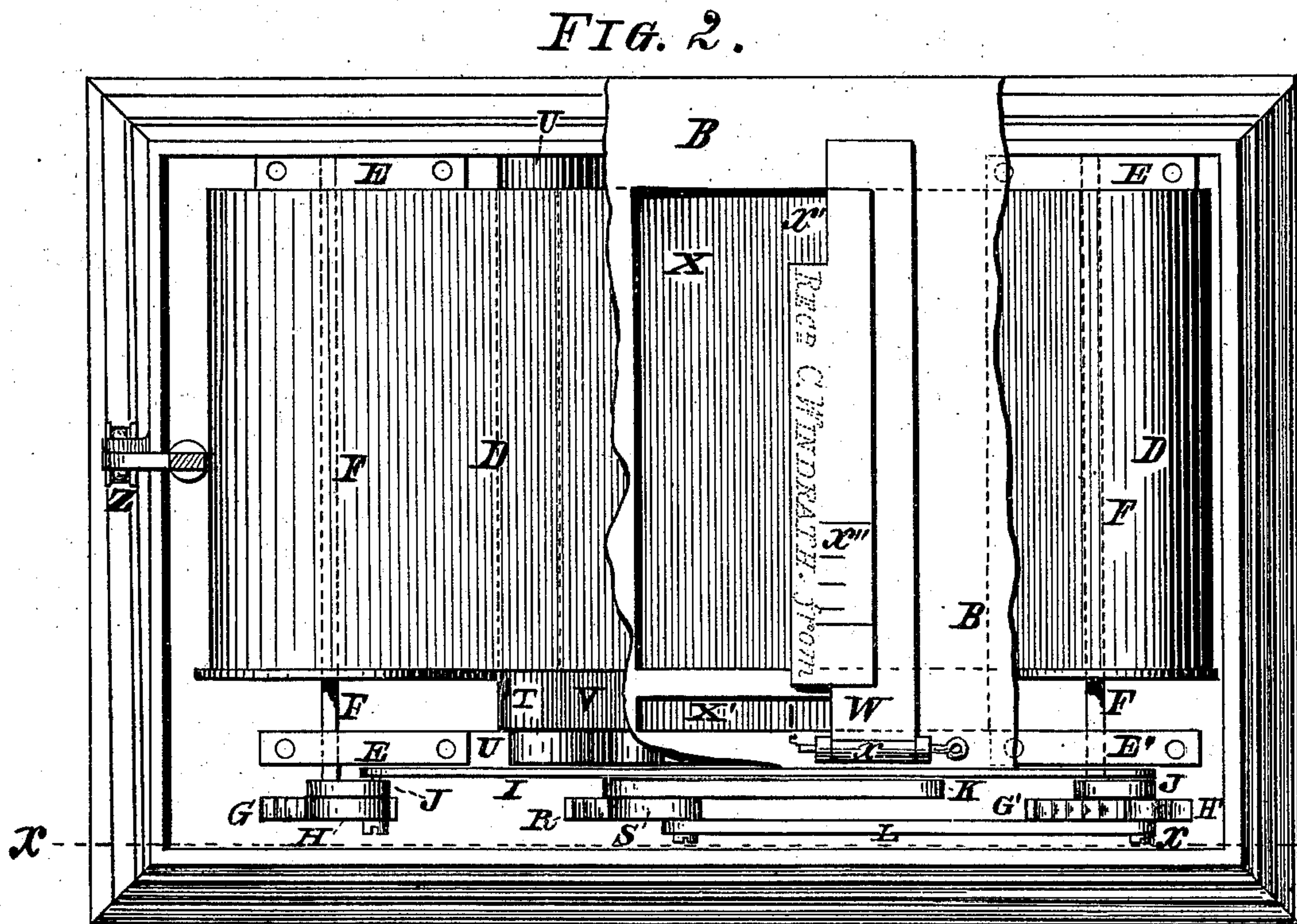
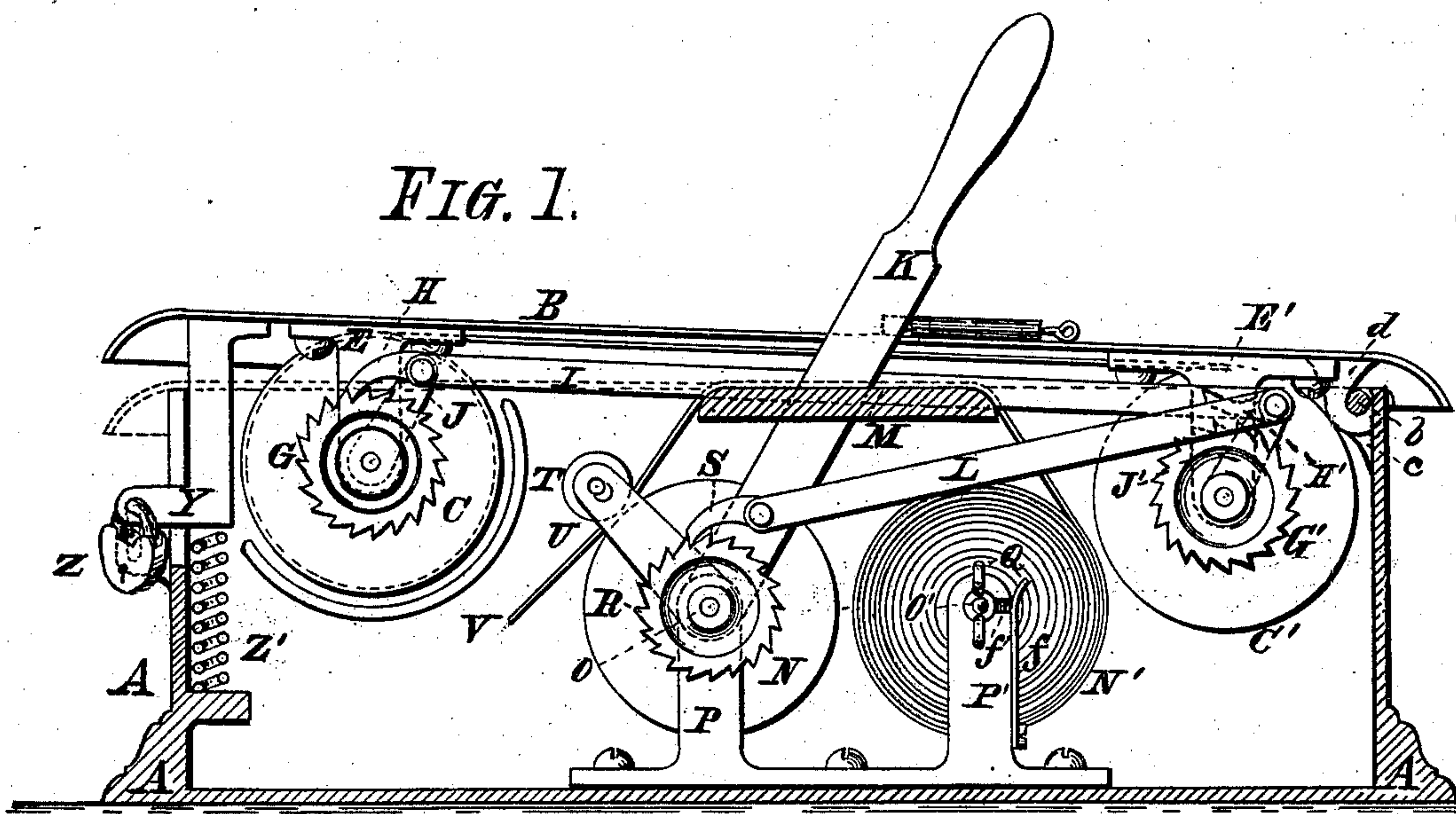


C. WINDRATH.
Combined Copying and Recording Machine.
No. 214,541. Patented April 22, 1879.



Witnesses:

Mc. J. Stark
R. C. Renwick

Inventor:

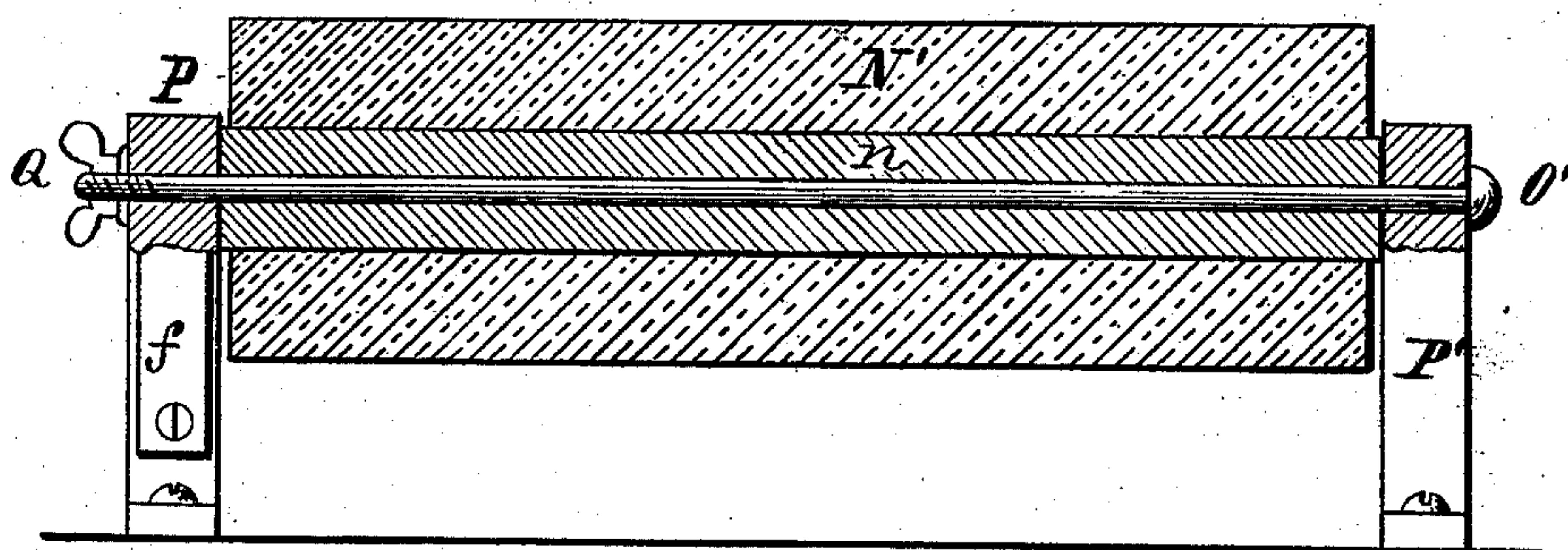
Carl Windrath
by Michael J. Stark
Atty.

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FIG. 3

May 14. '78	REC ^d . C. WINDRATH. from:					
	Michael J. Stark \$	98	50			<u>7</u>
May 14. '78	REC ^d . C. WINDRATH. from:					
	James Osburn \$	510	75			
	The balance of \$100					
	to be paid in 30 days.					<u>7</u>
May 14. '78	REC ^d . C. WINDRATH. from:					
	Ben. C. Franklin \$	1000	00			<u>7</u>

FIG. 4.



Witnesses:

M. J. Stark.
R. C. Renwick

Inventor:

Carl Windrath
by Michael J. Stark
atty.

UNITED STATES PATENT OFFICE.

CARL WINDRATH, OF BUFFALO, NEW YORK.

IMPROVEMENT IN COMBINED COPYING AND RECORDING MACHINES.

Specification forming part of Letters Patent No. **214,541**, dated April 22, 1879; application filed August 27, 1878.

To all whom it may concern:

Be it known that I, CARL WINDRATH, of Buffalo, in the county of Erie and State of New York, have invented certain new and useful Improvements on a Recording-Machine; and I do hereby declare that the following description of my said invention, taken in connection with the accompanying sheets of drawings, forms a full, clear, and exact specification, which will enable others skilled in the art to which it appertains to make and use the same.

This invention has special reference to recording-machines; and it consists in the peculiar arrangement of parts and details of construction, as hereinafter first fully set forth and described, and then pointed out in the claims.

In the drawings hereinbefore mentioned, which serve to illustrate my invention more fully, Figure 1 is a sectional elevation in line *xx* of Fig. 2. Fig. 2 is a plan. Fig. 3 is a plan of the recording-slip, and Fig. 4 a sectional elevation through the standard and recording-slip roller.

The object of my present invention is the production of a machine for recording cash and other receipts, and making a permanent memorandum of business transactions, which machine shall be so constructed as to prevent access to the record, except by the person or persons authorized to examine the same. It shall furthermore give a buyer duplicate receipts, one of which is a perfect fac-simile of the one recorded by the machine, and which receipt cannot be readily altered, and if tampered with can be easily compared with the receipt on record, and thus fraud detected.

This machine is especially designed to serve as a check to fraud by employes by preserving a record of the business transactions of the clerks in stores, &c., in their own handwriting, which record is not accessible to the one making the same, and thus incapable of being altered.

The letter A in the drawings represents a box-shaped compartment, which is provided with a hinged top, B. This compartment contains two rollers, C C', over which is stretched an inked ribbon, D. These rollers are mounted within brackets E, secured to the top plate, B, upon axles F, one end of which is provided

with ratchet-wheels G G', operated by pawls H H', pivoted to vibrating arms J J', oscillating upon the said shaft F. The two vibrating arms J J' are connected together by means of a rod, I, and are operated from a hand-lever, K, by means of a rod, L, connecting said lever K with the vibrating arm J'.

The mechanism hereinbefore described is designed to retain and move the inked ribbon D from one upon the other roller over a stationary table or bed-plate, M, by operating the lever K, which is readily accomplished in the following manner: The lever K being actuated, the connecting-rod L causes the arm J' to vibrate, and this in turn operates the vibrating arm J by the rod I. Now, it will be observed that each of the vibrating arms is provided with a pawl, H H', which engages the respective ratchet-wheels G G', the teeth of which stand in opposite directions. By engaging one or the other of the ratchet-wheels the proper one of the rollers C is caused to rotate and thereby to wind the inked ribbon upon said roller.

Within the compartment A are furthermore provided two rollers, N N', pivoted with their respective shafts O O' within double standards P P', secured to the bottom of the compartment A. The shaft O' has on its end a thumb-nut, Q, to tighten the said shaft by drawing the standards P P' slightly together, the object of which is to act as a tension to the roller-tube *n*, as hereinafter to be referred to.

The lever K swings loosely upon the shaft O, which is provided with a ratchet-wheel, R, the same as the rollers C C', operated by the pawl S, pivoted to said lever K.

The roller-tube *n* carries a band of writing-paper, which is tightly wound upon said roller and the end thereof passed over the table or bed-plate M, and then downward between the roller N and the auxiliary roller T, pivoted within the extensions U of the standards P. Either the roller N or the auxiliary roller T is flexible, so as to bear with sufficient force upon its opposite roller to drag the paper band V from the roller N' over the bed-plate M, which is accomplished by the lever K, ratchet R, and pawl S simultaneously with the ink-band D.

Upon the top plate, B, is hinged an impres-

sion-plate, W, at x , which impression-plate has on its under side an impression-die, preferably of type or other metal, bearing the name of the individual, firm, or corporation in whose name the receipt is to be given.

In the top plate is an opening, X, and the impression-die is arranged to occupy the uppermost part thereof, said impression-plate having a notched space, x' , for the purpose hereinafter referred to.

On one side of the openings X, and of even length therewith, is a further opening, X', and on the side of the latter a slot for the passage of the lever K. Upon the impression-plate W are marks x'' at certain intervals near the end of the aperture X.

The top plate, B, is hinged to the compartment A at one end thereof, marked b , Fig. 1, there being provided on the walls of said compartment brackets c , connected together by the pintle b . The top plate has slotted brackets d arranged to engage with the pintle b in a certain position, while at others it allows the insertion and removal of said top plate from the pintle b . On the forward end of the top plate is fixed a staple or other device, Y, which, by the padlock Z or other analogous means, locks the top plate, B, to the said compartment A. This top plate is arranged with capability of a slight vertical movement on its front end around the pintle b , and it is held in an elevated position by means of a spring, Z'. The purpose of thus hinging the top plate, B, is to keep the inked ribbon, which is in close proximity to the under side of the said top plate, away from the writing ribbon or band D, except when a record is to be made, in which case the writer, placing his hand upon the top plate, depresses the same, so that the ink-band lies upon the paper band.

To make a permanent record—such as, for instance, in giving a receipt for money received—the impression-plate is depressed, so as to ink the face of the impression-die from the ink-band.

Now the paper upon which the receipt is to be written is placed under the impression-die upon the opening X, and the impression-die depressed, so as to impress the receipt with the name of the party giving the receipt. In the present instance I have affixed an impression-plate bearing the following printing-matter: "Rec'd, C. Windrath, from." On the left-hand side of the apparatus, within the space designated x' , the writer will now insert the date, (which, however, may also be done by type on the impression-plate,) and in the space X the writer will now set the name of the payee and the amount paid, taking care that the figures of the sum received coincide with the marks x'' , for convenience in adding the amounts after the recording-slip is taken from the machine.

The writing upon the receipt-slip is done in lead-pencil, and the receipt-slip lying upon the inking-band D, it is evident that the back

of the receipt-slip receives from the inked band an impression being the reverse of that written upon the receipt-slip.

Under the inked band is placed the recording-band V, which will also receive the impression of the matter stamped and written upon the receipt-slip first mentioned.

Directly opposite the last line written upon the receipt-slip within the space X' the writer will make a dash, v , or similar mark, which is directly upon the recording-band, (this being as much wider than the inked ribbon as the space from the larger opening, X, to the smaller opening, X',) and thus indicate how far the underlying recording-slip has been marked upon.

Now the writer will actuate the lever K back and forth, to move the recording-slip a sufficient distance to present a new blank space under the inked band for the next record, the inked band moving at the same time a space ahead, to present a new spot to the opening X.

In this manner a succession of records can be made upon the recording-slip, which, underlying the inking-band, is, however, never seen by the clerk making the record, and thereby beyond his reach, to either see what has been written or to alter anything on the record.

It will now be seen that the record upon the slip V is in the writer's own handwriting, and can, therefore, be always recognized by comparison or otherwise, and that any attempt at fraud in the recording of cash receipts by altering the figures is not only an impossibility, because the recording-slip is not accessible by the person making the record, but would, if attempted, be clearly indicated upon the recording-slip.

The receipt given to the payee is made with a lead-pencil; but, although it is a legal receipt when thus executed, it would not be a very difficult matter to tamper with it and increase the amount indicated as paid. Such alteration, however, is rendered more difficult on account of the receipt-slip receiving on the under side a duplicate impression, (in reverse, it is true, but nevertheless readily readable,) which is made with indelible ink, and would be very difficult to erase and to substitute other figures in their place. At the same time the recording-slip, if compared with such a forged receipt, would at once disclose and thus frustrate the fraud.

The record-slips accumulate in the space below the roller C, and are severed once a day, or otherwise, to inspect and preserve the same, which can be readily done by tearing the slip from the band behind the roller U. Access to this part of the compartment can be readily had by unlocking the cover B, which may be locked by any one or more of the safety appliances used on cash-drawers, safe-doors, &c., and the cover then swung up, when the entire mechanism appertaining to the inked

band will swing with the cover out of the casing A, and thus permit the band V being easily reached.

The inked band D is wound from one roller to the other, in either direction, by engaging the proper pawl with its ratchet. Thus the band being wound in a solid coil will, after having been partially deprived of its ink by impressions taken therefrom, automatically resaturate these places by capillary attraction and contact with places sufficiently saturated, and may be moved back and forth from one roller to the other many times before a resaturation or reinking becomes necessary, which, however, may be readily done by removing the band from its rollers.

To apply the necessary tension to the paper band I have passed the roller-tube *n* over the bolt O', and provided the latter with a thumb-nut, Q, which by being screwed up draws the two standards P P' toward each other, and thereby clamps said roller-tube between them.

When a band is used up it will be indicated in the opening X', and a new one may be readily inserted by the proper person having the key to the lock Z, by pulling the empty roller toward the spring *f*' on the support P', which locks the slotted passage *f*' in said support, when the said roller may be readily removed and a new one inserted by pressing it between the standard and spring down into said slotted aperture.

It is perfectly obvious that this recording-machine is capable of being successfully applied to all the various branches of business where a perfect written record of any transaction is required, and where a record which cannot be tampered with is a desideratum.

I prefer to make the casing A of cast or wrought iron, or other suitable material, so as to be strong and non-transparent, to prevent the exposure of any part of the written record contained in said compartment; but, if desired, the longitudinal sides may be glazed to expose the interior mechanism without departing from the spirit of my invention.

It will be further observed that if bank-checks or other monetary papers are written upon a machine of the kind described there

will be not only a perfect record kept thereof, but the checks themselves protected from alteration on account of the marking they receive on their reverse side, which marking being directly opposite the writing on the face of the checks would require erasures on both sides of the paper, and could not be readily accomplished without destroying the material to such an extent as to render the fraud clearly visible.

Having thus fully described my invention, I claim as new and desire to secure to me by a patent—

1. The combination, with the casing A, of the inked band D, wound upon rollers C C', the recording-slip V, passed over the roller N, the lever K, rods L and I, arms J J', and pawls H, H', and S, said inking and recording bands being moved by said lever K, substantially as and for the object specified.

2. In a recording-machine, the combination, with the hinged and locked cover B, having the bearings E E', of the inking-band D and recording-band V and spring Z', said cover being adapted to be depressed by the writer during the time of making a record, and raised by the action of the spring Z', as and for the object specified.

3. In a recording-machine, the combination, with a top plate having the two apertures X X', of the inked band and the recording-slip, the inked band being narrower than the recording-band to expose the latter through said aperture X' to receive the marking *v*, as and for the use and purpose specified.

4. The combination, with the standards P P', of the paper tape N', wound upon the roller *n*, said roller being passed upon the bolt O', having the thumb-nut Q, and the standard P, provided with the notch *f*', closed by the spring *f*', as specified.

In testimony that I claim the foregoing as my invention I have hereunto set my hand and affixed my seal in the presence of two subscribing witnesses.

CARL WINDRATH. [L. S.]

Attest:

MICHAEL J. STARK,
R. C. RENWICK.