

No. 866,624.

PATENTED SEPT. 24, 1907.

W. H. COLLIER.

COMBINED TYPE WRITING AND PRINTING MACHINE.

APPLICATION FILED NOV. 7, 1906.

2 SHEETS—SHEET 1.

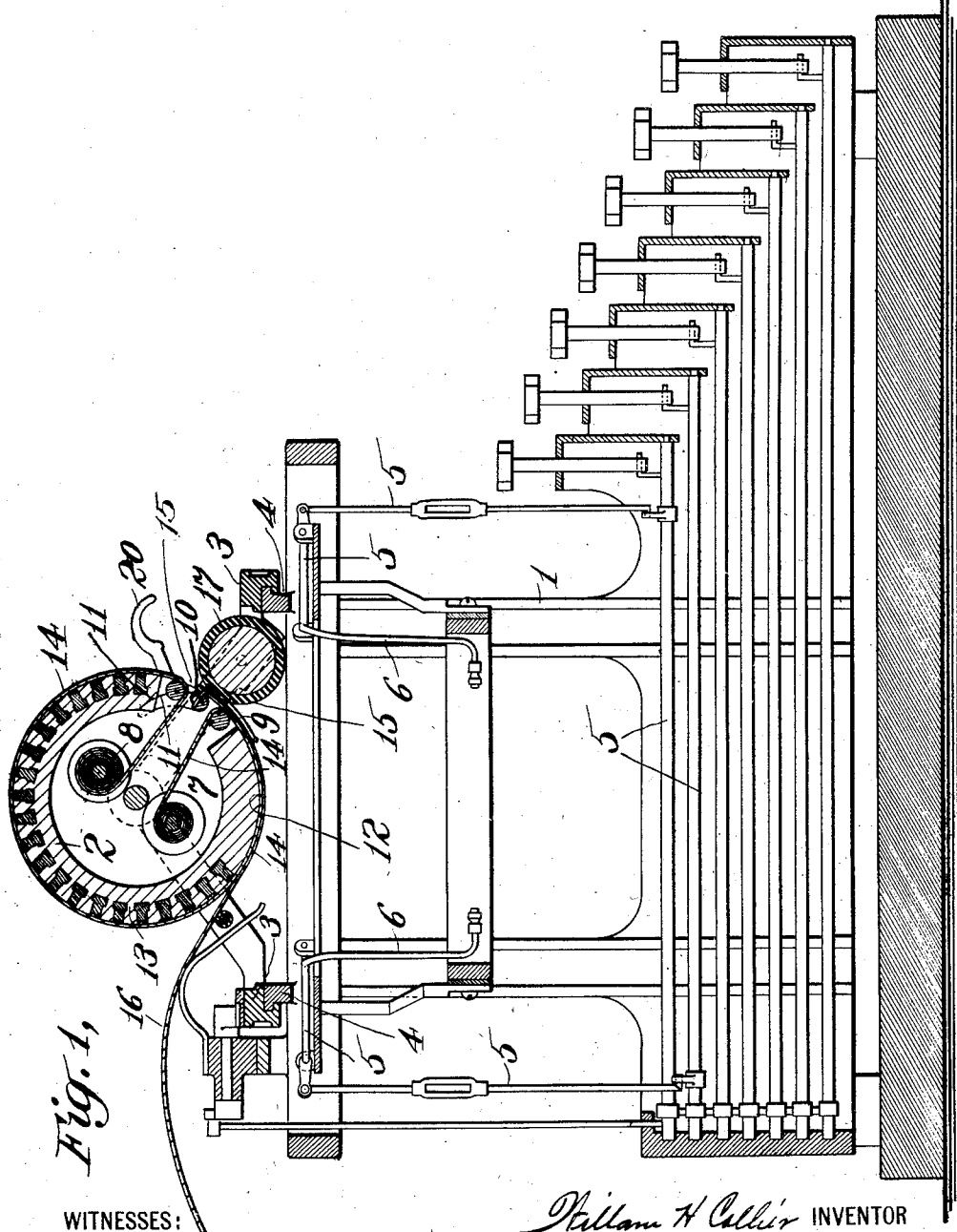


Fig. 1,

WITNESSES:

H. H. Brooks
Ch. J. L. L. L.

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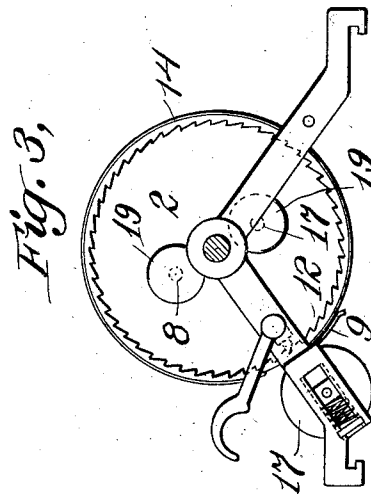
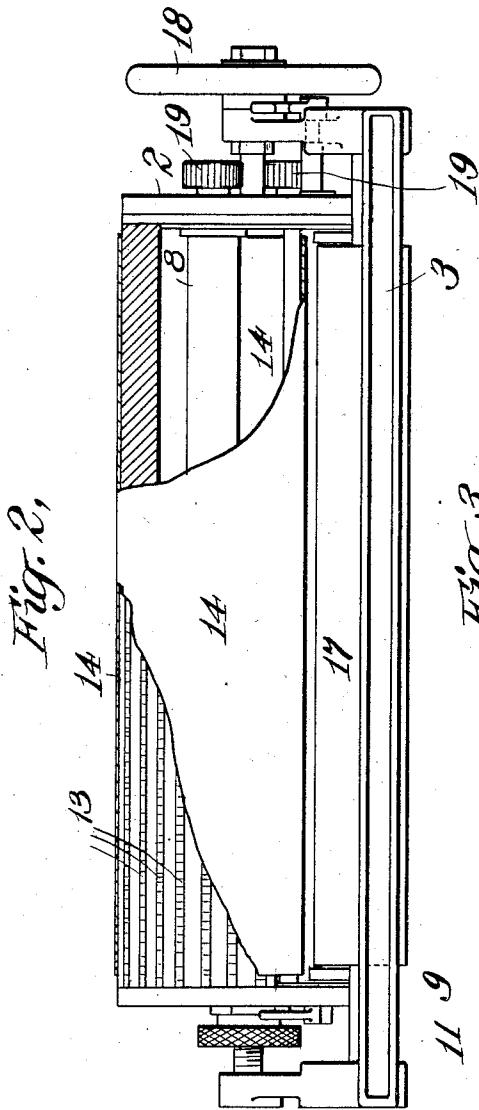
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WITNESSES:

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UNITED STATES PATENT OFFICE.

WILLIAM H. COLLIER, OF JACKSON, TENNESSEE.

COMBINED TYPE-WRITING AND PRINTING MACHINE.

No. 866,624.

Specification of Letters Patent.

Patented Sept. 24, 1907.

Application filed November 7, 1906. Serial No. 342,343.

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 a Combined Type-Writing and Printing Machine; 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, except for the difference in the type, hereinafter noted, except for the absence of the usual ribbon feed mechanism and the substitution thereof of a special ribbon feed mechanism carried by the platen, and except for the special carriage and type-carrying platen and pressure roll coacting therewith.

My invention consists in a paper-carrying roll forming both the platen of a typewriting machine and a type-cylinder of a printing press; in the combination of such roll with printing mechanism of a typewriter and printing means arranged to operate upon rotation of said roll; in the novel ribbon-feed mechanism employed; in a ribbon located between a type-cylinder and the surface to be printed upon; and in other features of invention hereafter 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 details; to permit the addresses and like parts to be written by typewriter mechanism and the remainder to be printed by prepared type or other suitable printing means; to make the machine simple, compact, reliable and in general structure similar to an ordinary typewriter, and to make the invention applicable to existing typewriters.

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 longitudinal sectional elevation of a combined typewriting and printing machine embodying my invention. Fig. 2 shows a front view and partial section of the carriage and type-cylinder platen thereof. Fig. 3 shows an end view of the carriage.

In the machine herein illustrated and described, I provide finger keys, typewriting mechanism, a movable carriage, with feeding mechanism therefor, and a platen on said carriage, the same as in ordinary typewriters;

but the platen is preferably much larger than those customarily used on typewriting machines, and is provided with a printing surface formed by inserting removable type into grooves in its periphery, or in any other suitable manner. It is also provided with means for holding the paper, so that the same will move with the roll as the latter rotates, and with an ink-ribbon which is interposed between the type or printing surface on said roll and the paper carried by the roll. The type of the typewriting mechanism of the machine therefore strike on the back side of the paper and the impression is produced on the other side of the paper—the side in contact with the ink ribbon. Therefore the type of the typewriter mechanism are positives, and not negatives, as is the case in ordinary type of typewriters.

In the said drawings, 1 designates the frame of the typewriter, 2 the said combined platen and printing cylinder, 3 the carriage therefor, 4 the ways on which said carriage slides, and 5, 5, type bar mechanism for operating type bars 6, 6. These parts are all of familiar construction, the particular typewriter illustrated being the so-called "Smith Premier" machine. I do not limit myself to any particular make of typewriter, but the one shown is well adapted for the purpose. The said combined platen and printing cylinder, 2, is hollow, having within it ribbon reels 7 and 8, as hereinafter more fully explained. It is also provided with a paper-holder 9, which in the construction shown is a spring blade mounted upon a rod 10 carried by roll 2, and arranged to be operated to clamp or release the paper by a handle 11. A portion 12 of the surface of the platen is plain, and forms a surface against which the type bars 6 may act. However, this plain portion of the platen may be located wherever, with respect to the printing surface of the platen, is most convenient with respect to the work to be done. As previously stated, said platen is likewise arranged to form a printing cylinder, having a printing surface which in the instance shown is formed by inserting type into grooves in the peripheral surface of the roll. But I may employ any suitable or convenient form of printing surface.

The ribbon, 14, passes from roll or reel 7, within the platen 2, through a slot 15 in the periphery of the platen and thence between the printing surface of the platen and paper held on the platen by the clip 9, around the platen and back through slot 15 to reel 8.

16 in Fig. 1 designates a piece of paper so held, with the ribbon between it and the platen. The ribbon 14 is of the full width which the machine is to print. A spring-actuated pressure roll 17, carried by the carriage, presses the paper 16 so tightly against the ribbon 14, that as the roll 2 is rotated and the pressure of the roll 17 is successively exerted through the paper and ribbon against the faces of the type carried by platen 2, said type will print through the ribbon upon the paper.

The manner of using this machine is as follows: Type having been arranged suitably in the grooves on the roll 2, and the ribbon drawn tight against the printing surface so formed, a sheet of paper is placed in the machine with its upper end held by the clip 9, and the address or other matter to be written by the typewriter mechanism is written, the machine operating the same as a typewriter, except that the impression is made on the side of the paper opposite that on which the type strike. The roll 2 is then rotated, by hand-wheel 18 or otherwise, and as its type successively pass the pressure roll 17 they make their respective impressions through the ribbon on the paper. The paper is then removed, a new sheet inserted and the operation repeated.

I have not illustrated any mechanism for advancing the ribbon automatically, but in Fig. 3 show heads 19 on shafts 7 and 8, whereby said ribbon may be advanced from time to time. 20 designates a paper feed-lever for operating a ratchet to advance the platen step by step while operating the machine as a typewriter.

It will be obvious that by substituting for roll 2 a roll without provision for a prepared printing surface, the machine may be used as an ordinary typewriter. Roll 2 may have any suitable printing surface, as for example a stencil surface, or a hectograph surface; the inking device being suitably adapted to the character of the printing surface employed.

I do not describe the construction of the typewriter action proper, as any suitable action may be employed. The typewriter will be understood to be provided with customary letter spacing, carriage return, and like mechanism, the same as ordinary typewriters.

What I claim is:—

1. A combined typewriter and printer comprising in combination typewriter printing mechanism and independent printing mechanism including a member having a printing surface and arranged likewise to form a platen for said typewriter printing mechanism.

2. A combined typewriter and printer comprising in combination typewriter printing mechanism and independent printing mechanism including a rotary member having a printing surface and arranged likewise to form a platen for said typewriter printing mechanism.

3. In a combined typewriter and printer, the combination of printing mechanism comprising a type cylinder and means for holding paper thereto, inking means, a pressure device therefor, and typewriter printing mechanism co-acting with said cylinder as a platen.

4. In a combined typewriter and printer, the combination of printing mechanism comprising a type cylinder and means for holding paper thereto, inking means comprising a web interposed between said printing surface and paper held thereto, means for pressing the paper and inking web against said printing surface, and typewriter printing mechanism co-acting with said cylinder.

5. In a combined typewriter and printer, the combination of printing means comprising a type cylinder and

means for holding paper thereto, an inking web surrounding said cylinder, and typewriter printing mechanism co-acting with said cylinder and platen.

6. A combined typewriter and printer comprising in combination typewriter printing mechanism and independent printing mechanism including a member having an inking web surrounding said cylinder and passing through an opening therein, means within said cylinder for holding said web, said typewriter printing mechanism co-acting with said cylinder as a platen.

7. A combined typewriter and printer comprising in combination typewriter printing mechanism and independent printing mechanism including a member having a printing surface and arranged likewise to form a platen for said typewriter printing mechanism, and a carriage for said member.

8. In a combined typewriter and printer, the combination with printing means comprising a type cylinder and means for holding paper thereto, inking means, a pressure device therefor, and typewriter printing mechanism co-acting with said cylinder, the latter forming a platen for said mechanism, and a carriage for said cylinder.

9. In a combined typewriter and printer, the combination with printing means comprising a type cylinder and means for holding paper thereto, an inking web surrounding said cylinder, and typewriter printing mechanism co-acting with said cylinder, the latter forming a platen for said mechanism, and a carriage for said cylinder.

10. In a combined typewriter and printer, a combined platen and printing cylinder having a printing surface and another surface to receive the impact of type and provided with means for holding paper to it, and provided also with means for holding an inking web, said printing surface and other surface to receive the impact of type being beneath said web when the latter is in place.

11. In a combined typewriter and printer, a combined printing cylinder and platen having a printing surface and another surface adapted to receive the impact of typewriter printing means and having a paper holding clip extending longitudinally along said cylinder.

12. In a combined typewriter and printer, a combined printing cylinder and platen having a printing surface and another surface adapted to receive the impact of typewriter printing means and having a paper holding clip extending longitudinally along said cylinder, and means for operating said clip.

13. In a combined typewriter and printer, a combined printing cylinder and platen having a printing surface and another surface to receive the impact of type and provided with a slot in its periphery and a chamber communicating with said slot, and inking means in said chamber.

14. In a combined typewriter and printer, a combined printing cylinder and platen provided with a slot in its periphery and a chamber communicating with said slot and provided also with a printing surface and with a surface to receive the impact of typewriter printing means, and means in said chamber for holding an inking web, and an inking web extending therefrom through the slot, around the cylinder and back through said slot to said holding means.

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

WILLIAM H. COLLIER.

Witnesses:

C. R. TIMBERLAKE,
H. H. BROOKS.