No. 858,857. PATENTED JULY 2, 1907.

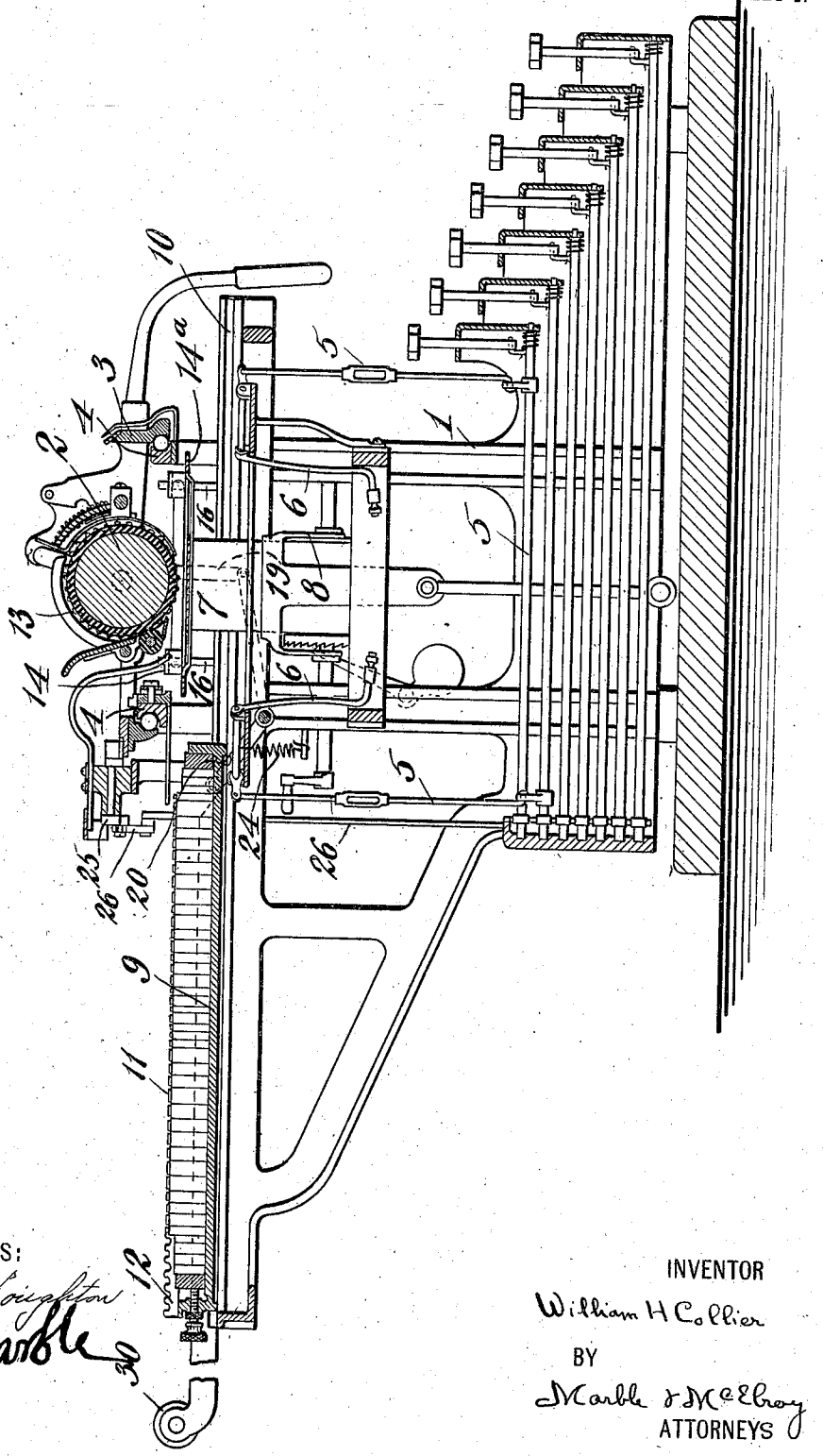
W. H. COLLIER.

COMBINED TYPE WRITING AND PRINTING MACHINE.

APPLICATION FILED AUG. 11, 1906.

3 SHEETS—SHEET 1.

Fig. 1.



WITNESSES:

A. M. Houghton

E. M. Marble

INVENTOR

William H. Collier

BY

Marble & McElroy

ATTORNEYS

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3 SHEETS—SHEET 2.

Fig. 2.

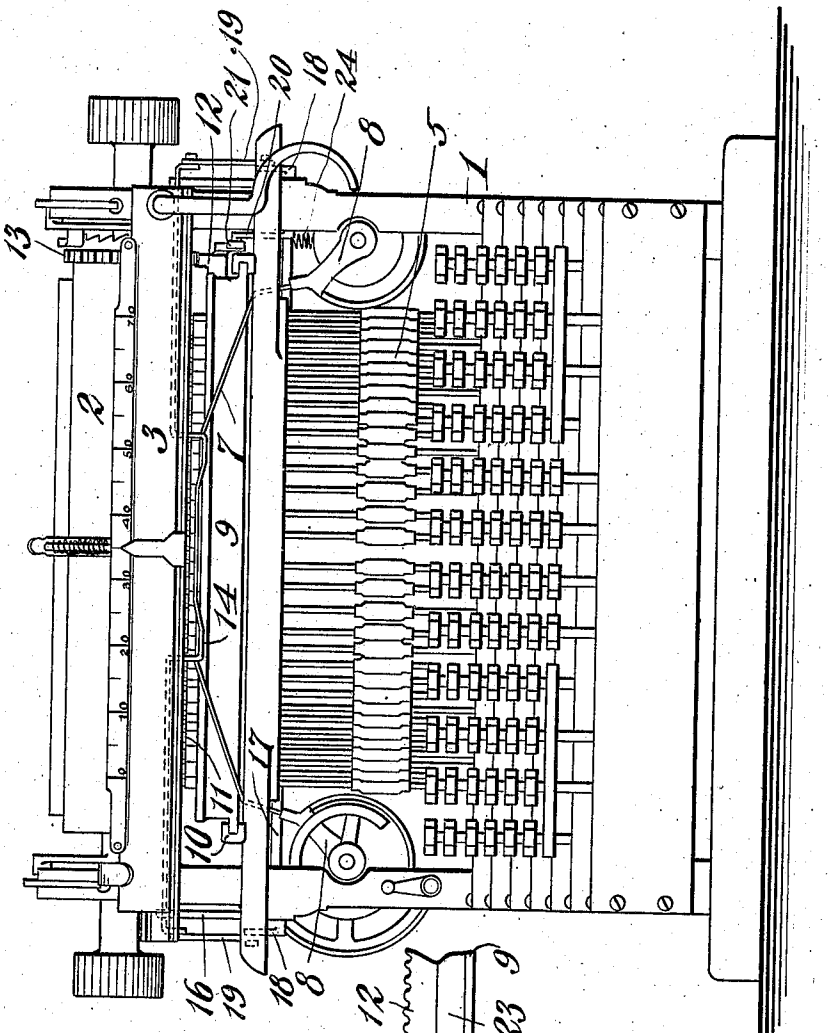
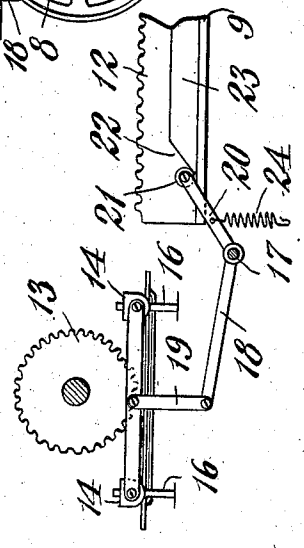


Fig. 3.



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3 SHEETS—SHEET 3.

Fig. 4.

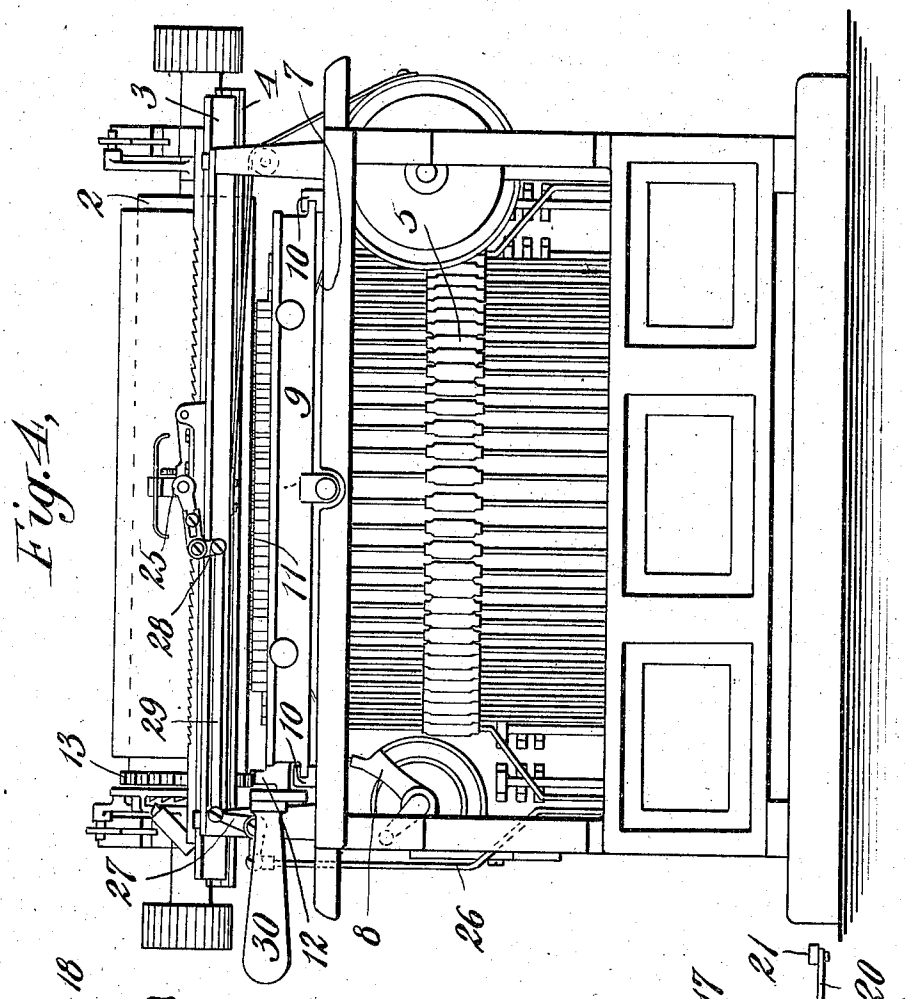
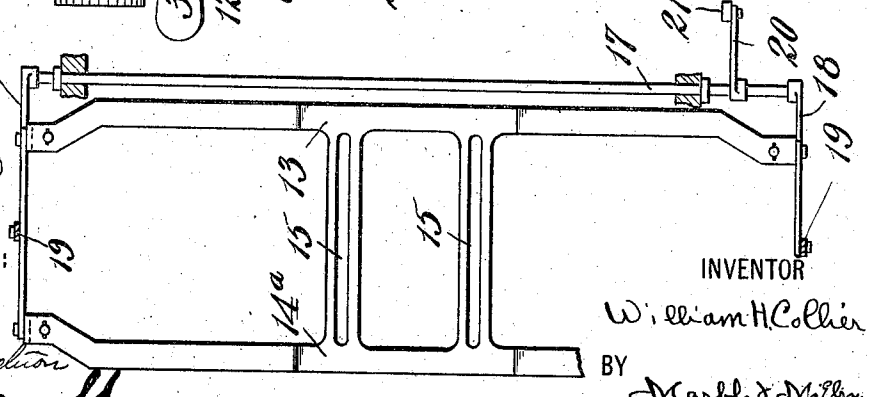


Fig. 5.



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UNITED STATES PATENT OFFICE.

WILLIAM H. COLLIER, OF JACKSON, TENNESSEE.

COMBINED TYPE-WRITING AND PRINTING MACHINE.

No. 858,857. Specification of Letters Patent. Patented July 2, 1907.

Application filed August 11, 1906. Serial No. 330,131.

To all whom it may concern:

Be it known that I, WILLIAM H. COLLIER, a citizen of the United States, residing at Jackson, in the county of Madison and State of Tennessee, have invented certain new and useful Improvements in Combined Type-Writing and Printing Machines; and I do hereby declare the following to be a full, clear, and exact description of the same, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to improvements in combined typewriting and printing machines.

Machines of this class are particularly adapted for the printing of circulars, letters, etc., which are in the main the same, but which differ in minor respects, as for example in the address.

The machine herein described is substantially an ordinary typewriter to which has been applied a printing bed adapted to co-act with the platen of the typewriter to print from paper carried by said platen.

My invention consists in the novel relative arrangement of said printing bed with respect to the platen and typewriter mechanism; in means for moving the ribbon of the typewriter out of path of said printing bed; in means for feeding the platen; and in other features hereinafter described and particularly pointed out in the claims.

The objects of my invention are to facilitate the printing of letters, circulars and the like, which are in the main the same but differ in minor respects; and to make the machine for this purpose as simple, compact and reliable as possible and in general structure similar to an ordinary typewriter.

I will now proceed to describe my invention with reference to the accompanying drawings, in which one form of combined printing and typewriting machine embodying my invention is illustrated, and will then point out the novel features in claims.

In the said drawings: Figure 1 shows a central vertical section of the machine on a plane transverse to the platen thereof. Fig. 2 shows a front view of the machine. Fig. 3 is a detail view illustrating mechanism for depressing the ribbon out of the path of the printing table. Fig. 4 is a rear view of the machine; and Fig. 5 shows a top view of the ribbon depressing mechanism.

In the said drawings, 1 designates the frame of a typewriter, 2 the platen thereof, 3 the platen carriage, 4 the ways on which said platen is mounted to slide, 5, 5 type bar mechanism for operating type bar 6, 6, and 7 the ink ribbon of the machine and 8, 8 reels therefor. These parts are all of familiar construction, the particular typewriter illustrated being what is commonly known as the Smith Premier.

I do not limit myself to any particular make of typewriter, but the one shown is well adapted for the purpose.

As shown, the machine is substantially the same in construction as the machines of that make commonly found on the market, except that the ways 4, 4 for the carriage, are set somewhat higher than customary, to provide room for the passage beneath the platen of the sliding printing bed, and except that the frame of the machine is provided with ways for said sliding printing bed.

9 is the said printing table, mounted to slide in ways 10. This table carries a printing surface 11 adapted, when properly inked, to print upon paper carried by the platen 2. Any suitable printing surface may be employed, for example movable type, stencils, or a hectograph surface.

The particular printing surface shown, is formed by movable type, but I do not limit myself thereto. This printing table is arranged to slide from rear to front underneath the platen 2, and as it does so, to rotate the platen; for which latter purpose said table is provided with a gear rack 12 adapted to engage a gear 13 on the platen.

I do not describe the construction of the typewriter action proper, as any suitable action may be employed.

Many typewriters, including those having type bar actions, have inking pads, and so require no ribbon and therefore nothing for depressing the ribbon out of the path of the sliding printing table. However, most type bar machines employ an ink ribbon, which is usually directly beneath the platen and in the way of a sliding printing table such as shown. In such machines therefore, I provide means for depressing the ribbon automatically as the table is moved forward. To this end I employ a ribbon guide comprising a skeleton plate 14, having a central slightly depressed portion 14^a (see Figs. 2 and 5) in which are slots 15 for the passage of the ribbon 7. This ribbon guide 14 is arranged to move up and down upon guide pins 16 and to so move the same up and down I provide a rock shaft 17 having at its ends arms 18 connected by links 19 to ribbon guide 14, and an arm 20 likewise mounted on said shaft 17 and provided with a roller 21 adapted to engage in the inclined surface 22 of a cam 23 carried by the sliding printing frame 9. When said table 9 is moved forward the cam 23 encounters arm 20 and depresses ribbon guide 14 out of the path of table 9. When the table has been pushed backward, the ribbon guide

is moved upward by suitable means, as for example, a spring 24 (see Fig. 1).

I have not illustrated any particular inking mechanism for the table 9, but it will be understood that the printing surface of said table may be inked by any device suitable for the particular type of printing surface provided. In the case of a printing surface formed by type, as indicated in Fig. 1, the inking may be done by a hand inking roller.

The typewriters will be understood to be provided with customary letter spacing, line spacing, carriage return, and paper feed mechanism, and I do not describe the same particularly, as such mechanisms, including those used on the particular type of machine illustrated herein, are well known.

In the Smith Premier machine the carriage escapement mechanism 25, is customarily actuated by a rod at the back of the machine and nearly at the middle of the machine. As such rod would be in the way of the printing table 9, I have shown the said escapement rod, 26, at the side of the machine, and connected to the escapement mechanism through bell cranks 27 and 28, and a link 29. I have shown the platen provided with the usual devices for holding the paper.

The manner of using my machine is as follows: Paper is introduced into the machine in the ordinary manner. If the machine is to be used for addressing letters, circulars, and the like, the address, or the like, is written in the ordinary manner by means of the ordinary typewriter mechanism. The carriage is then brought to a predetermined position, usually the central position, and the printing table 9 is pulled forward. As said table moves forward it depresses the ribbon guide 14, and then the printing surface 11, encountering the paper on the platen 2, makes the desired impression thereon, the platen being at the same time rotated through engagement of its gear with the rack 12 of the printing table. The table may then be moved backward to its former position and its printing surface freshly inked preparatory to making a new impression.

Any suitable means may be employed for moving the printing table backward and forward. I have shown for the purpose a handle 30.

What I claim is:—

1. In a combined typewriter and printer, the combination with the rotary platen and printing mechanism of a typewriter, of printing means comprising a support for a prepared printing surface in coöperative relation with respect to said platen, and means for moving one of said coöperatively-related parts with respect to and past the other in a direction transverse to the axis of rotation of said platen, said platen arranged to present to such printing surface a surface to be printed upon.

2. In a combined typewriter and printer, the combination with a platen and printing mechanism of a typewriter, of printing means comprising a movable support for a printing surface, said support in coöperative relation with respect to said platen and said platen arranged to present to such surface a surface to be printed upon, and means for moving said support past said platen.

3. In a combined typewriter and printer, the combination with the platen and printing mechanism of a typewriter, of printing means comprising a movable printing table adapted to move a printing surface past and in operative proximity to, said platen.

4. In a combined typewriter and printer, the combination with the platen and printing mechanism of a typewriter, of a printing table adapted to move past and in operative proximity to said platen at about the point of contact of the typewriter printing mechanism with said platen.

5. In a combined typewriter and printer, the combination with the rotary platen and printing mechanism of a typewriter, of printing means comprising a support for a prepared printing surface in coöperative relation with respect to said platen, means for moving one of said coöperatively-related parts with respect to and past the other in a direction transverse to the axis of rotation of said platen, said platen arranged to present to such printing surface a surface to be printed upon, and means for feeding the paper on said platen.

6. In a combined typewriter and printer, the combination with a platen and printing mechanism of a typewriter, of printing means comprising a movable support for a printing surface, said support in coöperative relation with respect to said platen and said platen arranged to present to such surface a surface to be printed upon, means for moving said support past said platen, and means for feeding the paper on said platen.

7. In a combined typewriter and printer, the combination with the platen and printing mechanism of a typewriter, of printing means comprising a movable printing table adapted to move a printing surface past and in operative proximity to, said platen, and means for feeding paper on said platen.

8. In a combined typewriter and printer, the combination with the platen and printing mechanism of a typewriter, of a printing table adapted to move past and in operative proximity to said platen at about the point of contact of the typewriter printing mechanism with said platen, and means for feeding paper on said platen.

9. In a combined typewriter and printer, the combination with the platen and printing mechanism of a typewriter, of printing means comprising a movable printing table adapted to move beneath and in operative proximity to said platen.

10. In a combined typewriter and printer, the combination with the platen and printing mechanism of a typewriter, of printing means comprising a movable printing table adapted to move beneath and in operative proximity to said platen, and means operated by said table for rotating the platen.

11. In a combined typewriter and printer, the combination with the platen and printing mechanism of a typewriter, of printing means comprising a movable printing table adapted to move beneath and in operative proximity to said platen, and a gear rack carried with the said table and adapted to engage a gear on said platen to rotate the latter.

12. In a combined typewriter and printer, the combination with the platen printing mechanism and ink ribbon mechanism of a typewriter, of printing means comprising means for moving a prepared printing surface past said platen and in operative relation therewith, and means for moving said ribbon out of the path of said printing surface.

13. In a combined typewriter and printer, the combination with the platen printing mechanism and ink ribbon mechanism of a typewriter, including a ribbon guide, of printing means comprising means for moving a prepared printing surface past said platen and in operative relation therewith, and means for moving said ribbon guide out of the path of said printing surface.

14. In a combined typewriter and printer, the combination with the platen and printing mechanism of a typewriter, including a ribbon guide, of printing means comprising means for moving a prepared printing surface past the said platen and in operative relation therewith, and cam mechanism for moving said ribbon guide out of the path of said printing surface.

15. In a combined typewriter and printer, the combination with the platen and printing mechanism of a typewriter, of a printing table adapted to move past and in operative proximity to said platen, and means operated by said table for moving the ribbon out of its path.

16. In a combined typewriter and printer, the combination with the platen and printing mechanism of a type-

writer, including a ribbon guide, of a printing table adapted to move past and in operative proximity to said platen, and means operated by said table for moving the ribbon out of its path.

17. In a combined typewriter and printer, the combination with a typewriter frame comprising ways for a platen carriage, a platen carriage mounted on said ways, and typewriter printing mechanism, said frame having likewise other ways beneath said carriage ways and at right angles thereto, of a printing table mounted upon said latter ways and arranged to move a printing surface past and in coöperative proximity with respect to said platen.

In testimony whereof I affix my signature, in the presence of two witnesses.

WILLIAM H. COLLIER.

Witnesses:
C. R. TIMBERLAKE,
H. H. URMSTON.