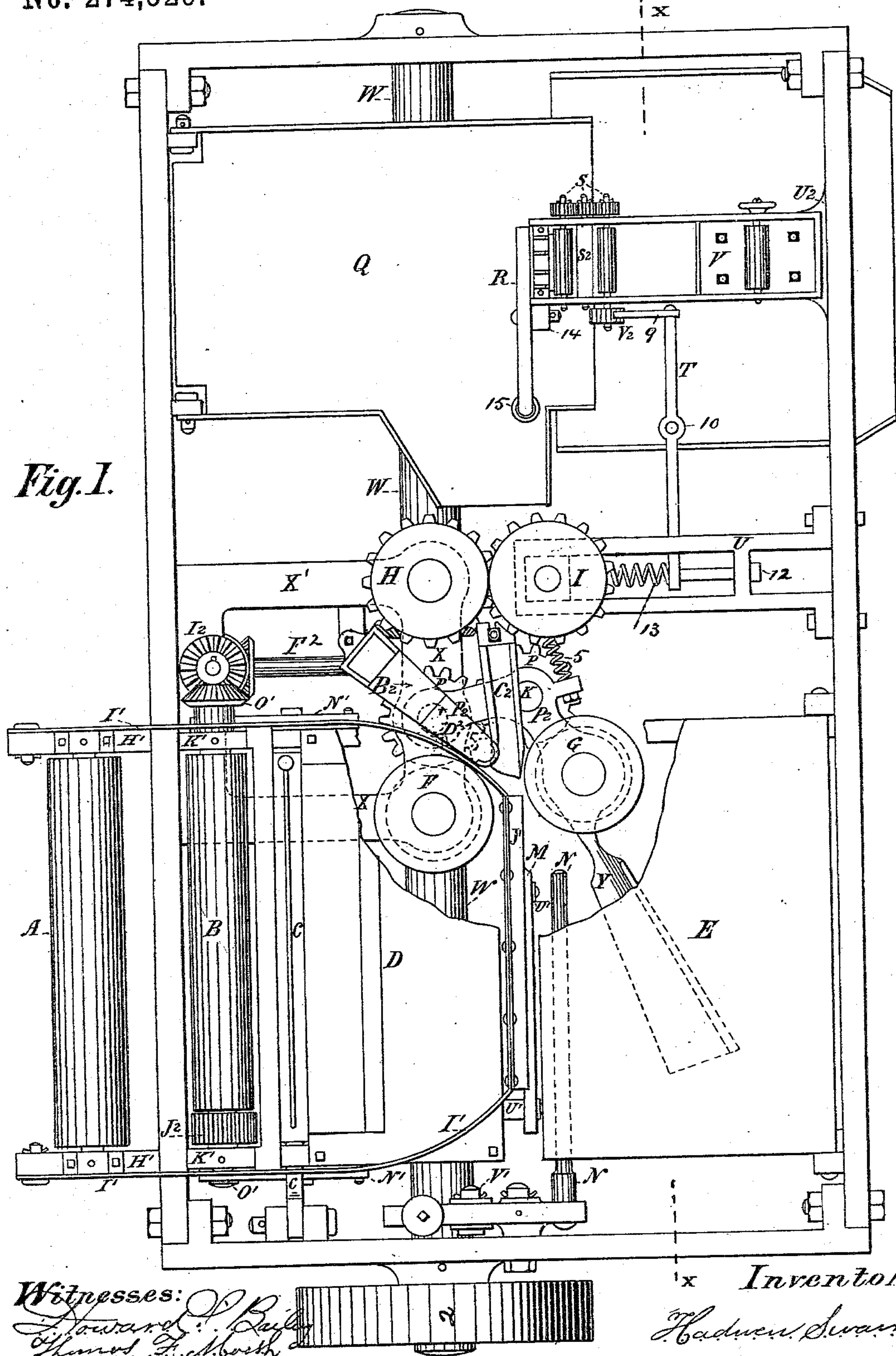
4 Sheets—Sheet 1.

H. SWAIN.

NEWSPAPER WRAPPING AND ADDRESSING MACHINE.

No. 274,529.

Patented, Mar. 27, 1883.



Witnesses:

Howard A. Bailey
James H. Moeth

Inventor:

Hadwen Swan

(No Model.)

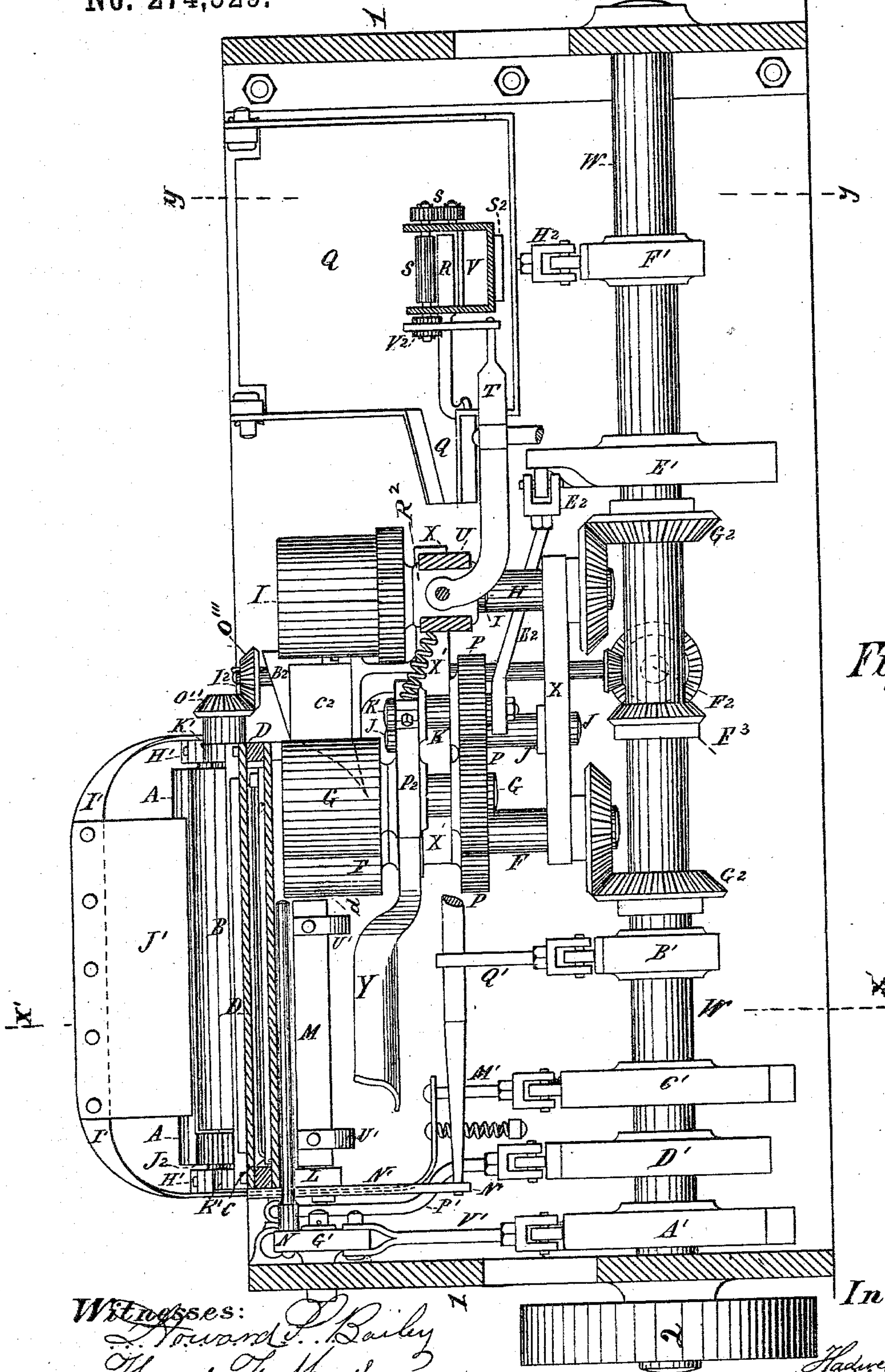
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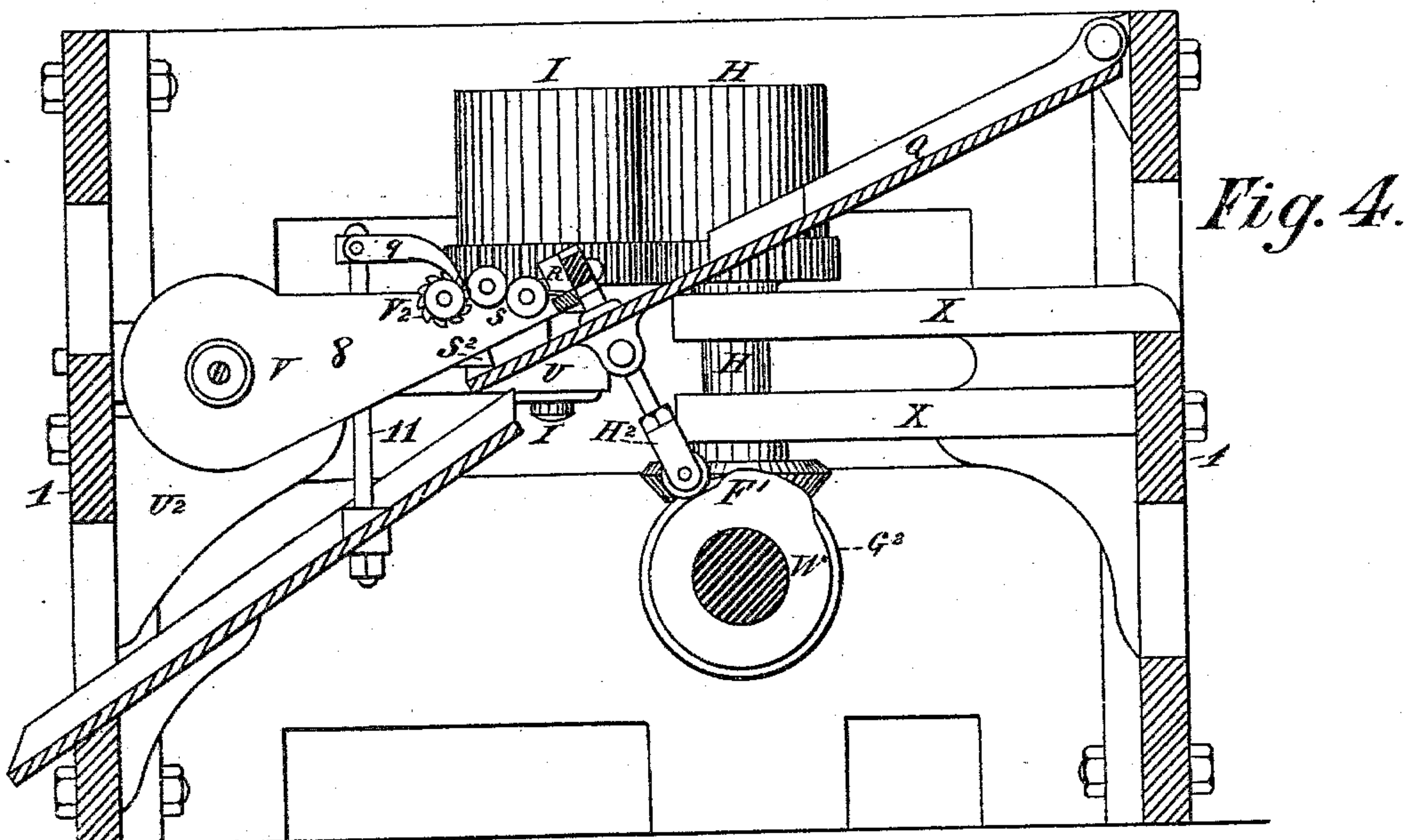
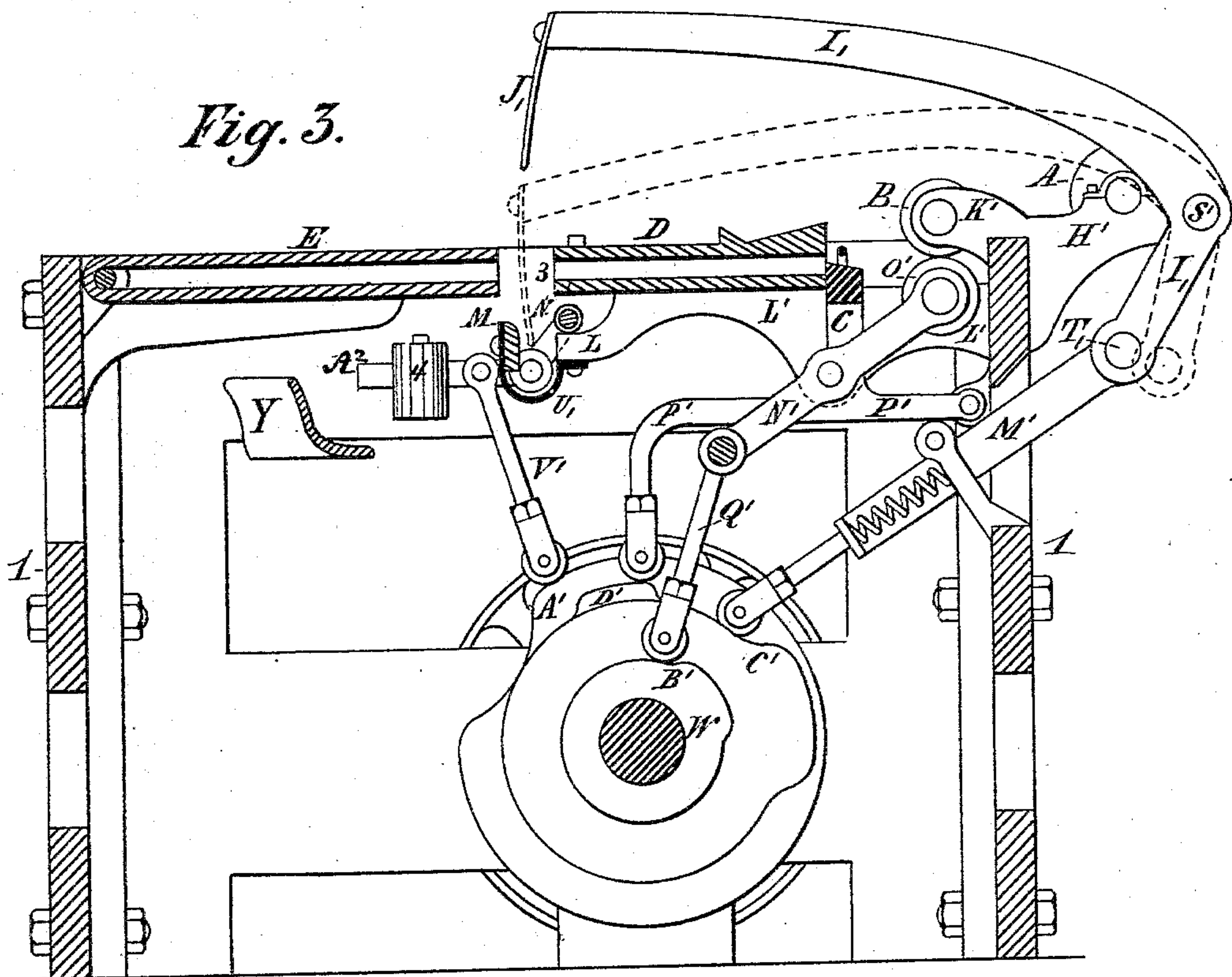
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H. SWAIN.

NEWSPAPER WRAPPING AND ADDRESSING MACHINE.

No. 274,529.

Patented Mar. 27, 1883.



Witnesses:
Howard D. Bailey
Amos L. North

Inventor:
Haden Swain.

(No Model.)

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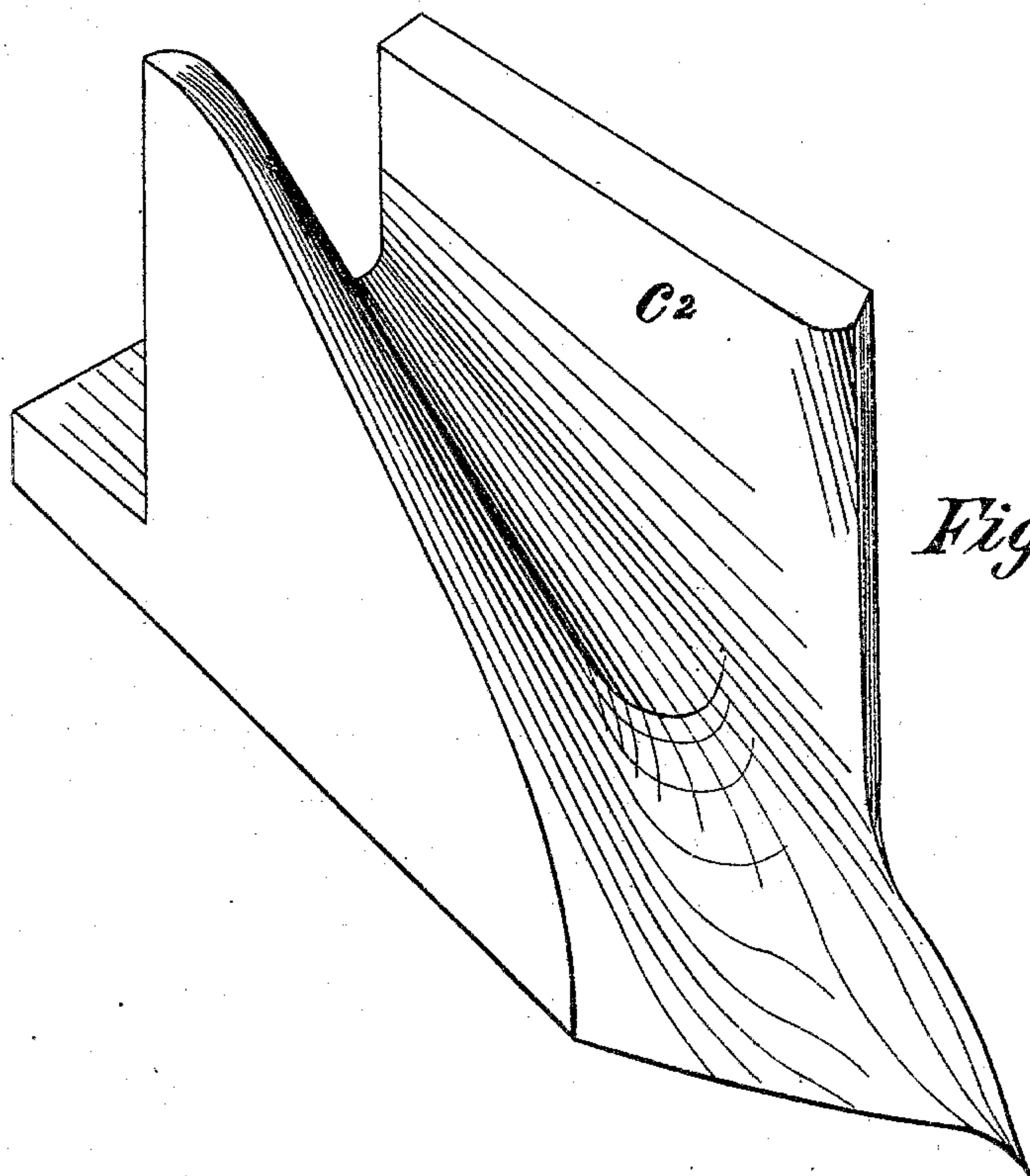
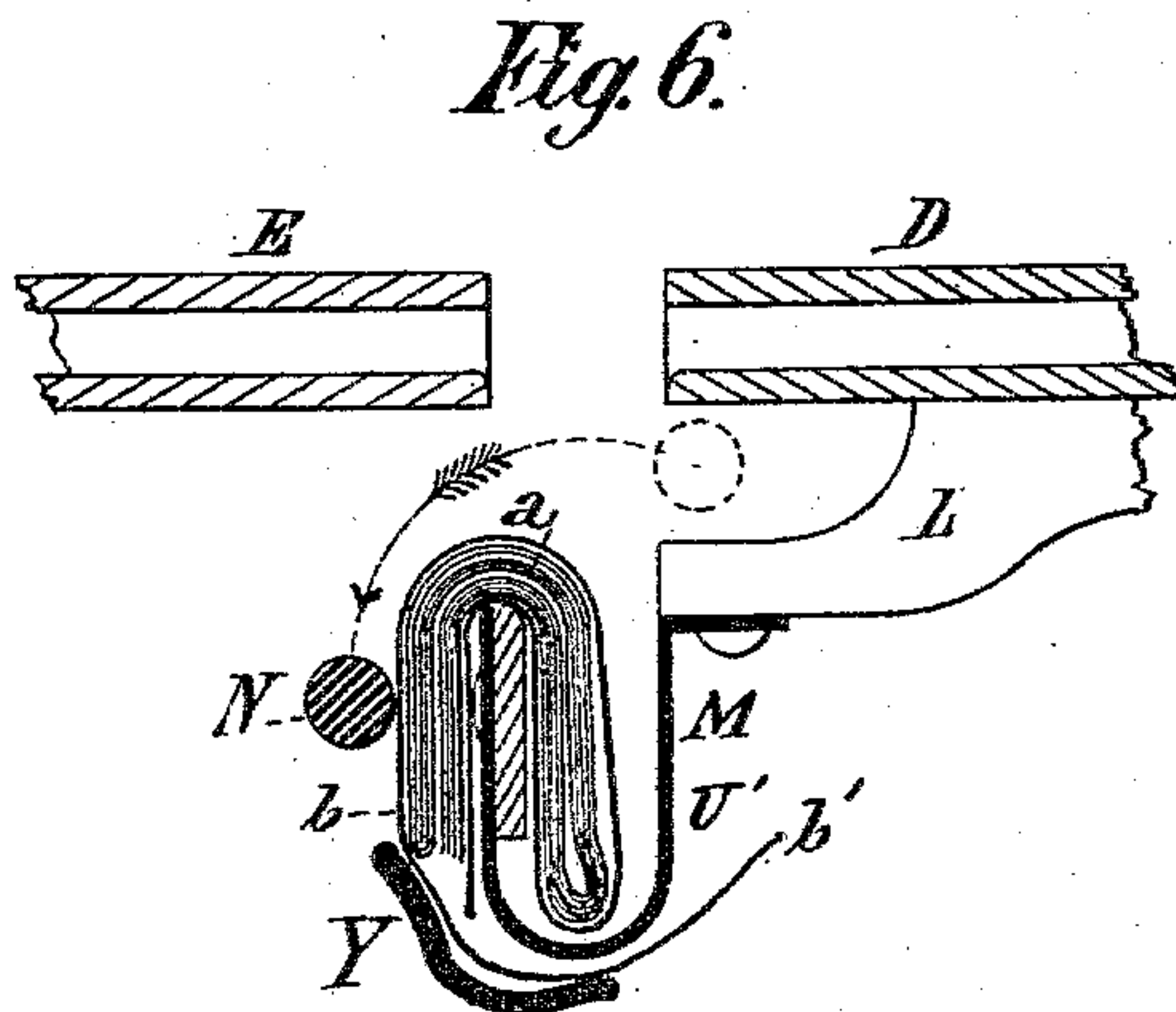
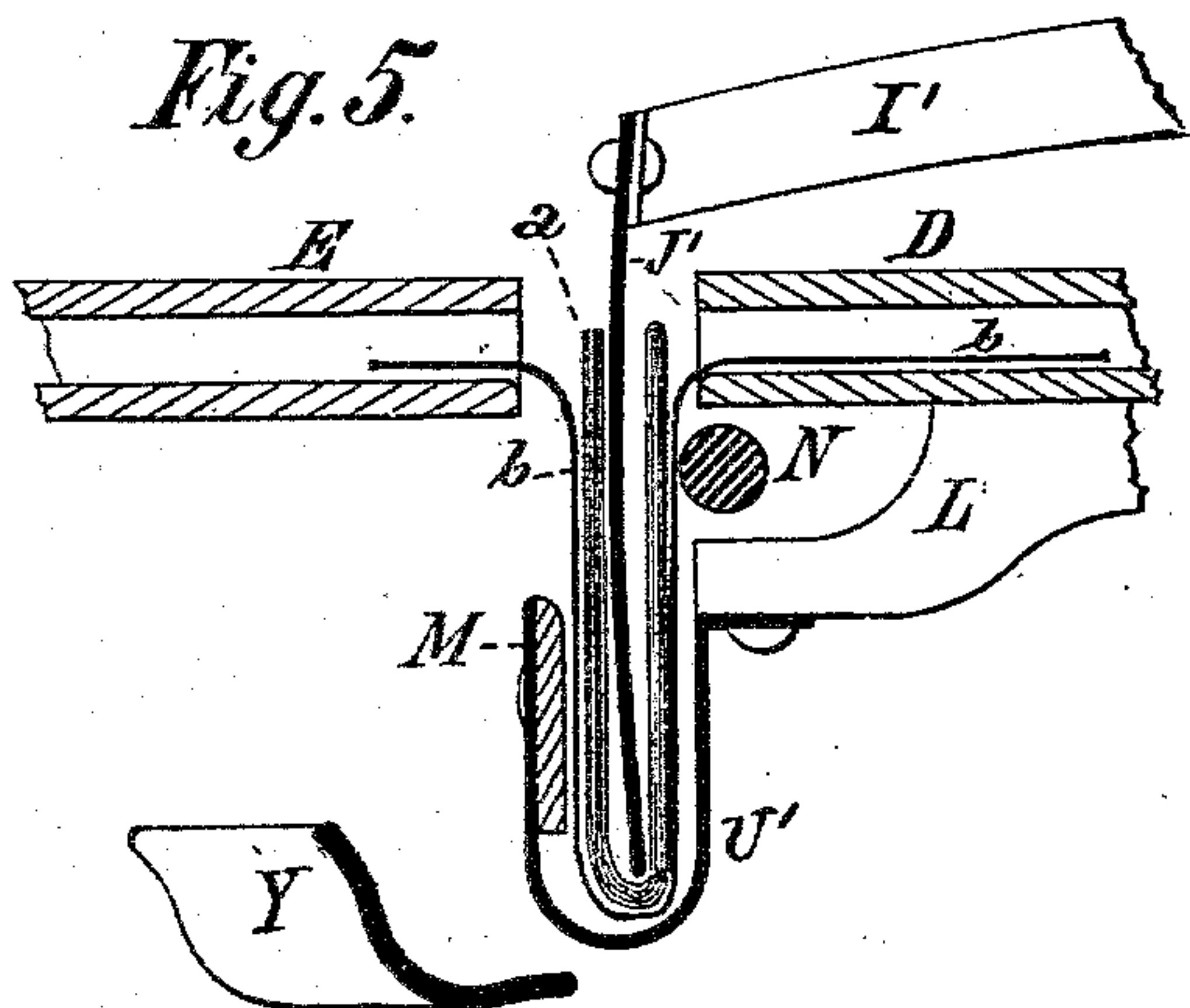


Fig. 7.

Witnesses:

Howard P. Bailey
Thomas G. Marsh.

Inventor:

H. Swain

UNITED STATES PATENT OFFICE.

HADWEN SWAIN, OF DENVER, COLORADO.

NEWSPAPER WRAPPING AND ADDRESSING MACHINE.

SPECIFICATION forming part of Letters Patent No. 274,529, dated March 27, 1883.

Application filed October 4, 1882. (No model.)

To all whom it may concern:

Be it known that I, HADWEN SWAIN, a citizen of the United States, residing at Denver in the county of Arapahoe and State of Colorado, have invented certain new and useful Improvements in Newspaper and Pamphlet Wrapping and Addressing Machines; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

My invention relates to newspaper and pamphlet folding, wrapping, and addressing machines.

The primary object of the invention is to produce a machine which will fold, wrap, and address the papers after they have passed through the ordinary folding-machine.

Figure 1 is a top or plan view with portions broken away to more clearly exhibit the working parts. Fig. 2 is a vertical sectional view on line xx of Fig. 1. Fig. 3 is a sectional view on the line $x'x'$ of Fig. 2. Fig. 4 is also a sectional view on the line yy of Fig. 2. Figs. 5 and 6 are enlarged sectional detail views of the paper and operating parts in the process of folding and wrapping. Fig. 7 is a view in perspective of the shoe or grooved casting which turns or folds up the tag or loose end of the wrapper against the paper.

11 indicate the frame of the machine, which may be of any convenient or desirable construction, but is by preference made rectangular in form, as shown.

Mounted in suitable bearings in the frame is the main driving and operating shaft W , which is provided with a belt-pulley, 2, for driving the same, or may be provided with a hand or foot crank for operating the machine where other power is not convenient. The shaft W is also provided with a series of cams, A' , B' , C' , D' , E' , and F' , and also with bevel-gears G^2 , the function and operation of which will be more fully hereinafter described.

A is a roller mounted in suitable brackets or bearings, $H' H'$, on which a roll of wrapping-paper is wound, and which is intermittently fed forward by the feed-rolls B and O' into the

hollow table $D E$. The roll B is supported in rigid bearings, and is driven continuously by means of bevel-gear wheels O'' on the end of roll B , and meshes with a bevel-gear wheel, O''' , on the vertical shaft I^2 , which is driven by bevel-gearing on the horizontal shaft F^2 and bevel-gear F^3 on the main driving-shaft W . One end of the feed-roll O' is hung on an arm, N' , which is pivoted at its center to the bracket L' . To the other end of the arm N' is secured an arm, Q' , the lower end of which is provided with a friction-wheel, which rests on the cam B' on the shaft W , and which causes the roll O' at stated intervals to impinge on the continuously-revolving roll B with the wrapping-paper between said rolls to feed the wrapping-paper forward the proper distance to make a wrapper of the desired length, when it is cut off by the knife or cutter C . The knife or cutter C is pivoted at one end to the frame and connected at the other end to the bent lever P' . The lever P' is pivoted at one end to the frame 1 or bracket L' , while the other end is bent down and is provided with a friction-wheel, which rests on the cam D' on the shaft W , which causes the knife to rise at stated and proper intervals to sever the paper into the requisite length to form a wrapper.

J' is a feeding or folding knife or blade secured to the bent arms or bell-crank levers I' , pivoted by the pin S' to the brackets H' .

To the lower or short end of one of the bell-crank levers I' is secured the bar M' , to which is flexibly secured a friction-wheel, which impinges on the cam O' on the main shaft and causes the blade J' to be vibrated and force the paper to be wrapped, together with the wrapper, down through the slot 3 in the table $D E$, and causes the same to enter between the parallel bars L and M , where it is held by the tension of the flat spring U' , which connects the two parallel bars until the paper is folded over and is embraced by the rollers, which carry the folded and wrapped paper rearward.

N is a bar which is secured to one end of the weighted and pivoted arm or lever A^2 .

V' is an arm secured to the lever A^2 , the lower end of which is provided with a friction-wheel, which impinges on the operating-cam A' on the main shaft. The elevated portion of the cam A' serves to hold the outer end of the lever A^2 in an elevated position, with the

bar N back of the partially-folded paper; but as soon as the bar V', with its friction-wheel, reaches the depressed or cut-away portion of the cam A' the weight 4 on the arm A² causes it to drop, swinging the bar N over and folding the paper with the wrapper over the bar M, as shown in Fig. 6. The bar N is then returned to its former position by the elevated portion of the cam A' acting on the arm V'.

F and H are vertical rolls supported by the bars or brackets X X', and are revolved from the main shaft W by means of bevel-gears G² G², which mesh with bevel-gears on the lower ends of the roll-shafts.

G is a vertical roller running parallel with the roll F, and is supported by the bracket or swinging arm P², which is pivoted to the upper bar or bracket, X', by means of the pivot J, which permits the roller G to have a motion toward and from the roll F. The roll G is thrown toward the roll F by means of a lever, E², secured to the lower end of the shaft K, which in turn is secured to the swinging arm P². The end of the lever E² is provided with a friction-roll, which impinges on the cam E' on the main shaft, and by which means an intermittent swinging motion to and from the roll F is given to the roll G, while a spring, 5, tends to keep the rolls apart when the lever E² is released from the action of the cam E', so that when the paper has been forced down between the parallel and spring bars L and M, and the bar N is thrown into the position shown in Fig. 6, the roll G is thrown forward and presses the wrapped paper against the roller F, and by the motion of the latter roll the paper is carried toward the devices to be hereinafter described.

Y is an extension of the swinging arm P², for folding the flap or long end of the wrapper over, as is clearly shown in Fig. 6.

The roll I lies parallel with and is operated by the roll H. Roll I is mounted in a sliding box, R², in the bracket U, while a spring presses the roll I against the roll H.

B² is a paste-cup having the wheel D² revolving partly therein, which applies the paste to the folded side of the wrapper.

Between the rolls F H and G I, and to the swinging arm P², is secured a curved and grooved casting or guide, C², which folds up the tag or loose end of the wrapper onto the pasted surface in its passage through the guide. The folded and wrapped paper is now caught by the rolls H I before it has been wholly released from the rolls F G, and the object in passing it through the rolls H I is to more firmly paste or smooth the end of the wrapper against the body of the paper. The folded and wrapped paper, when it leaves the rolls H I, falls on the inclined table or chute Q, (which is pivoted at its upper end to the frame of the machine,) and slides down sidewise underneath the addressing device, and is caught by the lug S², which holds it until the address is pasted onto the folded and wrapped paper.

8 is the addressing device, which consists of

a paste-box, V, mounted on a bracket, U², and is provided with feed-rollers S S, for feeding forward a strip of paper on which the names and addresses of subscribers have been previously printed, as is already practiced in other addressing-machines. The feed-rolls are geared together at one end by pinion-wheels, so as to have a simultaneous movement. On one end of one of the feed-rolls is secured a ratchet-wheel, V², which is engaged by a pawl, 9, pivoted to one end of the swinging arm T. The arm T is pivoted at 10 to a post, 11, and the other end of the arm is secured to a sliding bar, 12, in the bracket U, and connected to the sliding box R² by the spring 13, so that when the rolls H I are separated by the passage therethrough of the folded and wrapped paper the bar T will have imparted to it a swinging motion, while the pawl 9 will engage with the ratchet-wheel V² and impart to the feed-rolls a step-by-step motion and feed the addressed strip forward one space or step. The platform or table Q, on which the folded paper rests, is now raised by means of the arm H², operated by the cam F', which brings the wrapped paper in contact with the addressed strip of paper, and causes the same to be pressed or pasted thereon, while a knife, R, serves to cut the strip and sever the portion adhering to the wrapped paper from the main strip. The end of the table Q is now lowered by means of the depressed portions of the cam F' coming into operation, and allows the folded, wrapped, and addressed papers to fall onto the chute below, from whence they are carried away.

The knife R is pivoted at 14 to the frame of the addressing device, and is provided with a weighted arm, 15, which causes the knife to rise when the table Q is lowered, and permits the addressed strip of paper to be fed forward; but when the table Q is raised it comes in contact with the weighted end or arm of the knife, and thus brings the knife into operation to sever the strip. The addressing device may, however, be made to swing to the table Q, instead of the table swinging to the addressing device, without departing from the spirit of my invention.

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

1. In a paper folding and wrapping machine, the combination of clamping-bars receiving the folded paper and wrapper and the swinging bar N, as set forth.

2. In a machine for folding and wrapping papers, the combination of the following elements, viz: a hollow table into which the wrapping-paper is intermittently fed, a folding-blade for forcing the paper to be wrapped through an opening in the table, a clamping device for holding the folded and partially-wrapped paper, and a swinging bar for folding the ends of the paper and wrapper over the clamping-bars, as set forth.

3. In a machine for folding and wrapping

papers, the feeding, clamping, and folding devices herein described, in combination with a pair of opening and closing rolls which clamp the partially-wrapped paper and feed it forward to the pasting device, as set forth.

4. The combination, with the clamping-bars receiving the paper and wrapper folded together and means, substantially as described, for folding the paper and wrapper over one of said clamping-bars, of a swinging bar to fold the wrapper under the clamping-bars, substantially as described.

5. In combination with the clamping-bars and means, substantially as described, for folding the paper and wrapper within and over said bars, the stationary roller and the movable roller mounted on the swinging arm, having an extension thereon to fold the wrapper under the said clamping-bars, as set forth.

6. In a machine for folding and wrapping papers, the combination of the clamping-rolls F G and the paste-roll D², adapted to apply

the paste to the wrapper, with the folding shoe or casting C² and pressure-rollers H I, as set forth.

7. In a machine for folding, wrapping, and addressing papers, &c., the roller I, mounted in a movable bearing, in combination with the pivoted arm T, pawl 9, ratchet-wheel V², and addressing mechanism, substantially as described, whereby the addressed strip of paper is fed forward by the action of the roll I, as set forth.

8. In a machine for folding, wrapping, and addressing papers provided with folding and wrapping devices, substantially such as described, the combination of a vibrating table and a fixed addressing-machine and knife operated by the rising and falling of the vibrating table, as set forth.

HADWEN SWAIN.

Witnesses:

S. W. FRENCH,
S. B. MORGAN.