

J. A. Barrington Street 12, Streets.
Addressing Mach.

N^o 24364.

Patented Jun 14. 1859.

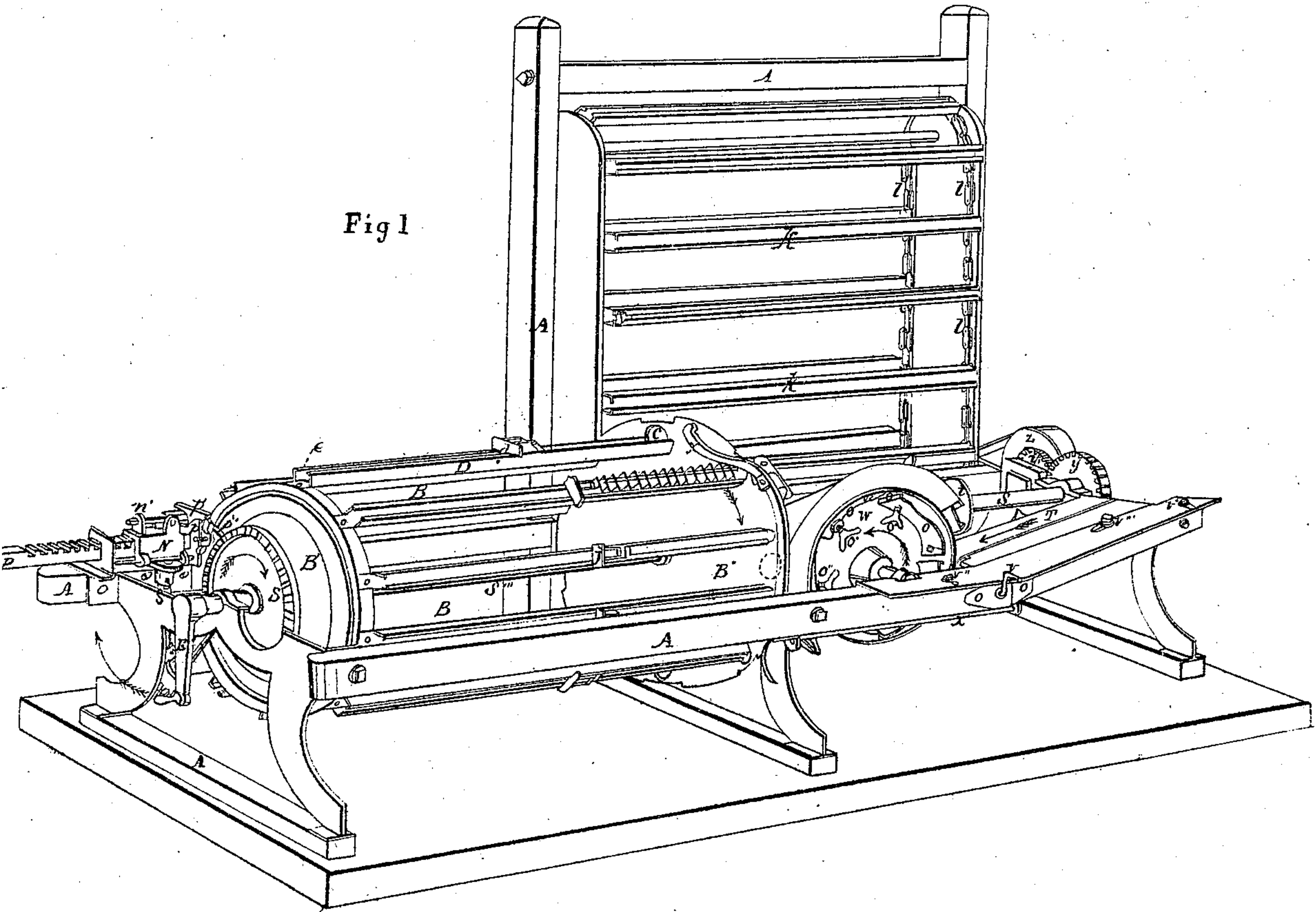


Fig 4

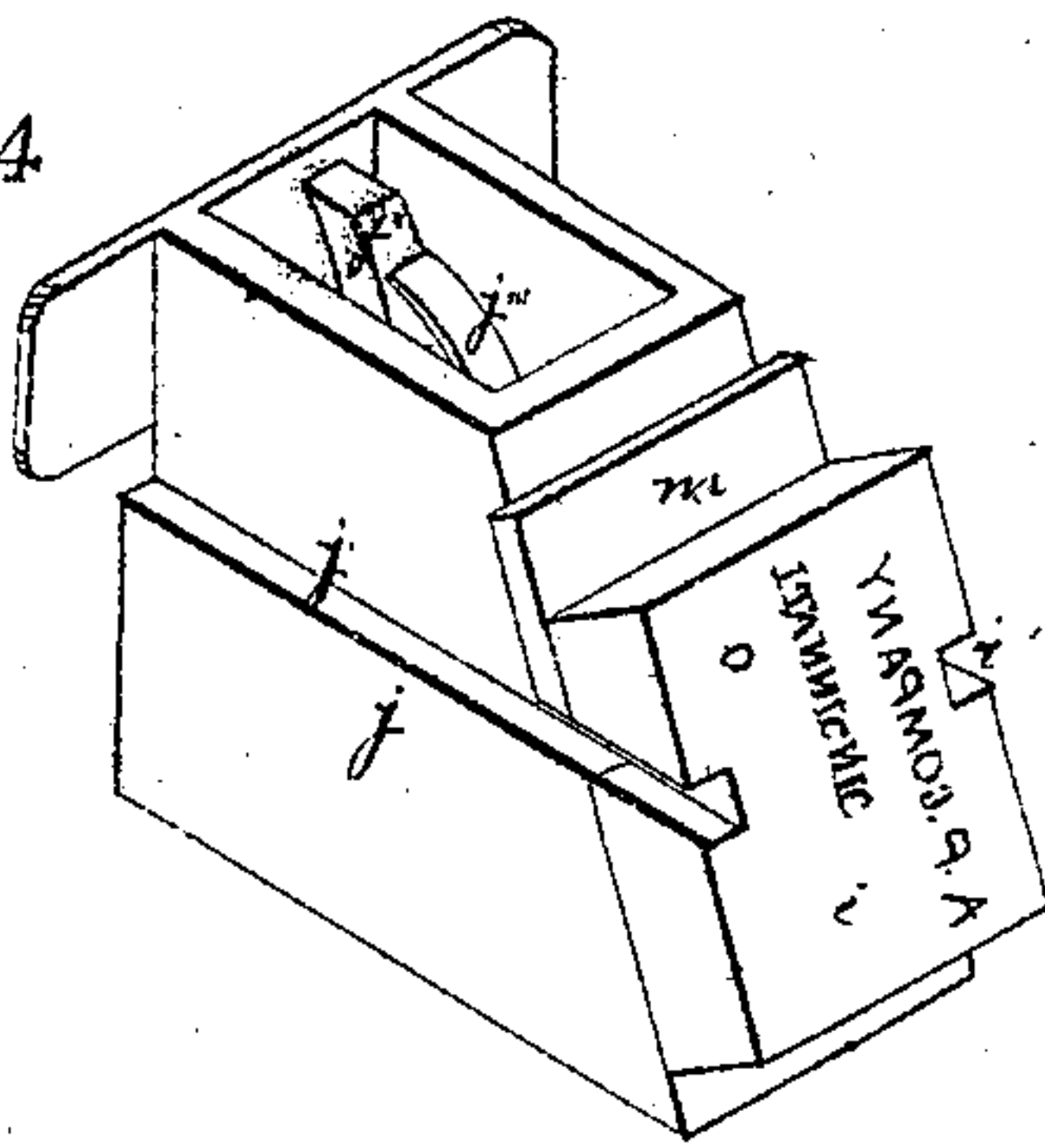
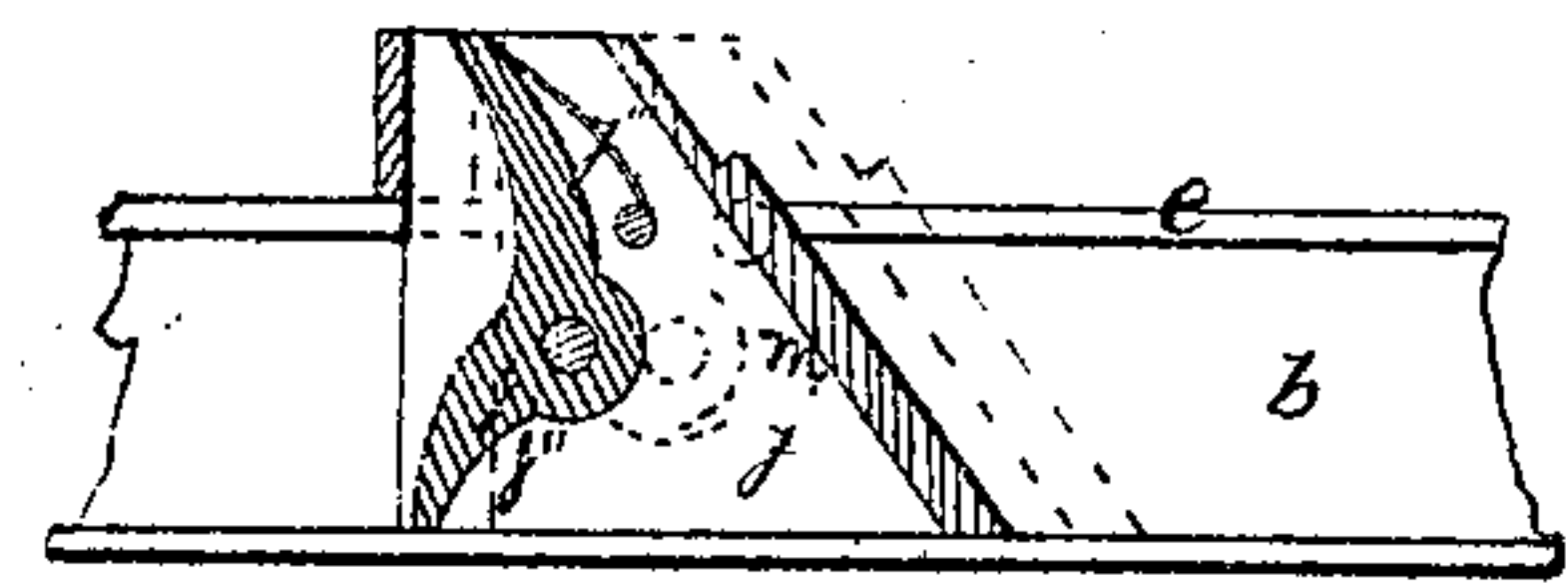


Fig 5



Witnesses:

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G. W. Sargent

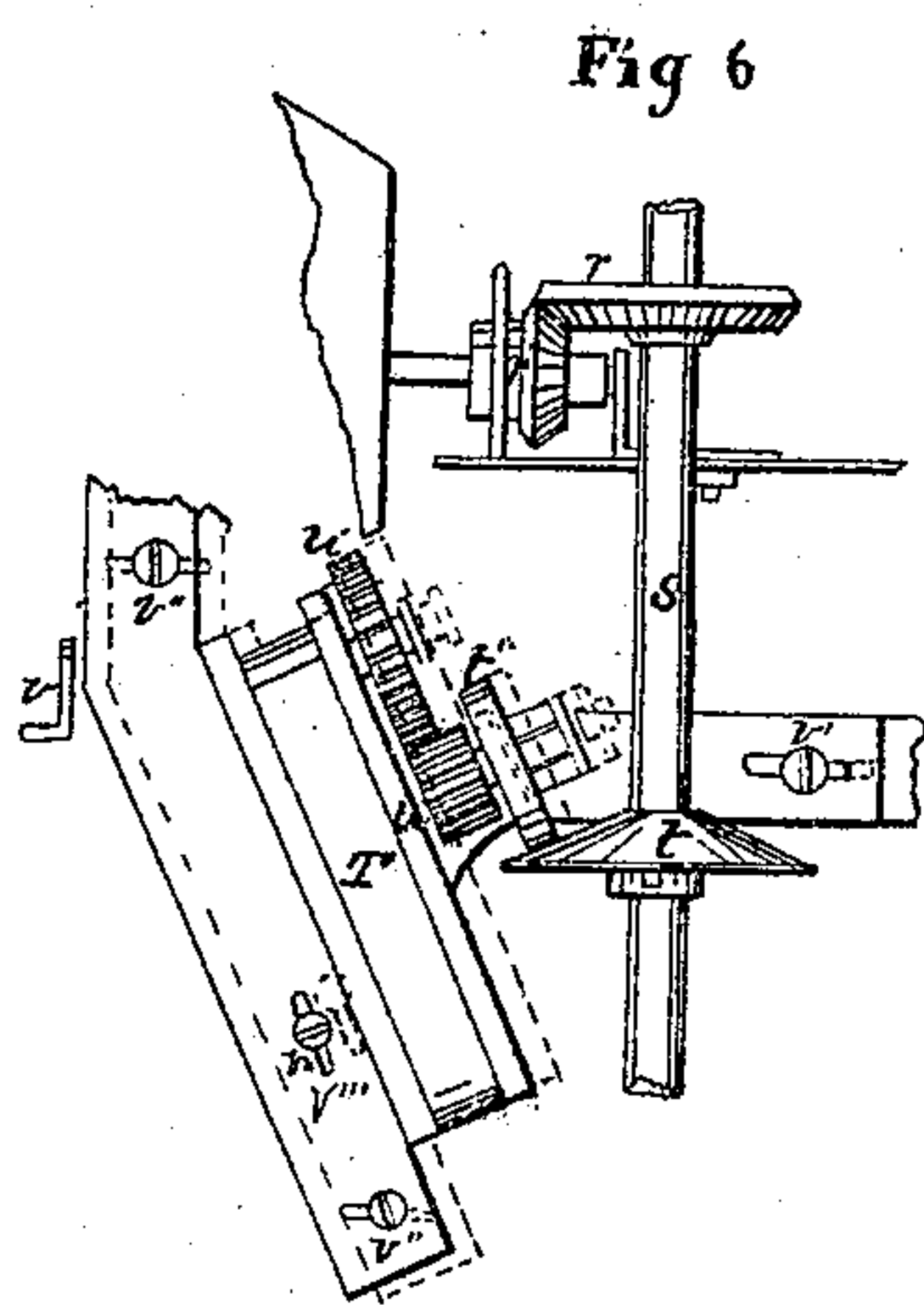
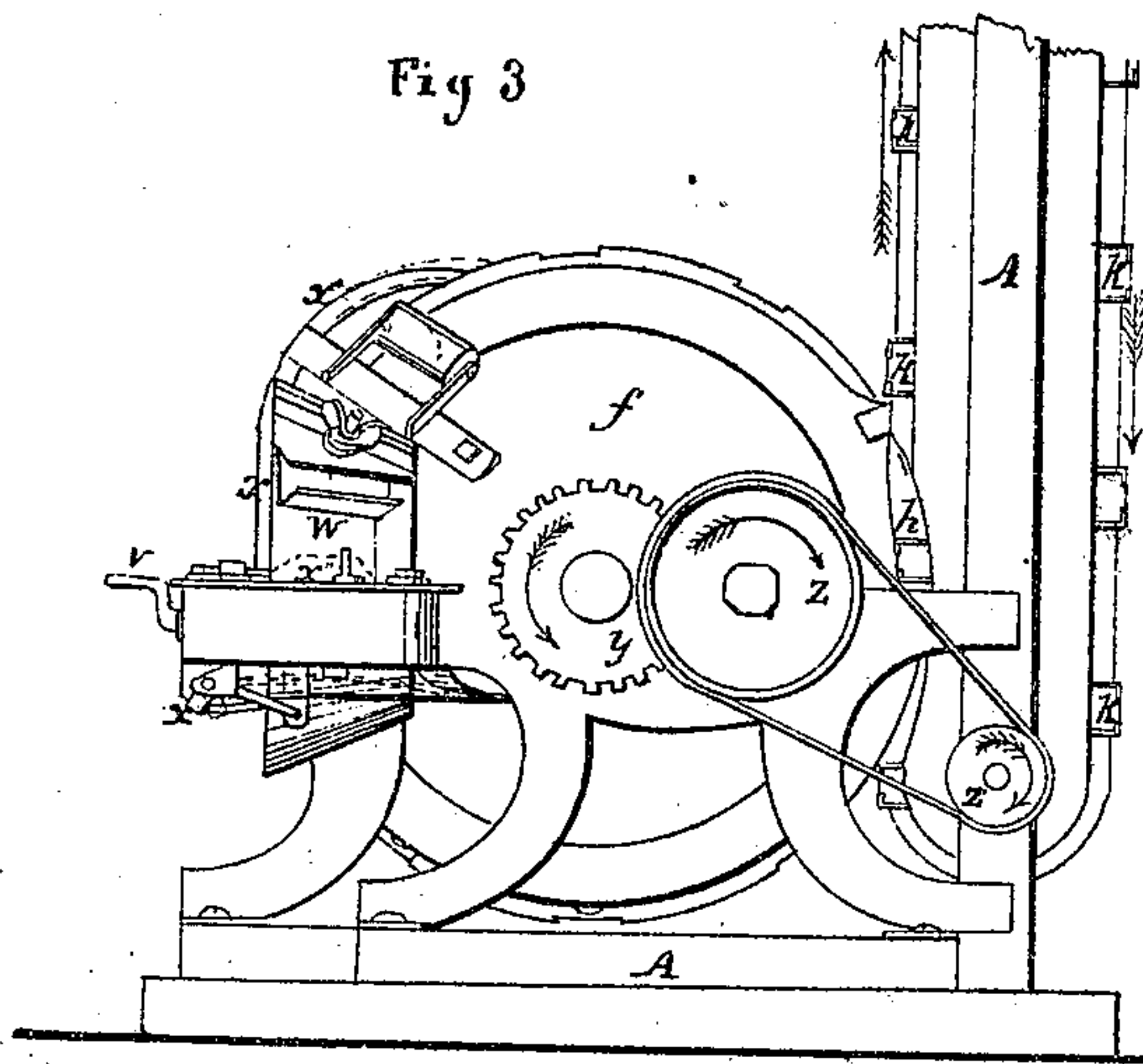
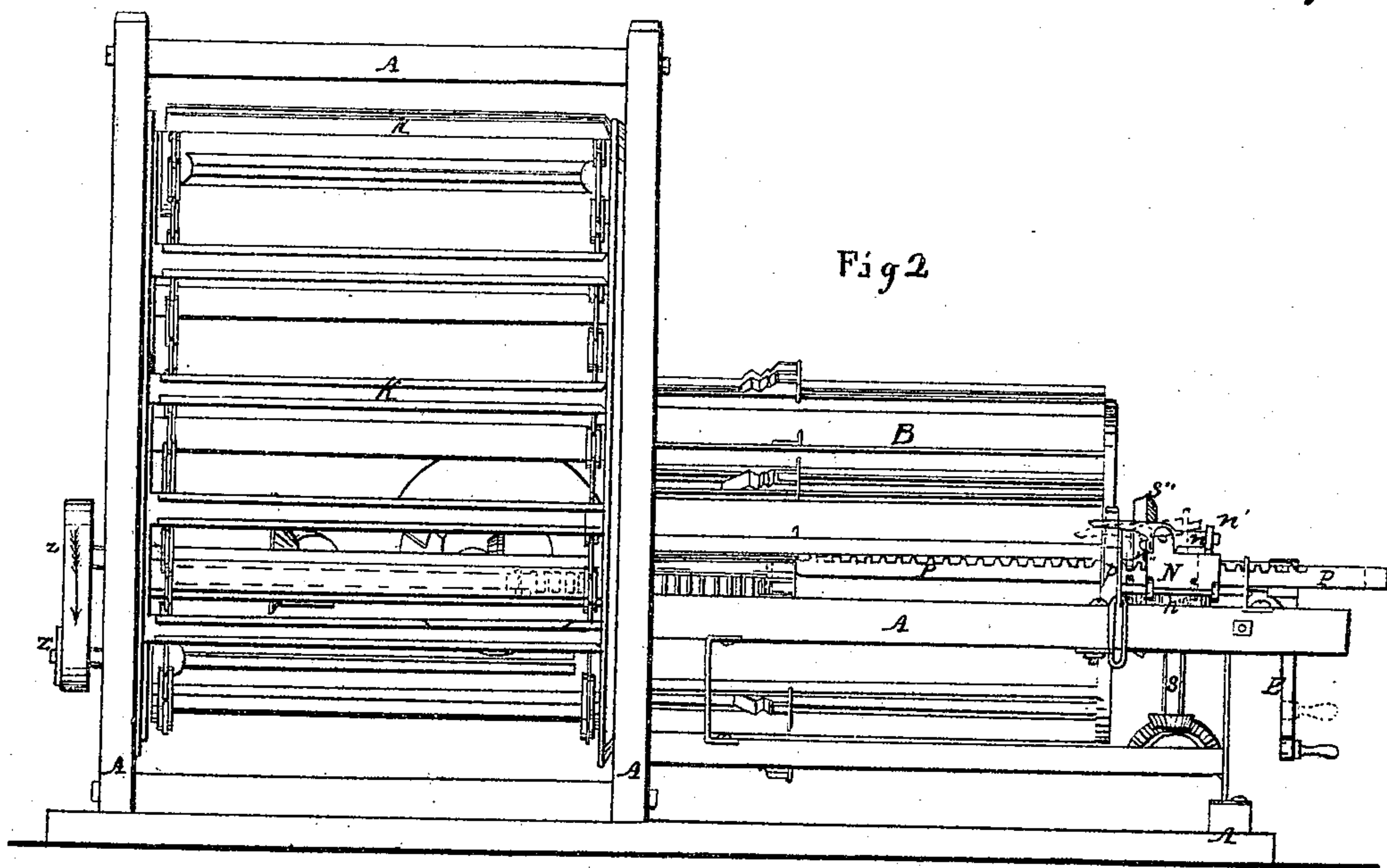
Inventor:

John A. Barrington

J. A. Barrington. Sheet 2. of 2. Sheets
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Inventor:

John A. Barrington

UNITED STATES PATENT OFFICE.

JOHN A. BARRINGTON, OF FREDERICKTOWN, OHIO.

MACHINE FOR PRINTING ADDRESSES, &c.

Specification of Letters Patent No. 24,364, dated June 14, 1859.

To all whom it may concern:

Be it known that I, JOHN A. BARRINGTON, of Fredericktown, in the county of Knox and State of Ohio, have invented a new and useful Improvement in Machinery for Printing the Address on the Envelops of Newspapers, &c.; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings and letters of reference marked thereon and made to form a part of this specification.

The nature of my invention relates, 1st, to the construction and arrangement of a ribbed cylinder for holding the forms of type, in such manner that they may be properly presented to a printing device. 2d, the employment of grooved ribs, arranged upon an endless chain, in such manner as to receive the said forms of type from said cylinder, after the process of printing is accomplished. 3d, a provision for securing the forms of type in proper position to deliver their impressions to the envelops, or other matter which is to be printed upon. 4th, a provision for feeding and adjusting, the forms of type to their proper position for printing, and delivering the said forms, from said cylinder, to the ribs of the endless chain, after the operation of printing is completed. 5th, a provision for regularly feeding the envelops to the type. 6th, a provision for regulating the speed of the endless apron, which delivers the envelops to the feed wheel.

In reference to the accompanying drawings, Figure 1, is a perspective view of the machine, with all its parts arranged for operation. Fig. 2, is a side elevation of the back of the machine, showing, especially the provision, for feeding the forms of type, and delivering them from the cylinder. Fig. 3, is a sectional end view of the machine, showing the device for inking the type, and the manner of operating the endless chain. Fig. 4, is a perspective view of the follower, and form of type. Fig. 5, is a sectional view of the follower and grooved rib, showing especially the catch and spring by means of which the position of the follower is secured. Fig. 6, is a sectional plan of the machine, showing the device for regulating the speed of the endless apron.

(A) represents the supporting frame work of the machine.

(B) is a type cylinder, formed with heads (B' and B'') (which are keyed to the main shaft) (S) and longitudinal grooved ribs (b) as represented in Figs. 1 and 2, the sides of the ribs (b) are made with flanges (e) which are formed to fit the slots (i') of the forms of type (i) by means of which the said forms are prevented from falling from the ribs (b) while the cylinder (B) is in rotation. In the cylinder head (B'') opposite the end of each rib (b) is an opening (c) which affords facilities for printing and for delivering the forms (i) from the ribs (b) after printing.

(f) Fig. 3, is a disk formed to fit the cylinder head (B'') in such manner as to prevent (in its direction) the lateral escape of the forms of type, and made with three openings, one at the printing point, one opposite the inking roller (g), and one (h) at the point where the forms (i) are discharged from the ribs (b).

(k) are grooved ribs, corresponding precisely, in form, and number with the ribs (b) and arranged upon an endless chain (l) in such manner, that the ribs (k) are always exactly opposite the ribs (b) at the discharging point (h) so that, the forms (i) may be delivered from the ribs (b) to the ribs (k) while passing the discharging point (h).

(j) fully shown in Figs. 4 and 5, are followers, formed to fit and work in the grooved ribs (b) the slots (j') fitting the flanges (e), and provided with a catch (j'') and spring (j'''), by means of which the position of the follower against the forms of type may be always secured. The projecting face (m) of the follower is made of a thickness equal with that of the cylinder head (B'') so that the last form of type contained in the ribs (b) may faithfully deliver its impression, and be discharged from the cylinder.

(N) Fig. 2, is a reciprocating carriage, provided with a lever (n), catch (n') and spring (n''), and made to operate by means of a cam (n''') through the medium of the pinion shafts (s) and (s') and pinion (s'') which is keyed to the main shaft (S''').

(p) is a guide rest, within which is ad-

justed a rocking cam (p'), the forward projection of which is made to extend across and over the end of the lever (n). This cam (p') is operated by means of an arm (p'') attached to the cylinder head (B). Passing through the carriage (N) and rest (p), and adjusted to them, is a notched feed bar (P) so constructed that the spaces between said notches, correspond precisely with the thickness of the forms of type (i). This feed bar (P) is made to reciprocate in harmony with the carriage (N) by means of the catch (n') which takes into its notches.

(W) is an inclined feed wheel, the inclination of which is made in harmony with that of the disk (f) and forms of type (i) so as to present a proper bed to print upon.

(o) are spring carriers, made with flanges (o') which project through the periphery of the wheel (W), (their opposite ends being attached to said wheel as represented) and arranged with reference to the ribs (b) in such manner that papers, or other matter, to be printed upon, may arrive at the printing point at precisely the same movement as the forms (i), thus securing certainty as to the operation of printing. The spring conveyers are adjustable with reference to their projection through the wheel (W) by means of the set screws (o''). This feed wheel receives motion from the main shaft (S''') through the medium of pinions (r) (r'), shown clearly in Fig. 6.

Packages intended to be addressed are delivered to the feed wheel (W) by means of the endless apron (T) which receives motion from the shaft (S''') by means of the inclined disk (t) friction wheel (t') and cog wheels (u , u'). This carrying device is adjustable in the direction of the plane of the inclined disk, by means of crank screw (v) and set screws (V , V'') and with reference to the bearing of the friction wheel (t') against the inclined disk (t) by means of set screw (V''') so that the motion of the apron (T) may be regulated, and adjusted to any speed required for the delivery of packages to the feed wheel (W).

(x) is a lever arranged in such manner that, its upper end, may impinge against, and be elevated, by, each form of type, which passes under it, and thereby operate the cam rod (x') and stop (x''). This stop (x'') is intended to prevent, too rapid delivery, of packages to the wheel (W) in case the apron (T) should be moving faster than required.

(g) is an ink roller arranged upon disk (f), with reference to the cylinder head (B') and forms of type (i) in such manner, that said forms of type, as they are made to pass under said roller may receive therefrom sufficient quantity of ink for printing purposes.

(y) is a cog wheel attached to the main

shaft (S''') which meshes into the cog wheel (y') and by means of the band wheels (z , z') operates the endless chain (l) and ribs (k) arranged thereon.

The operation of printing the address upon news-papers or other packages by means of the within described machine may be set forth as follows, the ribs (b) of the cylinder (B) being filled with forms of type, and the followers (j) being secured behind them, all the machinery will be set in motion, by means of the main shaft (S''') through the medium of the crank (E) or its equivalent, and its parts moving in the direction indicated by the arrows; the printing to commence with the rib (b) next in rear of the arm (p''); packages to be addressed will be placed upon the apron (T) which moves them in the direction of the feed wheel (W) where one by one they will be received by the conveyers (o) and carried over the wheel to the printing point, arriving at that point, precisely in time to receive impressions from the forms of type; they will then fall under the machine, with the address printed upon them, ready for mailing. The printing thus goes on; the form of type at the end of each rib (b) delivering its impression, until the rib containing the form which has delivered the first impression, arrives nearly opposite the feed bar (P). At this point in the rotation of the cylinder (B), the arm (p'') impinges against the heel of the cam (p') throws its point down, thereby depressing the end of the lever (n) which raises the catch (n') from its notch in the bar (P) and the carriage now makes its backward motion without moving the bar; the cam (p') now being released from the arm (p''), the lever (n) is thrown up by means of the spring (n'') and the catch (n') takes into a second notch of the bar (P); the rib (b) (before alluded to) having now arrived opposite the discharging point (h) and in line with a rib (k) of the endless chain, the bar (P) is forced forward, and discharges a form of type into a rib (k). This new position of the forms is secured by the follower (j). The cylinder continuing to rotate, the reciprocating motion of the bar (P) allows the next follower to come in front of it, when its forward motion discharges another form of type, to the next rib (k), and so on until the cylinder has made its revolution, when the lever (n) will again be operated as before described, and the bar (P) will again be moved one notch, in the direction of the ribs (k). The operation may thus continue until every form of type contained in the cylinder (B) has delivered its impression, and been forced into the ribs (k) of the endless chain, the catch (j) always holding the follower (j) against the forms in the precise position in which

the bar (P) has left it, until the cylinder makes its revolution, and the follower is again forced forward.

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

1. A cylinder constructed with grooved ribs, or their equivalents, for holding forms of type, presenting them at a proper point to perform the office of printing, and afterward allowing them to be delivered from the cylinder, substantially as described.

2. In combination with the cylinder (B) I claim the ribs (*k*) arranged upon an endless chain in such manner as to receive the forms of type, as herein described.

3. Securing the forms (*i*) within the ribs (*b*), in such manner as to present said forms properly for printing, by means of the follower (*j, j', m*) catch (*j''*) and spring (*j'''*) substantially as described.

4. Adjusting the forms of type for print-

ing and delivering them from the cylinder after printing, by means of a reciprocating bar operating substantially as herein described or its equivalent in effect.

5. The inclined feed wheel (W) constructed with adjustable spring conveyers (*o, o'*) and operating substantially as herein described.

6. Regulating, and adjusting, the speed of the endless apron (T) by means of the inclined disk (*t*) friction wheel (*t'*) as set screws (*V' V'' V'''*) and crank screw (V) all constructed arranged and operating substantially as herein described for the purposes set forth.

In testimony of which invention I have hereunto set my hand.

JOHN A. BARRINGTON.

Witnesses:

A. GREENLEE,
G. W. SARGENT.