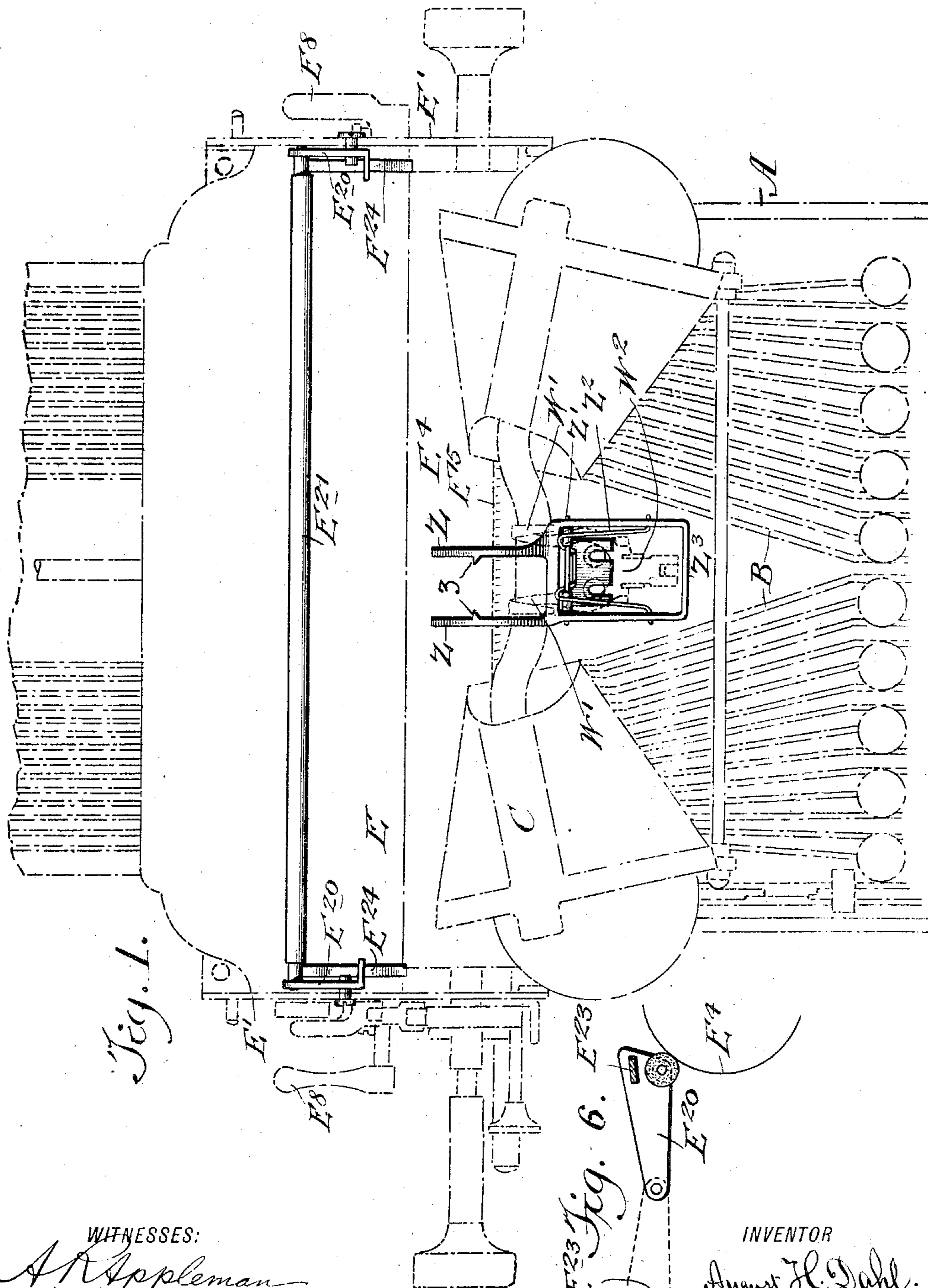


No. 828,843.

PATENTED AUG. 14, 1906.

A. H. DAHL.  
TYPE WRITING MACHINE.  
APPLICATION FILED NOV. 30, 1903.

2 SHEETS—SHEET 1.



~~WITNESSES:~~

A. R. Appleman  
M. F. Boyle.

INVENTOR

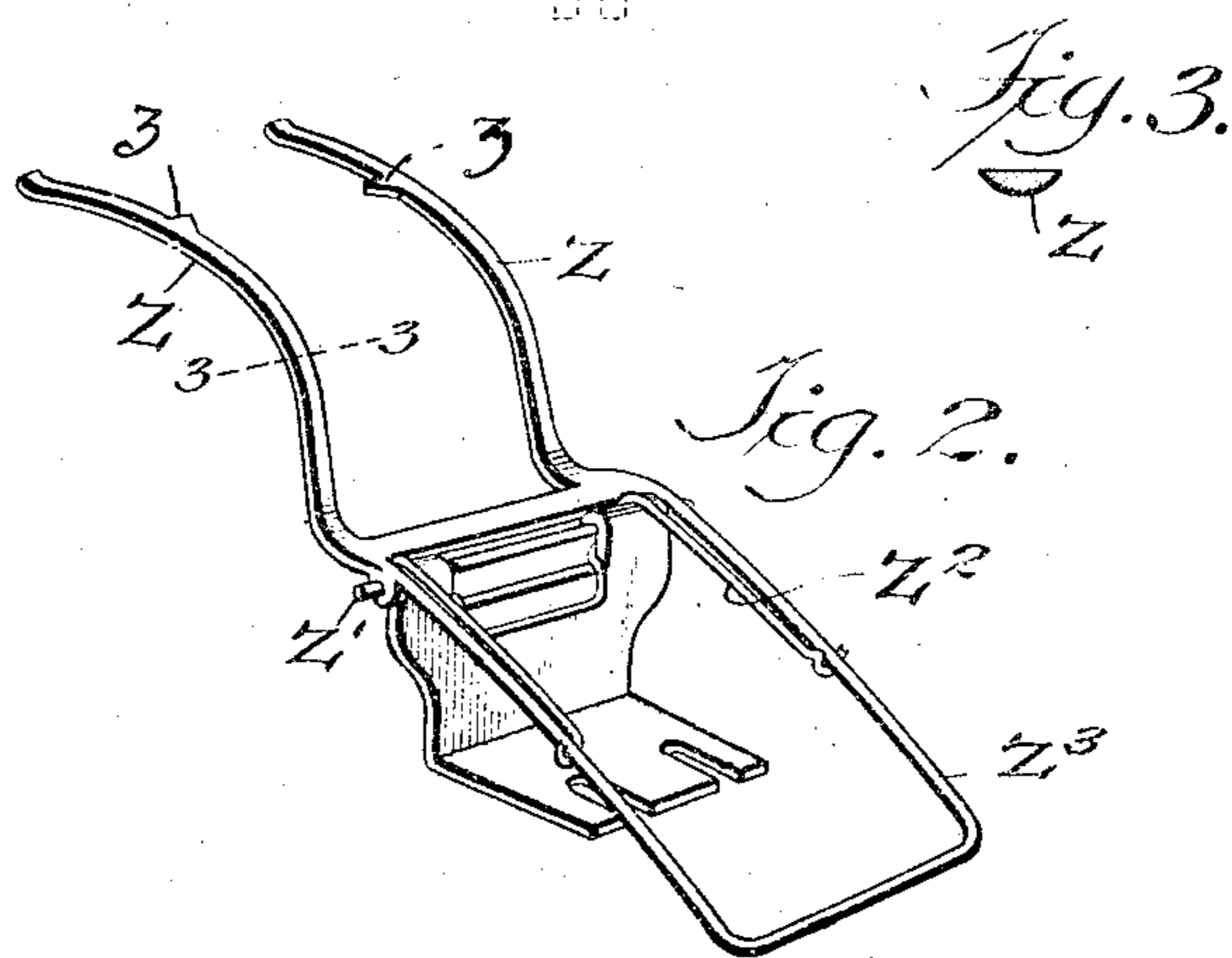
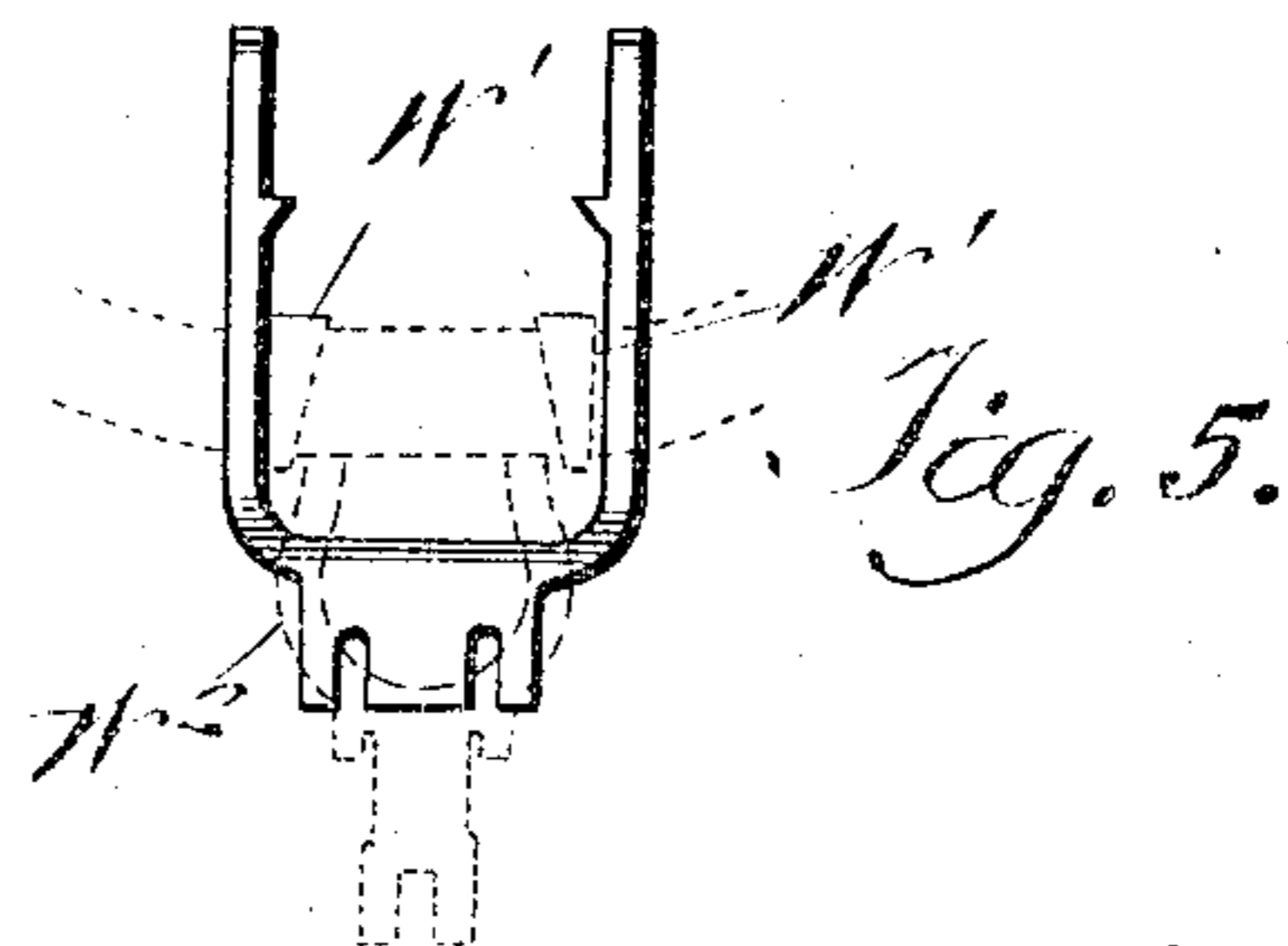
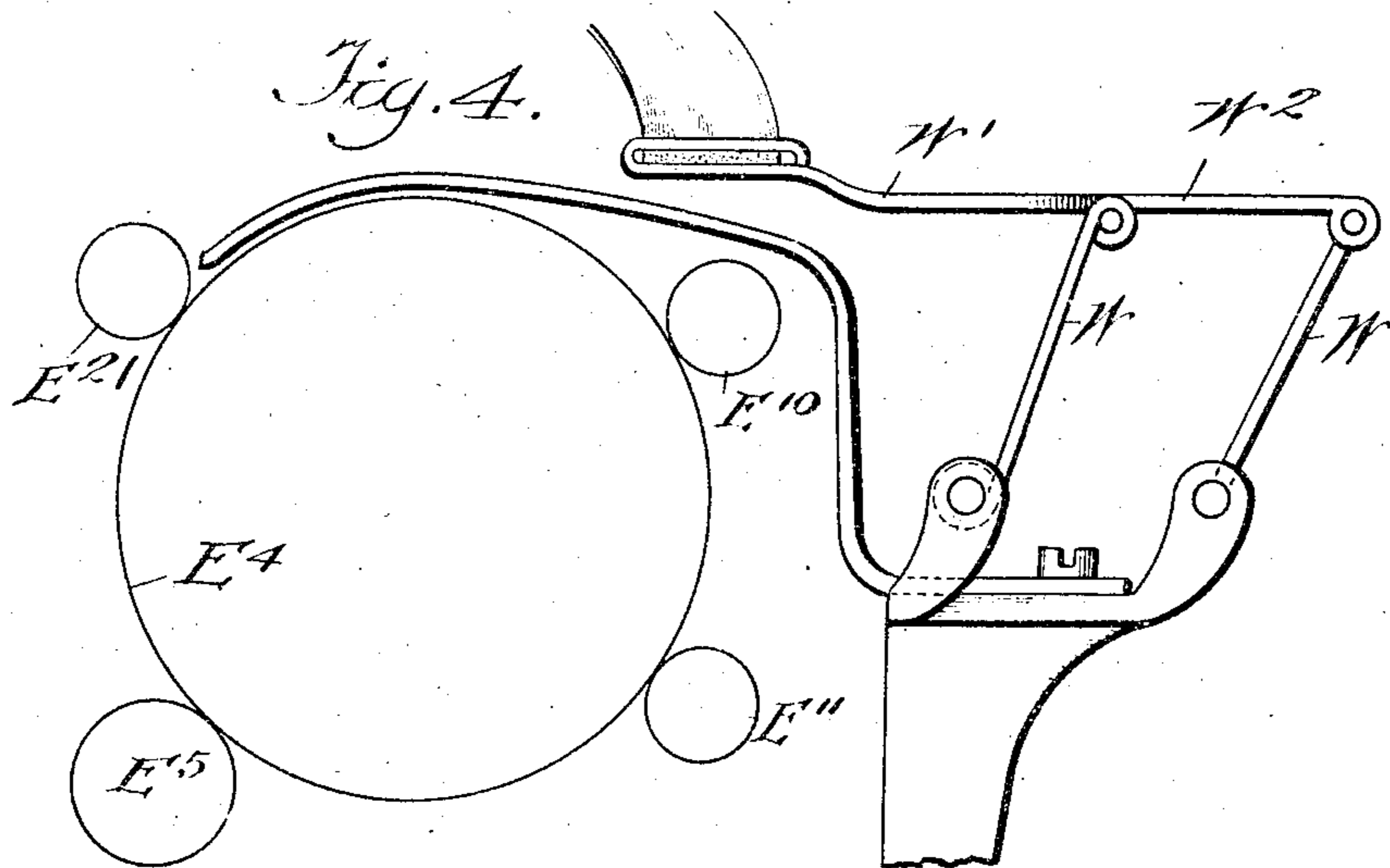
August H. Dahl.  
BY  
Thomas Drew Nelson  
ATTORNEY

No. 828,843.

PATENTED AUG. 14, 1906.

A. H. DAHL.  
TYPE WRITING MACHINE.  
APPLICATION FILED NOV. 30, 1903.

2 SHEETS—SHEET 2.



WITNESSES:  
*A. Appleman*  
*M. F. Boyle*

INVENTOR  
*August H. Dahl.*  
BY  
*Thomas Drew Stetson.*  
ATTORNEY

# UNITED STATES PATENT OFFICE.

AUGUST H. DAHL, OF NEW YORK, N. Y.

## TYPE-WRITING MACHINE.

No. 828,843.

Specification of Letters Patent.

Patented Aug. 14, 1906.

Application filed November 30, 1903. Serial No. 183,144.

*To all whom it may concern:*

Be it known that I, AUGUST H. DAHL, a citizen of the United States, residing in the borough of Brooklyn, in the city and State of New York, have invented a certain new and useful Improvement in Type-Writing Machines, of which the following is a specification.

The improvement is intended to apply more especially to type-writing machines of the visible-writing class, and I will describe it as applied to one of the best known of that class, the Oliver type-writing machine, constructed as set forth in the patent to Thomas Oliver, dated March 1, 1898, No. 599,863, which is hereby referred to as supplementary to the following description.

The improvement relates to provisions for guiding the material on which the type-writing is to be effected, and which I will designate by the simple term "paper." The invention provides for guiding cards, envelopes, and other forms and sizes of paper correctly and exposing for easy inspection what has been done across the entire width quite out to the edge of the sheet. The construction holds the paper reliably in contact with the platen at and adjacent to the points where the type is impressed, and thus allows type-writing to be effected at the extreme upper and lower edges without slurring.

The following is a description of what I consider the best means of carrying out the invention.

The accompanying drawings form a part of this specification.

Figure 1 is a plan view showing in strong lines the parts in which the novelty is involved and in dotted lines so much of the other parts of the machine as is necessary to indicate their relation thereto. Fig. 2 is a perspective view showing a portion detached. Fig. 3 is a cross-section of one of the arms on the line 3 3 in Fig. 2. The remaining figures show modifications. Fig. 4 is a side elevation. Fig. 5 is a plan view of the controller and of the associated ribbon-throw. Fig. 6 is a side view of certain portions showing another modification.

Similar letters of reference indicate corresponding parts in all the figures where they appear.

A is a fixed casting which forms the base, B the key-levers, and C the type-bars.

I will when necessary refer to the entire carriage as E, using the same letter with dif-

ferent numerals to indicate specific parts thereof.

E' represents the end plates.

E<sup>4</sup> is the large soft-surfaced roller, which performs the ordinary functions of a platen.

E<sup>5</sup> is a lower presser-roller, and E<sup>10</sup> and E<sup>11</sup> are front presser-rollers, proper force being provided for holding these parts gently in contact with the platen by gentle springs and provisions by a lever E<sup>8</sup> and connections for removing them from their contact with the platen when required in adjusting the paper and, if desired, in introducing it.

E<sup>15</sup> is a yielding-mounted strip marked with a scale. It presses the paper gently and uniformly on the platen adjacent to the line of writing to be impressed.

E<sup>21</sup> is a movable fourth and final pressing-roller arranged to press the paper gently upon the platen after it has passed the printing-line. This roller is easily moved out of the way, having its bearings in arms E<sup>20</sup>, pivoted on the carriage.

E<sup>24</sup> is a spring which holds the roller in contact with the paper and holds it in the removed position when desired.

The arms E<sup>20</sup> E<sup>20</sup> are pivoted on the carriage far in rear of the platen and have bearings formed in their free ends, which receive the journals of the fourth pressing-roll E<sup>21</sup>. The pivoted links allow it to be lifted and thrown over into a position so much farther rearward as to be no obstruction in viewing the recently-written lines. The roller can be brought back again into position for use by reversing this simple movement. The roller E<sup>21</sup> is of small diameter and when in position for work covers but little of the printed work. When it is thrown over into the position shown in Fig. 1, it leaves a large area of the work clearly visible quite across the whole breadth of the paper.

Z Z are two arms of a forked device which I will call a "controller," which is curved to coincide with the contour of the platen and extends rearward beyond the printing-line and partially downward in rear of the platen. The rear end of each of these forks is turned slightly upward. This device is capable of tilting on an axis Z', which is mounted in bearings supported on a fixed upright U on the stationary base A. The connection of this upright with the base is secured by screws inserted in open slots in the foot of the base. This mode of connection allows the upright and its attachments to be easily re-

moved and reintroduced by slackening and tightening the screws. It is not necessary to remove and replace them. The controller is subject to the force of a spring  $Z^2$  and ordinarily holds the arm  $Z$  in such position as to keep the paper in contact with the platen. Its axial motion and spring force allow it to yield to serve with different thicknesses of the paper, holding the paper always in gentle contact, and also to allow the effective portion—the rear end of the controller—to be lifted to large extents when required. The lifting action is effected by pressing down with the finger on the arm  $Z^3$ , which extends forward beyond the axis  $Z'$ .

This device performs two functions: First, by the position of the arms and the spurs  $z$  thereon it indicates the printing-point—the point where the several types strike on the paper. This is important, especially in making corrections.

Another function is to hold the paper down into constant contact with the cylindrical surface of the platen. By extending beyond the printing-point and conforming to the cylindrical surface of the platen it insures that the paper at and adjacent to the printing-point is held in contact with the platen, so that at the place where the type is pressed thereon the paper is stationary and the impression is clear and perfect.

Modifications may be made without departing from the principle or sacrificing the advantages of the invention. The controller may be made to serve with some success without being pivoted, simply bolting it upon the fixed support. In such case it should be extended about the same, as shown, and should be curved, as shown, so as to exactly correspond to the surface of the platen at a slight distance therefrom. It should be made stiff enough to resist the lifting force of stiff paper or card. This should be secured by screws engaged in open slots in the foot, allowing easy removal and replacing, as above described, for the securing of the corresponding upright.

The spring  $Z^2$  can be easily removed, and a substitute spring of corresponding form and size or having greater or less tension can be introduced in its place at any time. This allows the force with which the controller presses the paper upon the platen to be varied at will to accommodate paper differing in thickness or rigidity.

Instead of having the arms  $E^{20}$  independent they may be rigidly connected by a cross-bar  $E^{23}$ . Such is shown in Fig. 6. By locating the cross-bar in the position shown it will come immediately above the roller when the latter is swung over into use. With this construction when the roller is moved

out of the way it gives a completely unobstructed view of a large area of the type-writing, which has been last effected, such area extending quite out to the edge on each side.

For ordinary type-writing work the pressing-roller  $E^{21}$  may be out of use. For some kinds of work, as letter-writing and taking testimony, using uniform thin paper with or without duplicating, this roller, with its carrying-arms and spring and arrangement for throwing over out of use, may be entirely omitted.

The improvement may be applied with success to machines in which the printing-point is not on the top, but is on the front or on the under side of the platen. In such cases the controller is correspondingly changed in position and shape.

I claim as my invention—

1. In a type-writer having a cylindrical platen, a forked controller  $Z Z$  having two arms made integral, each with an index-point on its inner edge, mounted on the fixed framework and extending rearward over the platen and partially downward in rear thereof, arranged to serve substantially as herein specified.

2. In a type-writer having a cylindrical platen, a U-shaped controller  $Z Z$  mounted on the fixed framing and extending rearward over the platen and partially downward in rear thereof arranged to tilt and having a front arm arranged to be conveniently depressed when required, all substantially as specified.

3. In a type-writer having a cylindrical platen, a controller  $Z Z$  mounted on the fixed framing carrying the spurs  $z z$  and extending rearward over the platen and partially downward in rear thereof arranged to tilt and having a front arm arranged to be conveniently depressed when required, in combination with an actuating-spring and arranged to operate substantially as herein specified.

4. In a type-writer having a cylindrical platen, two indicators  $Z Z$  made integral, mounted on the fixed framing and presenting the spurs  $z z$  on the right and left of the printing-point, the holding-roller  $E^{21}$  carried on arms capable of being turned so as to be conveniently thrown out of use at will, leaving a clear space in the rear to allow easy inspection of the entire printed surface, all substantially as herein specified.

In testimony that I claim the invention above set forth I affix my signature in presence of two witnesses.

AUGUST H. DAHL.

Witnesses:

A. R. APPLEMAN,  
THOMAS DREW STETSON.