

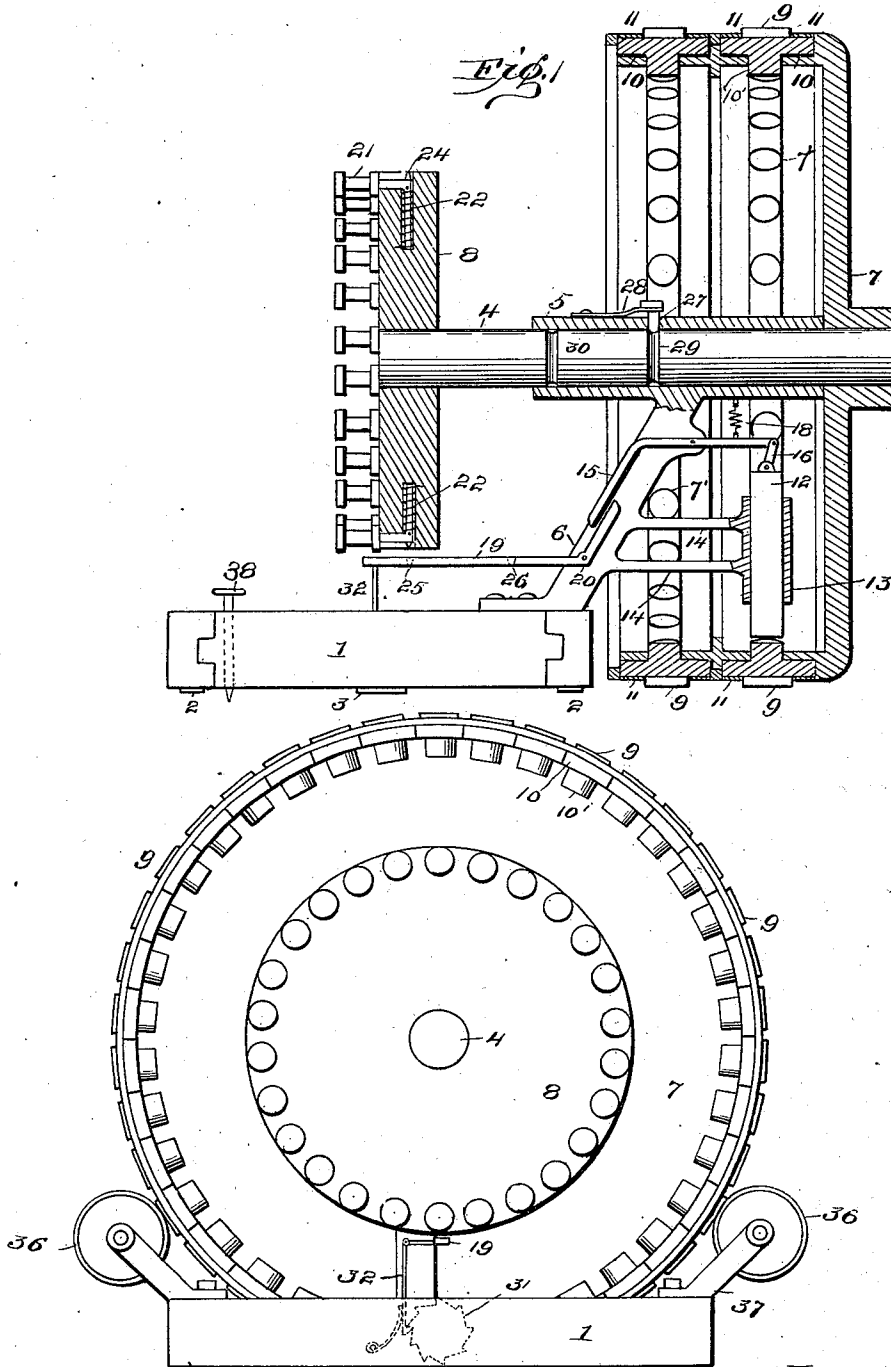
No. 723,855.

PATENTED MAR. 31, 1903.

W. W. FRANTZ.
SHIPPER'S TYPE WRITER.
APPLICATION FILED MAY 21, 1901.

NO MODEL.

2 SHEETS—SHEET 1.



Witnesses:
J. M. Fowler Jr.
Allan M. Goose.

Fig. 2

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Willis W. Frantz
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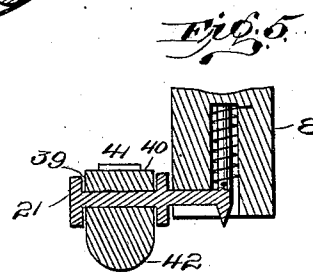
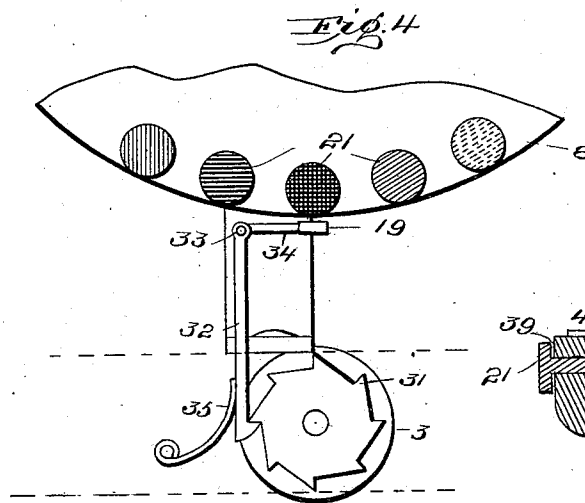
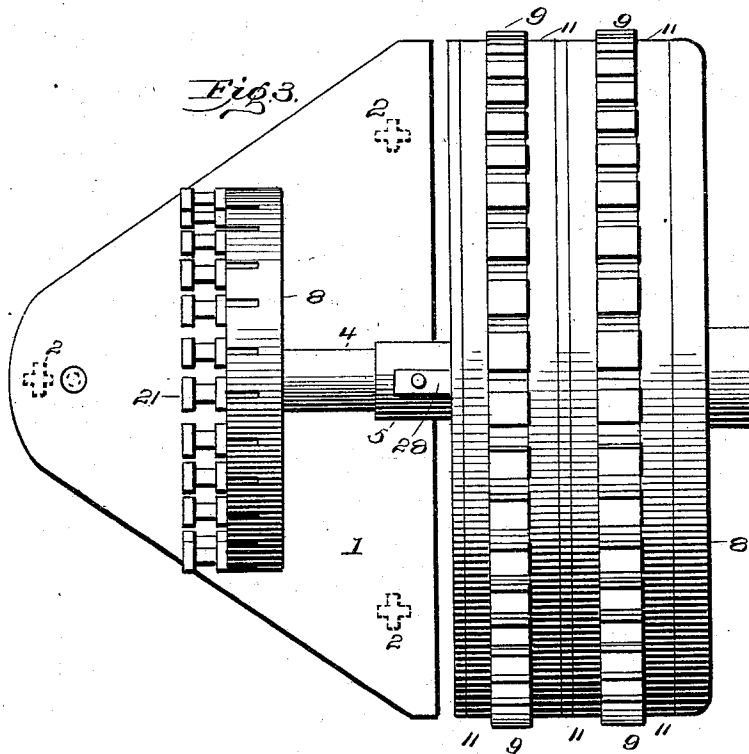
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UNITED STATES PATENT OFFICE.

WILLIS W. FRANTZ, OF WAYNESBORO, PENNSYLVANIA.

SHIPPER'S TYPE-WRITER.

SPECIFICATION forming part of Letters Patent No. 723,855, dated March 31, 1903.

Application filed May 21, 1901. Serial No. 61,219. (No model.)

To all whom it may concern:

Be it known that I, WILLIS W. FRANTZ, a citizen of the United States, residing at Waynesboro, in the county of Franklin and State of Pennsylvania, (whose post-office address is Waynesboro, Pennsylvania,) have invented certain new and useful Improvements in Shippers' Type-Writers; and I do declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to improvements in shippers' type-writers used for marking and addressing boxes, bundles, bales, barrels, and the like and for printing signs, notices, and placards.

The objects of my invention are to produce a type-writer that is cheap in first cost and which at the same time will be compact, light, and easy to operate and at the same time will do good work with a fair amount of speed.

The essential features of my invention consist of a wheeled frame adapted to rest upon the article which is to receive the writing or on a firm base upon a plane therewith. This frame carries a horizontal shaft on one extremity of which is a type-wheel and the other a frame carrying a number of movable fingers with operating-buttons equal in number to the number of type on the type-wheel. The type are elastically supported upon their supporting-wheel and are arranged to turn above, but almost in contact with, the printing-surface. A hammer is mounted in fixed ways within the periphery of the type-wheel and is so arranged that by means of a series of levers it may be depressed, engaging with some force with the back of that type which for the time being is immediately over the work. The lever for actuating the hammer is arranged to be depressed by that finger which corresponds to the type about to be brought into action. One of the supporting-rollers is provided with a suitable spacing mechanism for giving to it a partial revolution every time the hammer-actuating lever is depressed. To reduce the size of the type-wheel, I prefer to arrange the type in two rows upon its face. The type-wheel-supporting shaft may be moved longitudinally in its bearings, so that either set of type may be

brought under the action of the hammer. A suitable inking roll or rolls is provided. Means is also provided for pivoting one extremity of the supporting-frame, and thereby print in curved lines, which will be of service when printing upon the heads of barrels.

In order to better understand the nature of my invention, attention is directed to the accompanying drawings, forming a part of this specification, and in which—

Figure 1 is a side view partly in section, Fig. 2 a front view, and Fig. 3 a top view, of the complete device. Fig. 4 is an enlarged view showing in detail the spacing mechanism, and Fig. 5 is an enlarged view in section of one of the finger-keys.

In all the several views like parts are designated by the same numerals of reference.

The frame 1 is supported upon the small rollers 2 and the larger feed-roller 3, the latter projecting below the frame a greater distance than the former, so as always to be in contact with the supporting-surface, even if inequalities exist in the latter. A horizontal shaft 4 is mounted in a suitable bearing 5, supported upon a bracket 6, attached to the frame 1. The extremities of the shaft 4 are attached, respectively, to a type-wheel 7 and a frame 8, both being rigidly secured to the shaft. The type 9 are preferably of rubber attached to backing-blocks 10, either of rubber or of wood or metal, having a stem 10'. The periphery of the type-wheel is provided with a series of cells or openings 7', in each of which rests the stem of a type-block. The blocks are seated within the cells by means of continuous rubber bands 11. These bands hold the blocks in position, but allow any of them to be depressed, and thus extended beyond the peripheral line.

A hammer 12 is mounted in a suitable guide 13, secured to the standard 6 by means of the arms 14. The hammer is of metal and is of some weight. It is supported by the bell-crank lever 15 and the short link 16. The lever is pivoted at 17. A spring 18 will keep the hammer normally elevated. A second bell-crank lever 19, pivoted at 20, engages with the free extremity of the lever 15. The other extremity extends forward under the frame 8. The lever 19 and its support 20 are sufficiently strong as not to be deflected side-

wise, and thus serve as a guide for the type-wheel.

The frame 8 carries upon its periphery as many buttons 21 as there are type in one series upon the periphery of the type-wheel. Each button 21 is supported upon a stem 22, arranged within a depression in the frame. A spiral spring 23, having one extremity secured to the frame and the other to the stem, as is shown in Fig. 5, will keep the stem normally seated. Each stem is provided with a pointed projection 24, which may be caused to enter either of the openings 25 or 26 in the lever 19 and will thus serve as a guide or lock for the type-wheel.

In order to reduce the size of the type-wheel, I prefer to arrange the type thereon in two series, as is shown in the drawings. One series will contain the letters of the alphabet, the other numerals, punctuation-marks, and other arbitrary signs. To bring either set of type under the action of the hammer 12, the shaft 4 may be moved within its bearing 5. A pin 27, depressed by a spring 28, will enter either of the grooves 29 or 30 in the shaft 4 and retain the shaft in position. As shown in Fig. 1, the pin 27 is in engagement within the groove 29. Consequently the projections 24 on the wheel 8 will enter the opening 25 on the lever 19. If the pin 27 be disengaged from the groove 29 and reengaged in the groove 30, the projections 24 will enter the opening 26 and the second line of type will be under the action of the hammer. The feeding device actuates the roll 3, giving it a partial revolution as each letter is printed. To the roll 3 or to its supporting-shaft is attached a ratchet-wheel 31, which engages with a pawl 32, pivoted at 33 to an offset 34 from the free extremity of the lever 19. A spring 35 keeps the pawl in engagement with the teeth of the ratchet. The parts are so arranged and proportioned that the pawl will engage with the teeth of the ratchet on the upstroke only, feeding the machine to the right, while the type is clear of the printing-surface.

Ink-wheels 36, mounted in frames 37, bear against the periphery of the type-wheel.

A pointed pin 38 in one end of the frame 1 is used for anchoring that end when it is desired that the line of printing shall be curved.

To serve as a guide to the operator, I prefer to designate the several keys by coloring them in different shades, as is shown in Fig. 4. This is in addition to the characters imprinted upon their faces.

For greater facility in operation I prefer to attach a pivoted finger-piece to each button. Each finger-piece has a flat lettered top and a weighted bottom and is so arranged as to maintain a vertical position irrespective of its position on the wheel. As shown in Fig. 5, the button 21 is provided with the finger-piece 39, having the flattened finger-surface 40 and character 41 thereon and a weighted

portion 42 below. The finger-piece will always automatically present a horizontal finger-surface to the operator.

Having now particularly described and ascertained the nature of my said invention, what I claim, and desire to secure by Letters Patent, is—

1. In a shipper's type-writer, a shaft carrying a type-wheel, elastically-supported thereon, arranged to be normally out of contact with the printing-surface, a series of actuating-keys arranged on the shaft, a hammer engaging with the back of the type for forcing the type against the printing-surface, and means for actuating the hammer, engaged by one of the keys, substantially as set forth.

2. In a shipper's type-writer, a shaft carrying a type-wheel, elastically-supported thereon, arranged to be normally out of contact with the printing-surface, a series of actuating-keys arranged on the shaft, a hammer engaging with the back of the type for forcing the type against the printing-surface, means for actuating the hammer, engaged by one of the keys, and locking means for the type-wheel, actuated by the hammer-actuating means, substantially as set forth.

3. In a shipper's type-writer, a type-wheel having two series of type thereon, a supporting-shaft therefor with two grooves, a bearing for the shaft, and means carried by the said bearing for engaging either of said grooves, substantially as set forth.

4. In a shipper's type-writer, a type-wheel having two series of type thereon, a supporting-shaft therefor with two grooves, a bearing for the shaft, and a pin carried by said bearing for engaging either of said grooves, substantially as set forth.

5. In a shipper's type-writer, a type-wheel, and key-frame, a series of key-actuated stems with spurs thereon, a hammer and actuating-lever, a perforation within the lever to be engaged by the spur when the latter is depressed, substantially as set forth.

6. In a shipper's type-writer, a frame therefor, supporting-rolls, a series of type, a hammer and actuating-levers, a ratchet-wheel on one of the supporting-rolls, a pawl therefor, and connections between the pawl and hammer-actuating mechanism, substantially as set forth.

7. In a shipper's type-writer, a frame, supporting-wheels therefor, a feeding device, and a pivoting-pin forming an anchor for one side of the frame, substantially as set forth.

8. In a shipper's type-writer, a supporting wheeled frame therefor, adapted to rest upon and be supported by the printing-surface, a rotating type-wheel journaled in fixed bearings, and means for depressing a single type against the printing-surface, substantially as set forth.

9. In a shipper's type-writer, a supporting-frame therefor, adapted to rest upon and be supported by the printing-surface, a rotating type-wheel journaled in fixed bearings, and

means actuated by the depression of a single type against the printing-surface for moving the supporting-frame across the printing-surface, substantially as set forth.

5 10. In a shipper's type-writer, a supporting wheeled frame therefor, adapted to rest upon and be supported by the printing-surface, a rotating type-wheel journaled in fixed bearings, inking-rollers journaled in fixed bearings, and means for depressing a single type
10 against the printing-surface, substantially as set forth.

11. In a shipper's type-writer, a supporting wheeled frame therefor, adapted to rest upon
15 and be supported by the printing-surface, a rotating type-wheel journaled in fixed bearings, inking-rollers journaled in fixed bearings, and means actuated by the depression of a single type against the printing-surface
20 for moving the supporting-frame across the printing-surface, substantially as set forth.

12. In a shipper's type-writer, a circular keyboard, keys therein slidable radially outward from the periphery of the keyboard, and springs to normally retract the keys within
25 the perimeter of the keyboard, substantially as set forth.

13. In a shipper's type-writer, a type-wheel therefor, keys thereon, and weighted finger-pieces pivoted to said keys, substantially as
30 set forth.

14. In a shipper's type-writer, a type-wheel therefor, keys thereon, and pivoted finger-pieces 39 with weighted portions 42 thereon,
35 substantially as set forth.

This specification signed and witnessed this 8th day of May, 1901.

WILLIS W. FRANTZ.

Witnesses:

H. MUNGER,
ALF. N. RUSSELL.