

No. 870,336.

PATENTED NOV. 5, 1907.

E. J. BARKER.
TYPE WRITER.

APPLICATION FILED JUNE 25, 1906.

2 SHEETS—SHEET 1.

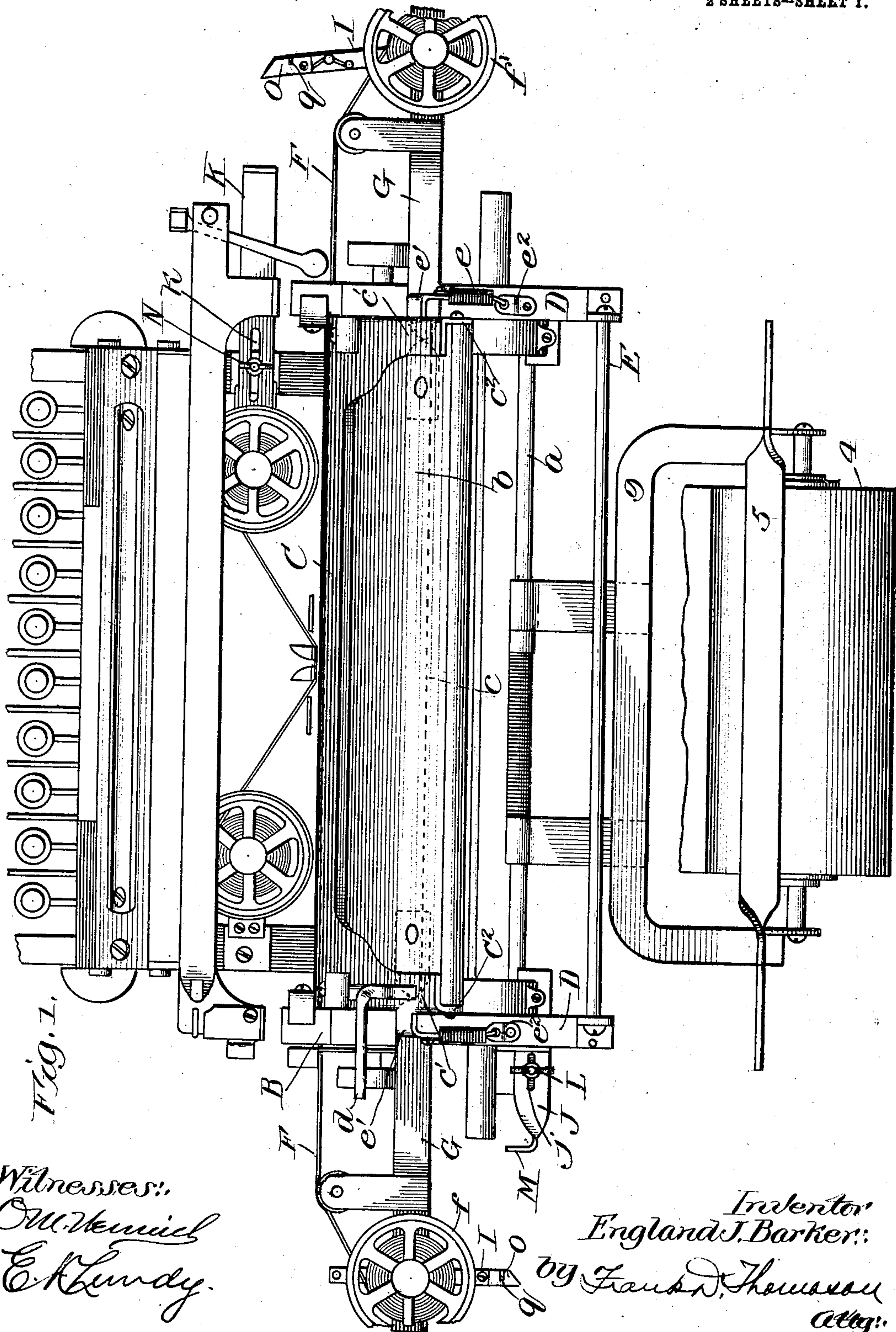


Fig. 1.

Witnesses:
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Inventor
England J. Barker:
by Frank D. Thompson
Attg.

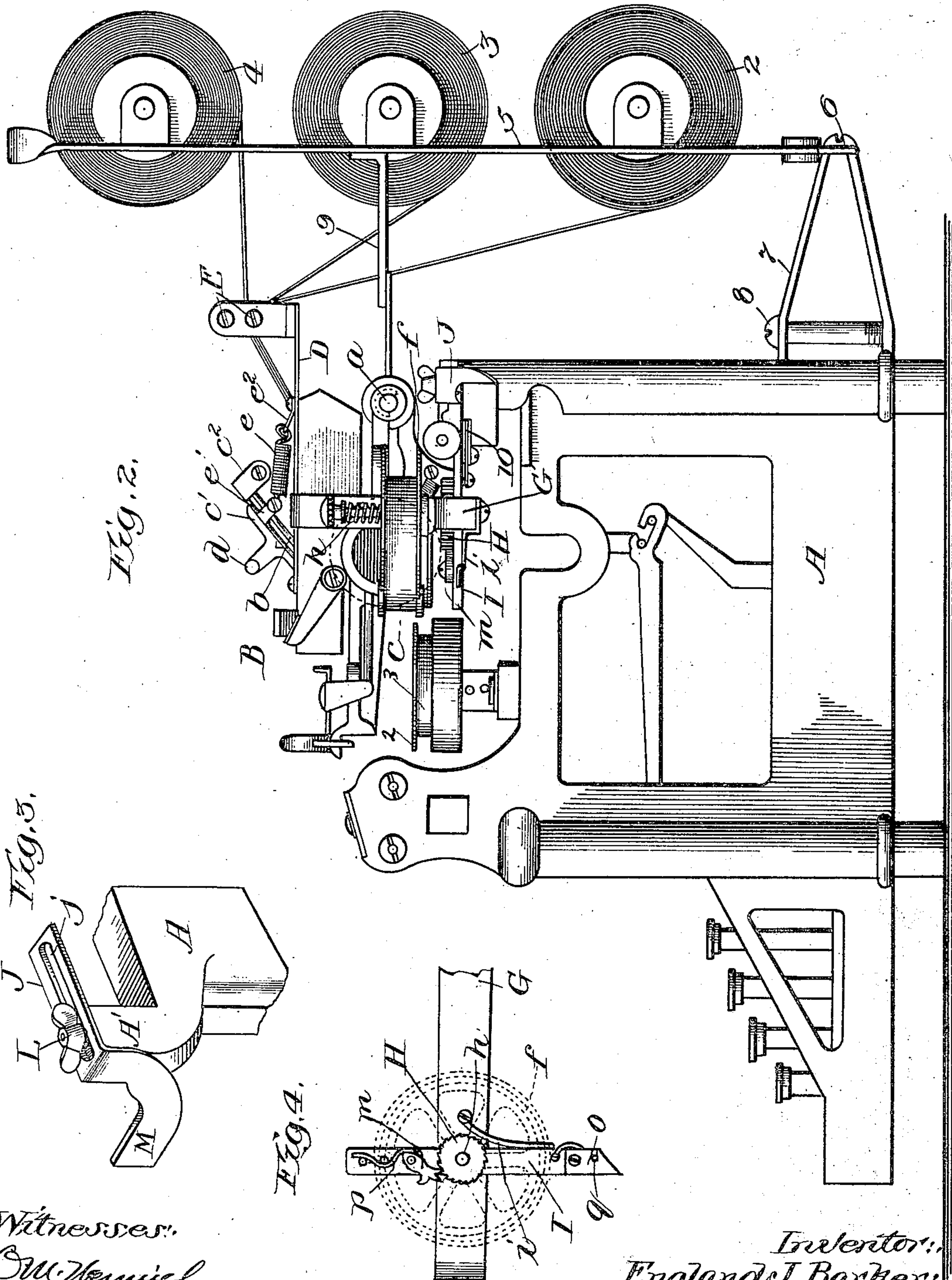
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Witnesses:
O. M. H. H. H.
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Inventor:
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UNITED STATES PATENT OFFICE.

ENGLAND J. BARKER, OF MORGAN PARK, ILLINOIS.

TYPE-WRITER.

No. 870,336.

Specification of Letters Patent.

Patented Nov. 5, 1907.

Original application filed September 11, 1905, Serial No. 277,982. Divided and this application filed June 25, 1906.
Serial No. 323,283.

To all whom it may concern:

Be it known that I, ENGLAND J. BARKER, a citizen of the United States, and a resident of Morgan Park, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Type-Writers, of which the following is a clear, full, and exact description.

My invention relates to the ribbon feed mechanism of typewriting machines similar to that set forth in a prior application filed by me September 11, 1905, Serial No. 277,982 (of which this case is a division). In typewriting machines of this class the paper is fed to the carriage and platen from one or more rolls of paper supported on a carrier-frame or truck that is mounted at the rear of the machine.

The object of my invention is to provide a simple and economically constructed device, by means of which the manifolding ribbon will be automatically fed step by step through the machine in a positive manner at each longitudinal movement of the carriage. This I accomplish by the mechanism herein-after fully described and as particularly pointed out in the claims.

In the drawings:—Figure 1 is a plan view of a typewriter having my invention applied thereto. Fig. 2 is a side elevation thereof. Fig. 3 is a detail view showing in perspective the adjustable trip for actuating the manifold ink ribbon reels. Fig. 4 is a detail view of the mechanism for intermittently revolving the ribbon spools having the latter in dotted lines.

Referring to the drawings A represents a suitable supporting-frame, and B the transversely reciprocal carriage. Mounted on suitable brackets that are secured to opposite sides of this supporting-frame A are a pair of spools 2, 2, upon which are wound the usual inking ribbon 3 of a typewriting machine. This ribbon is adapted to be automatically fed from one spool to the other during the operation of the machine and in doing so moves in front of and close to the platen c where it passes through the guide-bracket 4. The frame-work of the carriage is, preferably, rectangular, and its ends are connected at the rear of the machine by a longitudinal bar a, and near the front of the machine is provided with a rearwardly inclined paper guide b, for the revolving platen c, and is arranged in the usual manner at a tangent to the circumferential sides of said platen so as to guide the paper therefrom. A longitudinally disposed cutter-blade C is placed flat against and in front of the lower portion of the shield b, but is separated therefrom a sufficient distance to permit of the work, as it is delivered from the platen c, to pass between it and the shield. This cut-

ter-blade is considerably narrower than the shield, and its upper edge is sharpened to facilitate the tearing off of the paper when it is desired to remove the paper from the machine. The ends of this cutter-blade project upwards and form arms c' therefor, the side edge of the upper portions of which latter are provided with downturned lugs c², that are pivotally connected to the ends of the shield adjacent to its upper edge. The arm c' at one end of the blade C is provided with a suitable handle d, by means of which the blade C can be raised or lowered, and, at a suitable point adjacent to the pivotal lugs c², its ends are provided with lugs e' that are connected by means of contraction springs e to a suitable strap e², secured to the upper edge of the ends of the carrier above the portion of flat metal strips D attached direct to the upper edge of the carrier, substantially as shown. The action of the springs e upon the cutter-blade is such as to hold it securely in its position against the shield, or, when raised and moved to the limit of its rearward movement, to hold it in the latter position.

The manifolding inking devices of the machine comprise a horizontal ribbon or tape F, extending longitudinally in front of that portion of the platen against which the type of the machine strike. The ends of this ribbon are wound upon reels f, f', mounted and journaled upon the ends of suitably shaped brackets G, whose upper elongated ends terminate and are removably secured to the underside of the ends of the shield b, while the opposite free ends are bent back upon themselves and form a bearing for the lower end of the spindles, upon which the spools are mounted, substantially as shown in Fig. 4 of the drawings. The spindles h of the reels f, f' extend down through said reels and through suitable bearings in the two parallel portions of the downturned crooked outer extremity of brackets G. Between these parallel portions each spindle has a ratchet H secured thereto, and, below said ratchet, a lever I of the first class, loosely fulcrumed thereon, which at, say the right hand end of the machine, has its longer branch extending towards the rear, and at the left hand side has its longer branch extending towards the front of the machine. These levers are kept in a position normally at about right angles to the brackets, by a spring i, one end of which is secured to the bracket and the other end bearing loosely against the edge of the lever. The longer branches of these levers are engaged by suitably bent arms J and K; arm J comprising a flat strip of metal one end of which is made straight and has a longitudinal slot j therein, and is secured to a stud A' (projecting upwards from the rear right hand end of the

supporting-frame A of the machine) by means of a thumb-screw L. The portion of arm J opposite its slotted end is bent laterally, according as desired, to form a sweep M, against which the lower rearwardly extending branch of the adjacent lever I impinges, as the movement of the carrier carries it past the same. As the lever moves on its fulcrum, a pawl *m* on its opposite end will engage the ratchet H on the spindle *h*, and move the reel *f*. The arm J can be moved as on a pivot or moved longitudinally, and can be adjusted so as to obtain a longer or shorter sweep of the lever I, at a point nearer to or farther from the end of the reciprocal throw of the carrier. The arm K for engaging the opposite lever I of the manifold inking devices at the opposite end of the machine, comprises an L-shaped strip of metal, one end portion of the horizontal part of which has a longitudinal slot *k* therein, and is secured to the upper edge of the end of the supporting-frame by means of a thumb-screw N. The opposite end of arm K is upturned or bent to bring it within the path of the end of the lever I cooperating with the reel *f'*, and said arm can be adjusted in the same manner as arm J, for the purpose of regulating and controlling the movement of this latter lever I and of the inking devices. It will be understood that when arm J is in use, arm K is moved out of the path of the lever of the adjacent inking reels, and vice versa. In order to allow levers I to pass their respective sweeps when the carriage is reversed, I provide the ends of said levers with trips O, O, that are pivotally secured thereto. These trips comprise short strips of metal, preferably of the same width as levers I, and have their unsecured ends projecting beyond the extremity of said lever and, preferably, beveled on one side. Pawls *m* are maintained in their normal operative position by means of spring *p*, and when the carriage is approaching the limit of its movement in the proper direction, the vertical edge or deflected portion of the trip will meet the end of one or the other of the sweep and moves independently on its pivot so as to escape past said arm. When, however, said carriage moves in the opposite direction the trip will engage the arm, and, by means of its engagement with a stop pin *q*, will not yield independently but will move the lever I with it and thereby cause the pawl to engage the ratchet and revolve the spool a short distance. It is of course desirable to operate the ribbon its full length in one direction and then reverse the same. To do this one of pawls *m* is disengaged from its ratchet by swinging it away therefrom, in which position its spring *p* will engage the opposite face of said pawl, while the movement of the carriage is utilized to turn the spool on the opposite end of the machine.

The details of the devices for moving and supporting the rolls of paper at the rear of the machine shown in the drawings form the subject-matter of the prior application above referred to, and it is not necessary herein to describe the same in detail. Suffice it to say, however, that I prefer to employ three rolls of paper 2, 3 and 4, as shown, and to journal them in a rectangular frame 5, which latter is provided with trucks that are adapted to run on a track 6. This track extends the length of the frame of the machine,

and is mounted in the ends of a V-shaped clamp 7, the forward ends of which are hooked and adapted to clamp the lower rear rail of the machine by means of bolts or screws 8. The frame 5 is maintained in an upright position by a yoke 9, the forward corners of which have suitable hooks that engage and are clamped to the rear horizontal bar *a* of the typewriter carriage. Upon leaving the rolls, the strips of paper are guided to the platen of the machine between guide-bars E', E', mounted upon upright brackets on the ends of strips D, attached to the rear of the carriage and there cooperate with the ribbons to make manifold copies, as hereinbefore explained.

What I claim as new is:—

1. In a typewriting machine a suitable supporting-frame, a reciprocal carrier, a platen, and auxiliary inking devices therefor mounted on and movable with said carrier, in combination with stationary means adjustably secured to said frame for actuating said inking devices. 80
2. In a typewriting machine a suitable supporting-frame, a reciprocal carrier, a platen, and manifold inking devices therefor mounted on and movable with said carrier, in combination with stationary arms for actuating said inking devices secured to said supporting-frame and adjustable pivotally. 85
3. In a typewriting machine a suitable supporting-frame a reciprocal carrier, a platen, and manifold inking devices therefor mounted on and movable with said carrier, in combination with stationary arms for actuating said inking devices secured to said supporting-frame and adjustable longitudinally. 90
4. In a typewriting machine a suitable supporting-frame, a reciprocal carrier, a platen, and manifold inking devices therefor mounted on and movable with said carrier, in combination with stationary arms for actuating said inking devices secured to said supporting-frame and adjustable pivotally and longitudinally. 95
5. A typewriting machine comprising a suitable supporting-frame, a reciprocal carrier, a platen journaled therein, manifold inking devices and longitudinally disposed brackets mounted on and projecting beyond the ends of the carrier on which said inking devices are journaled. 100
6. A typewriting machine comprising a suitable supporting-frame, a reciprocal carrier, a platen journaled therein, manifold inking devices and longitudinally disposed brackets removably mounted on and projecting beyond the ends of the carrier, on which said inking devices are journaled. 105
7. A typewriting machine comprising a suitable supporting-frame, a reciprocal carrier, a platen journaled therein, a shield therefor mounted on and movable with said carrier, manifold inking devices, and longitudinally disposed brackets secured to said shield on which said inking devices are mounted. 115
8. A typewriting machine comprising a suitable supporting-frame, a reciprocal carrier, a platen journaled therein, manifold inking devices and longitudinally disposed brackets mounted on and projecting beyond the ends of the carrier on which said inking devices are journaled in combination with stationary means adjustably secured to said frame for actuating said inking devices. 120
9. A typewriting machine comprising a suitable supporting-frame, a reciprocal carrier, a platen journaled therein, a shield therefor mounted on and movable with said carrier, manifold inking devices, and longitudinally disposed brackets secured to said shield on which said inking devices are mounted in combination with stationary means adjustably secured to said frame for actuating said inking devices. 125
10. A typewriting machine comprising a suitable supporting-frame, a reciprocal carrier, a platen journaled therein, manifold inking devices and longitudinally dis- 135

posed brackets mounted on and projecting beyond the
ends of the carrier on which said inking devices are
journaled in combination with stationary arms for actuat-
ing said inking devices secured to said supporting frame
5 and adjustable pivotally.

11. A typewriting machine comprising a suitable sup-
porting-frame, a reciprocal carrier, a platen journaled
therein, manifold inking devices and longitudinally dis-
posed brackets mounted on and projecting beyond the
10 ends of the carrier on which said inking devices are

journaled in combination with stationary arms for actuat-
ing said inking devices secured to said supporting-frame
and adjustable pivotally and longitudinally.

In testimony whereof I have hereunto set my hand
this 17th day of May, A. D., 1906.

ENGLAND J. BARKER.

Witnesses:

FRANK D. THOMASON,
E. K. LUNDY.