(No Model.)

3 Sheets—Sheet 1.

H. BANKS, Jr.

ADDRESSING MACHINE.

No. 396,457. Patented Jan. 22, 1889.

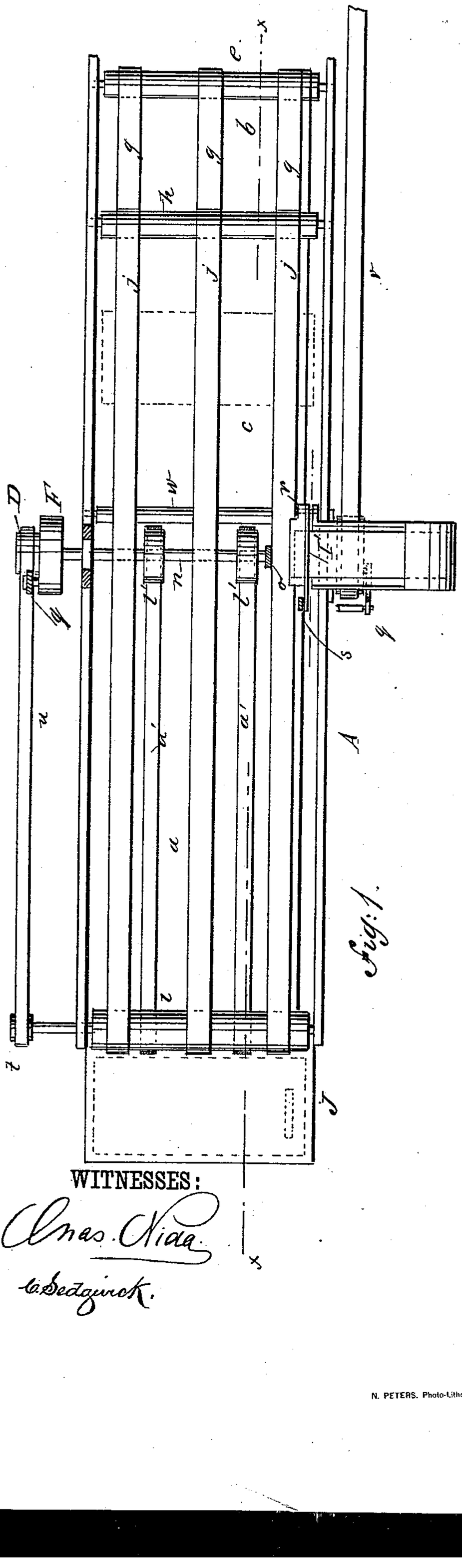

Fig: 1.

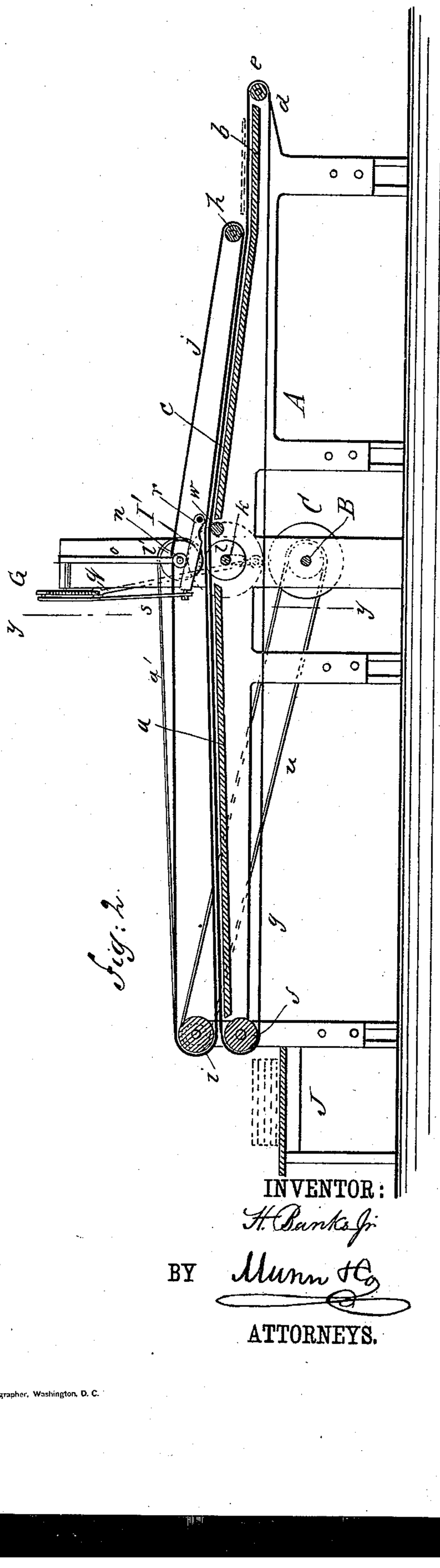

Fig: 2.

WITNESSES:

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C. Sedgwick.

INVENTOR:

H. Banks Jr.

BY Munn & Co

ATTORNEYS.

(No Model.) 3 Sheets—Sheet 2.

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Fig: 3.

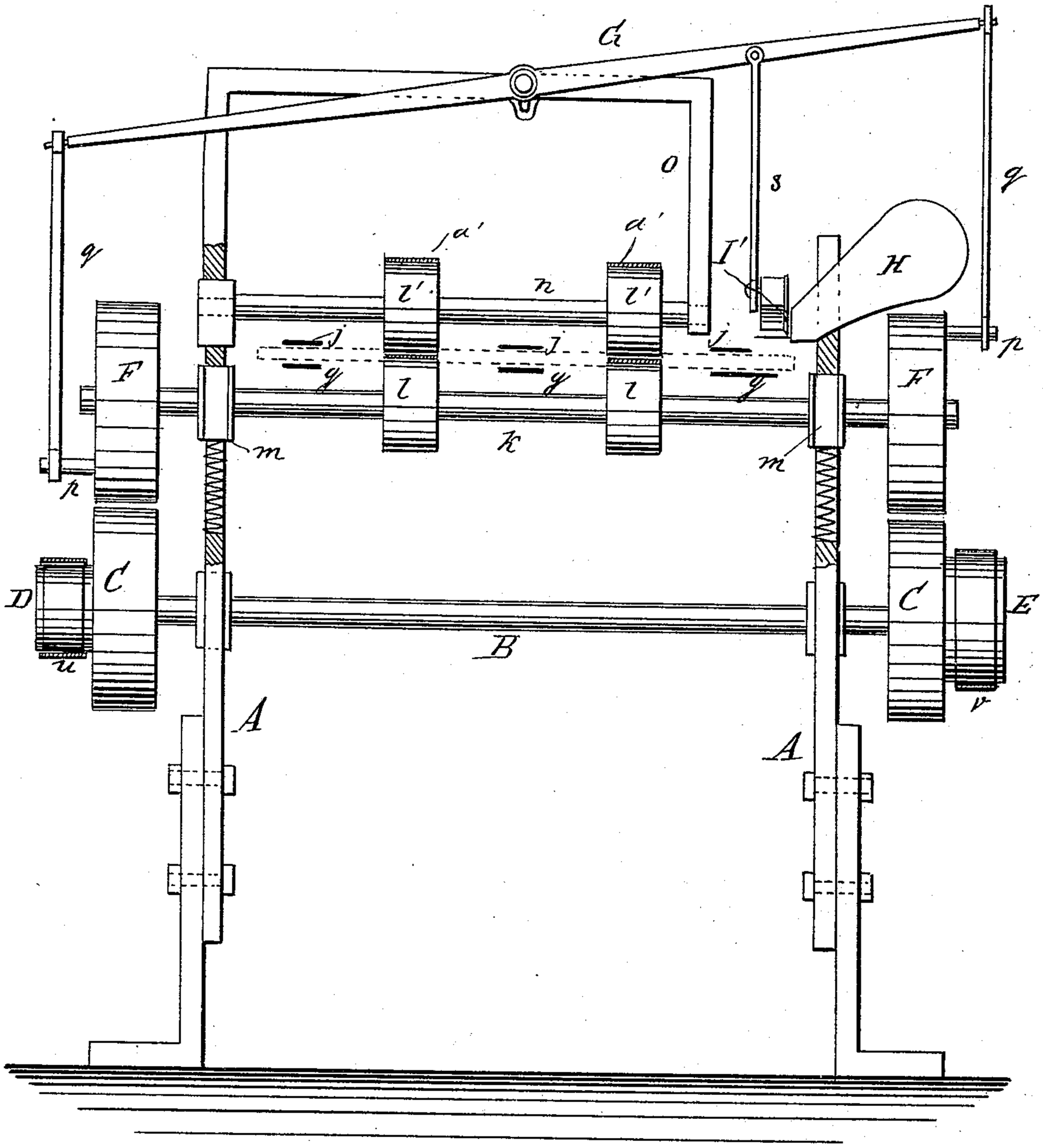

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Fig: 4.

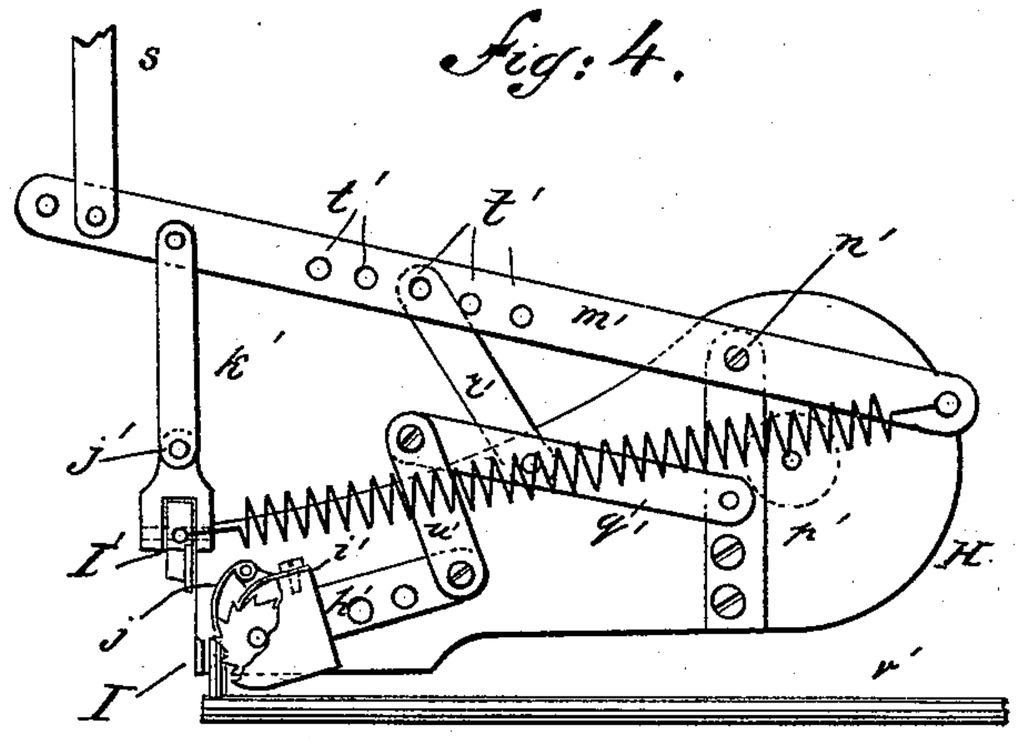


Fig: 5.

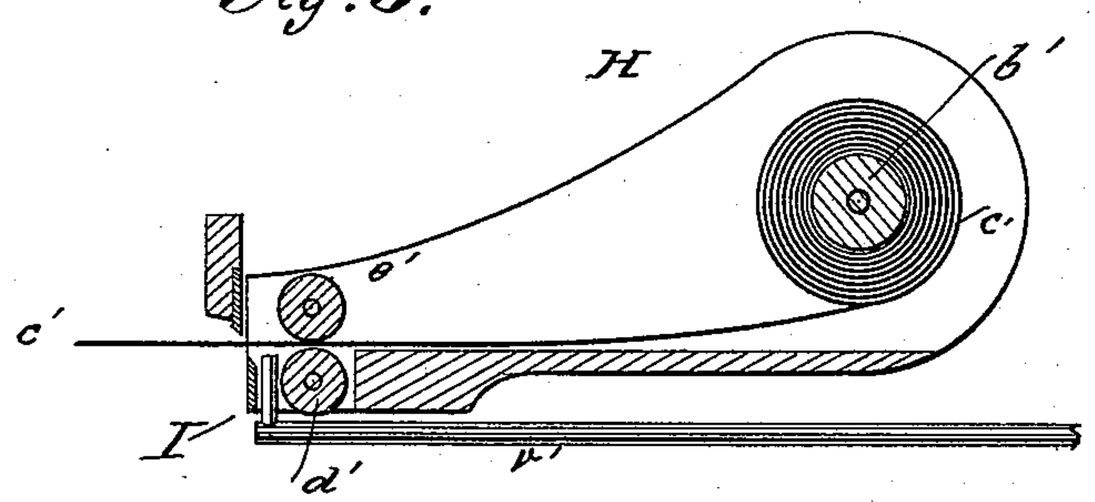
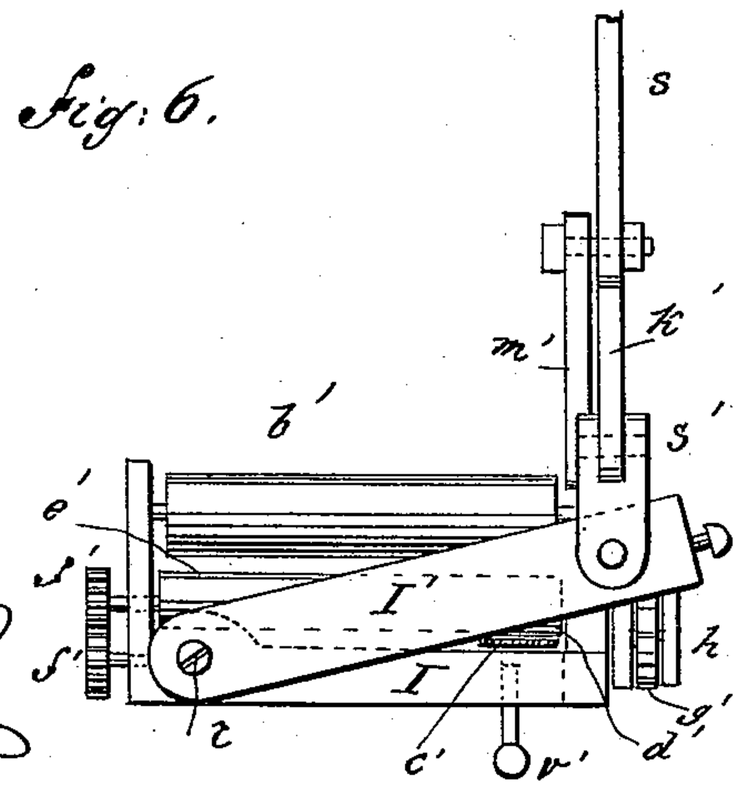


Fig: 6.



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INVENTOR:

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UNITED STATES PATENT OFFICE.

HENRY BANKS, JR., OF LA GRANGE, GEORGIA.

ADDRESSING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 396,457, dated January 22, 1889.

Application filed September 4, 1886. Serial No. 212,715. (No model.)

To all whom it may concern:

Be it known that I, HENRY BANKS, Jr., of La Grange, in the county of Troup and State of Georgia, have invented a new and Improved Addressing-Machine, of which the following is a specification, reference being had to the annexed drawings, forming a part thereof, in which—

Figure 1 is a plan view of my improved addressing attachment. Fig. 2 is a vertical longitudinal section taken on line *x x* in Fig. 1. Fig. 3 is a sectional end elevation. Fig. 4 is a side elevation, partly in section, of the stamping-machine. Fig. 5 is a longitudinal section of the same, showing the relation of the shears, the feed-rolls, and the moistening device; and Fig. 6 is an end elevation of the stamping-machine.

Similar letters of reference indicate corresponding parts in all the views.

The object of my invention is to construct a simple and efficient machine for addressing newspapers as they are delivered from the newspaper-folder.

My invention consists in the construction and arrangement of parts, as will be hereinafter fully described and claimed.

The table A, forming the body of the machine, is made in two levels, *a b*, joined by an inclined plane, *c*.

My machine is intended as an attachment to the folding-machine of a newspaper-press. Folders deliver the printed and folded papers at a point near the floor; hence the table A is inclined, so that the front portion, *b*, of it may be placed underneath the folder to receive the folded and printed papers therefrom. If the table should be level from the part *b*, it would be too near the floor for the operator's convenience and there would not be sufficient space between the rear end of the table and the floor for the delivery of the folded papers after having been stamped or addressed.

To the front end, *d*, of the table is journaled a roller, *e*, and at the opposite end is journaled a roller, *f*. Three endless bands, *g*, extend around the rollers *e f*. One strand of each band passes over the top of the table and the other strand passes under the table-

Above the table, at the juncture of the inclined plane *c* and part *b* of the table, is journaled a roller, *h*, and at the rear end of the table above the roller *f* is journaled a roller, *i*. Endless bands *j* pass around the rollers *h i*. The endless bands *j* are arranged above the bands *g*, so that as the two sets of bands revolve together they will receive and carry forward papers laid upon the bands *g* above the portion *b* of the table. At the upper end of the inclined plane *c* is placed a roller, *w*, which supports and guides the bands *g j* and prevents friction at this point.

At the juncture of the inclined plane *c* and elevated portion *a* of the table is journaled a shaft, *k*, carrying two wheels, *l*, which project through the space between the outside and middle bands. The shaft *k* revolves in spring-supported journal-boxes *m*, which slide in grooves in the frame of the table A. Above the shaft *k* is journaled a shaft, *n*, supported by the frame *o*, extending over the top of the table and carrying two rollers, *l'*, which bear upon the rollers *l*. Endless bands *a'* run from the roller *i* around the rollers *l'*, which impart rotary motion to the rollers *l'*, and thus assist in drawing the papers between the rollers *l'* and *l*. Below the shaft *k* is journaled the driving-shaft B of the machine, carrying upon opposite ends friction-wheels C and outside of the friction-wheels the pulleys D E. To opposite ends of the shaft *k* and above the friction-wheels C are secured friction-wheels F. Crank-pins *p* project from the outer sides of the wheels F, which are arranged diametrically opposite each other and connected by rods *q* with opposite ends of the equal-armed lever G, pivoted to the frame *o*. The lever G at its pivot or axis R is allowed a slight amount of play in order that the shaft *k* may be depressed to the extent necessary by a folded paper to passing between the rollers *l l'*. This play is allowed by providing a vertical slot in the frame O to receive the pivot or axis R of the lever G, as shown in Fig. 3.

At one side of the table A and above the path of the papers carried between the bands *g j* is supported an addressing device, H. (Shown in detail in Figs. 4, 5, and 6.) The addressing device H is provided with a roller, *b'*, for carrying the coiled gummed strip *c'*,

upon which are printed the addresses at regular intervals. In the frame of the addressing device are journaled two rollers, d' e', whose shafts are provided with spur-wheels f', which mesh into each other and cause the rollers to turn in opposite directions. The shaft of the lower roller, d', carries a ratchet-wheel, g', and upon the shaft is placed a forked arm, h', carrying a spring-pawl, i', which acts upon the ratchet-wheel g'. To the side of the frame of the addressing device is pivoted a pawl, j', which prevents the ratchet-wheel from turning backward. The forward end of the addressing device H is provided with a shear-blade, I, whose cutting-edge is opposite the line of contact of the two rollers d' e', and to the blade I is pivoted a blade, I', upon the screw r, and the opposite end of the shear-blade I' is connected by a knuckle-joint, s', with the rod k', which is pivoted to the lever m', fulcrumed on the stud n', projecting from the side of the frame of the addressing device. The free end of the lever m' is connected by a rod, s, with the lever G. The lever m' is prolonged beyond its fulcrum n', and is connected by a spiral spring, p', with the end of the shear-blade I', the spring serving the double purpose of lifting the longer arm of the lever and shear-blade attached thereto and of holding the shear-blade into working contact with the blade I.

At the side of the frame of the addressing device H is pivoted the lever q', which is connected by the link r' with the lever m'. Several holes, t', are made in the lever m' to admit of placing the link r' in different positions along the length of the lever to vary the stroke of the lever q'. The free end of the lever q' is connected by a link, u', with the free end of the pawl-carrying lever h'. The lever h' is provided with a series of holes for changing the position of the link u' when it becomes necessary to vary the stroke of the lever h' to adapt the feed of the addressing device to varying spaces between the addresses on the gummed strip c'. The gummed surface of the strip c' is moistened by steam or a spray of water issuing from the tube v', arranged below the addressing device and in front of the roller d', as shown in Figs 4 and 5.

The shaft of the roller i is provided with a pulley, t, which receives motion through a belt, u, from the pulley D. Continuous rotary motion is imparted to the shaft B by a driving-belt, v, running around the pulley E and taking its motion from any convenient source of power, and motion is imparted to the shaft of the roller i by the belt u, running over the pulley t, and motion is imparted by the roller i to the roller h, the rollers l', roller f, and roller e, through the belts j, a', and g. The front of the addressing device is placed in such relation to the folding-machine as to receive upon the bands g the papers delivered by the folding-machine, and the bands carry the papers forward under the roller h, after which they are held between the bands j, a', and g and carried forward. In their passage between the wheels l l' they push the wheels l and shaft k downward, bringing the friction-wheels F into engagement with the friction-wheels C, thus causing the wheels F to revolve, tripping the lever G, cutting off the protruding end of the strip of addresses by the movement of the shear-blade I, and by the same operation pressing the moistened cut-off part of the strip down upon the paper passing between the wheels. After addressing, the paper is carried forward and delivered to a table, J, at the rear of the machine.

Where a folding-machine is constructed to fold two papers at once, two of my improved machines will be adapted to the folding-machine, one being arranged above the other.

It will thus be seen that when no papers are passing through the machine the addressed strip is not cut, as the spring-supported journal-boxes m hold the shaft k in an elevated position, thus keeping the wheels F out of engagement with the wheels C.

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

1. The combination, with an addressing-machine having a rotary vertically-movable operating-shaft receiving its vertical movement from the article to be addressed, of a carrier extending past said shaft at right angles thereto and adjacent to the delivery end of the addressing-machine, and means for rotating said operating-shaft when depressed by the passage of the article, substantially as set forth.

2. The combination, with an addressing-machine having a rotary vertically-movable operating-shaft depressed by the passage of the article and a second shaft parallel with the said shaft and mounted in fixed bearings, of a carrier passing between said shafts and adjacent to the delivery end of the addressing-machine, and a power-shaft with which said vertically-movable shaft is engaged when depressed by the article, substantially as set forth.

3. The combination, in a machine for addressing newspapers, with the table having a transverse opening and the endless carrier passing along the upper face of the table, of a rotary and vertically-movable shaft extending across the under side of the table and having rollers extending up through said transverse opening, a power-shaft below the roller-shaft and adapted to rotate it upon the depression of the said roller-shaft by the passage of the paper over it, a transverse shaft journaled in fixed bearings above the vertically-movable shaft and having rollers contacting with the rollers thereon, an addressing device, and mechanism for operating the said addressing device when the vertically-movable shaft is depressed by the paper and rotated by the said power-shaft, substantially as set forth.

4. The combination, with the frame, the

endless carrier, and the addressing-machine at one side of the frame, of a yielding shaft adapted to be depressed by the passage of the article to be addressed and extending transversely to the carrier and having crank-pulleys at its ends provided with oppositely-arranged crank-pins, a lever pivoted between its ends above the shaft and parallel therewith, rods connecting the ends of the lever with said crank-pins, a rod connecting the lever between its ends with the addressing-machine, and a power-shaft below said pulleys for operating them upon the depression of the yielding shaft by the article to be addressed, substantially as set forth.

5. In an addressing-machine, the combination, with the endless bands $j\,a'\,g$ and devices for supporting and moving the bands, of the fixed shaft n, provided with wheels $l'\,l'$, the movable shaft k, provided with wheels $l\,l$, the friction-wheels F, secured on the ends of the shaft k and carrying crank-pins p, the driving-shaft B, provided with friction-wheels C, the lever G, the addressing device H, and the connecting-rods $q\,s$, substantially as shown and described.

6. In an addressing-machine, the combination, with the feed-rollers $d'\,e'$, ratchet g', arm h', having a pawl, i', engaging said ratchet, the lever q', the link u', the link r', and lever m', of the fixed blade I and the pivoted blade I′, connected to lever m', substantially as set forth.

7. The combination, with the feed-rollers, the ratchet g', arm h', and pawl i', of the lever m', pivoted near its rear end and connected between its ends with the arm h' of the fixed blade I, pivoted blade I′, connected to the forward end of lever m', and the spring p', connecting the rear end of lever m' with the outer end of the pivoted shear-blade, substantially as set forth.

HENRY BANKS, JR.

Witnesses:
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R. H. BUCKLEY, JR.