

(No Model.)

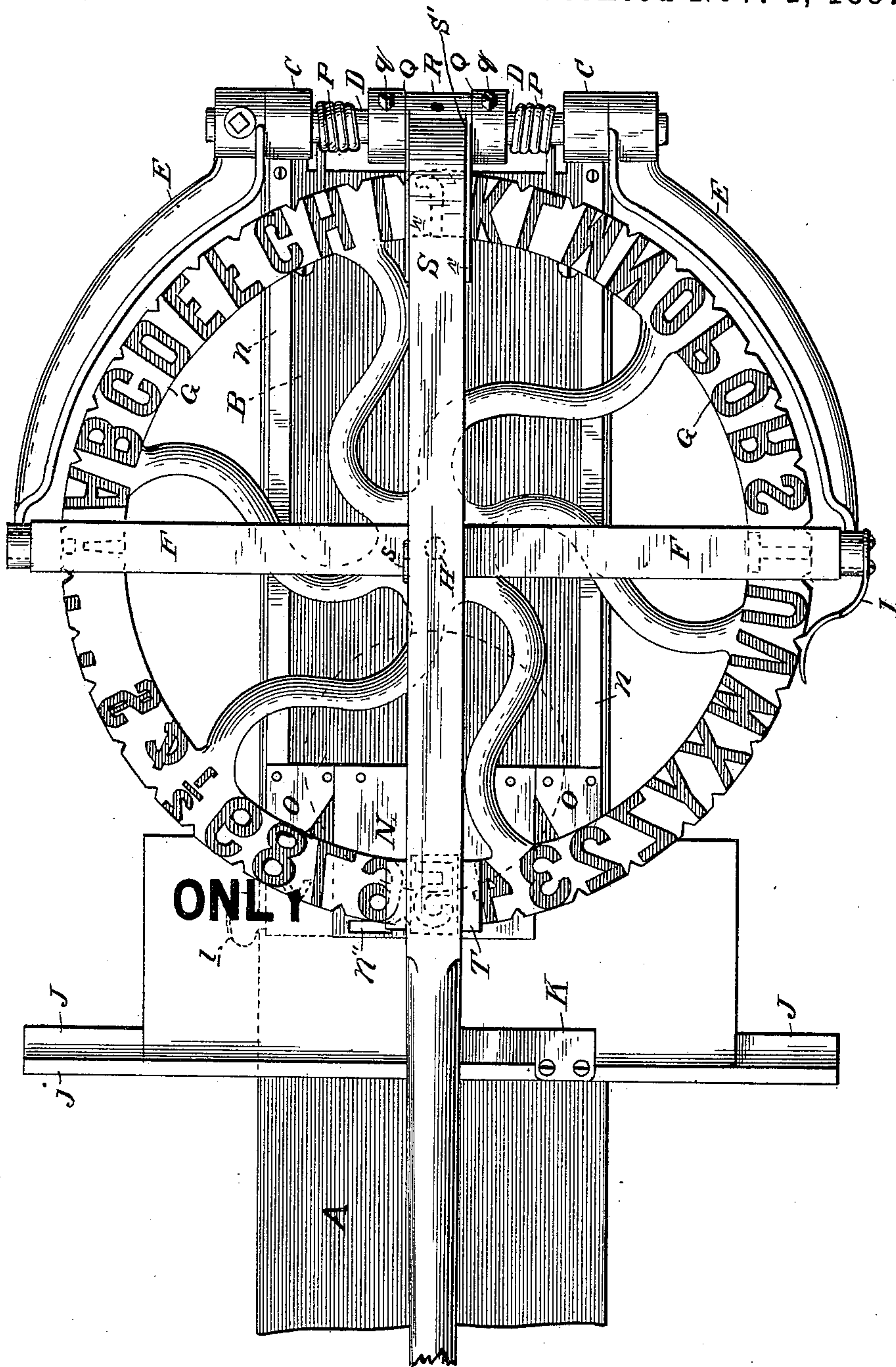
2 Sheets—Sheet 1.

W. P. KIDDER & J. R. CARTER.  
TYPE WRITING MACHINE.

No. 372,542.

Patented Nov. 1, 1887.

Fig. 1.



WITNESSES  
*C. H. Raeder.*  
*Thomas Ernest*

INVENTORS.  
*Wellington P. Kidder*  
*John R. Carter*  
By *T. J. W. Robertson*  
Their Attorney

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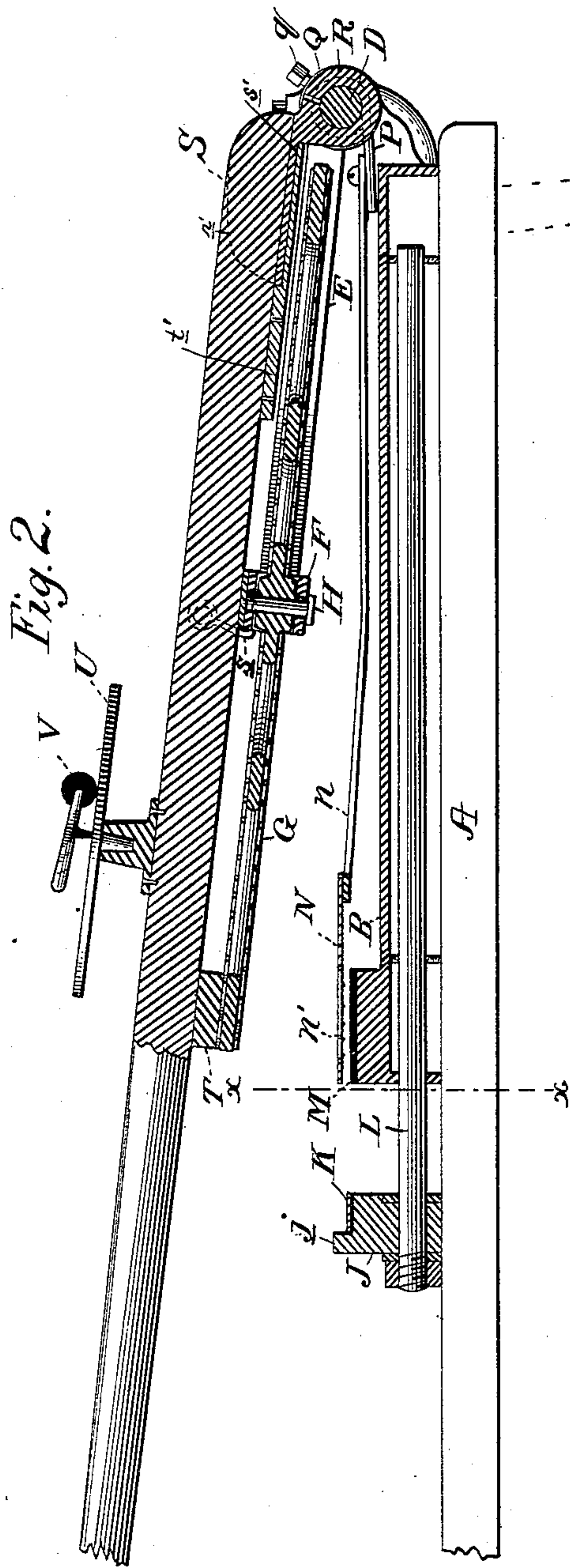
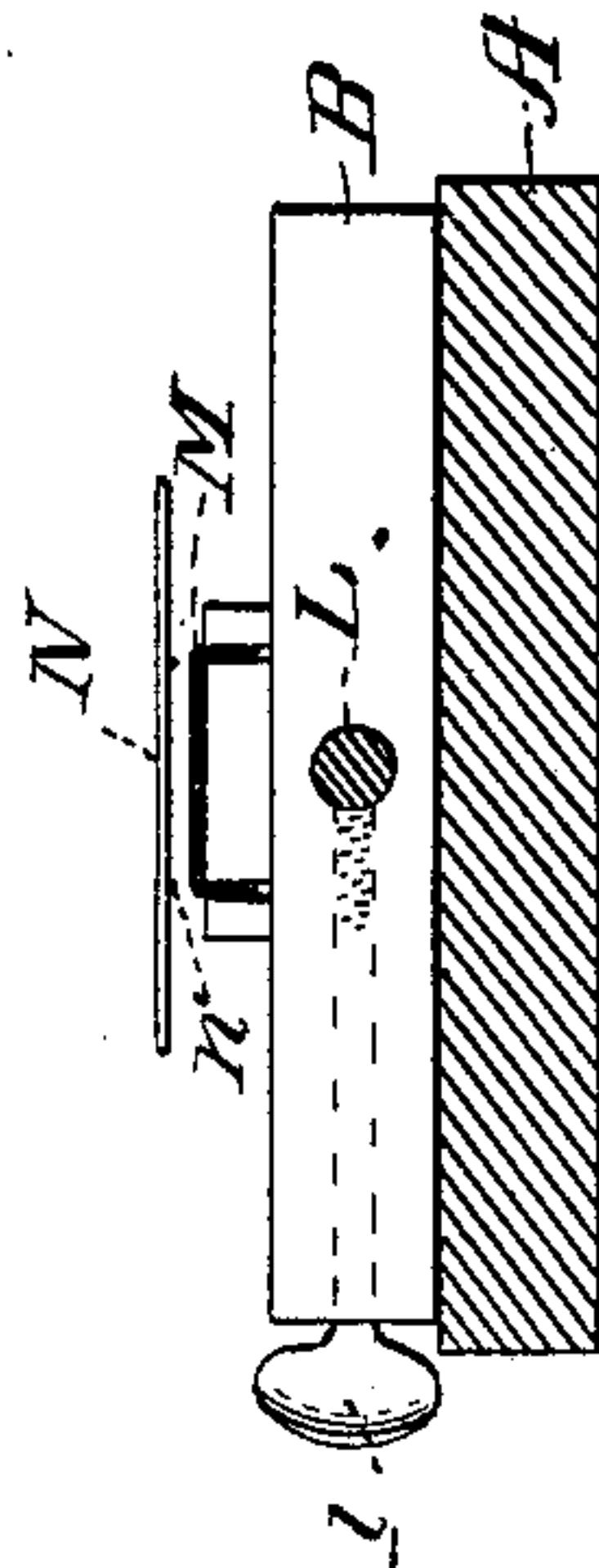


Fig. 4.



Fig. 3.



WITNESSES  
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# UNITED STATES PATENT OFFICE.

WELLINGTON P. KIDDER, OF BOSTON, MASSACHUSETTS, AND JOHN R. CARTER, OF NIAGARA FALLS, NEW YORK.

## TYPE-WRITING MACHINE.

SPECIFICATION forming part of Letters Patent No. 372,542, dated November 1, 1887.

Application filed March 19, 1886. Serial No. 195,843. (No model.)

*To all whom it may concern:*

Be it known that we, WELLINGTON P. KIDDER and JOHN R. CARTER, the former a citizen of the United States of America, residing at Boston, in the county of Suffolk and State of Massachusetts, and the latter a resident of Niagara Falls, Niagara county, New York State, but a subject of the Queen of Great Britain, have invented certain new and useful  
10 Improvements in Type-Writing Machines, of which the following is a specification, reference being had therein to the accompanying drawings, in which—

Figure 1 represents a plan of our card-printer; Fig. 2, a longitudinal vertical central section of the same; Fig. 3, a transverse vertical section through the line *xx* in Fig. 2, and Fig. 4 shows a section of the under side of the printing-wheel with letters of a different size  
20 from those on the top of the same.

This invention relates to a machine designed to print show-cards, price-tickets, &c.; and the invention consists in the peculiar construction, arrangement, and combinations of parts,  
25 hereinafter described, and more particularly pointed out in the claims.

Referring to the details of the drawings, which show the preferable form of our invention, A represents the base, which may be the top of a strong bench with legs, as shown in dotted lines, or it may be without legs, and adapted to be placed on top of another bench or table. Secured to this base is a cast bed-plate, B, having at one end the boxes C, raised  
30 a little above the body of the bed-plate. In these boxes is journaled a rock shaft or bar, D, having two arms, E, securely and rigidly fastened, one on each end. Between these arms and journaled in their ends a yoke, F, is  
40 securely held in such a manner as to allow it to turn either side up when desired. In this yoke a wheel, G, runs on a bolt, H, which passes through both the yoke and the hub of the wheel. This wheel is provided with two  
45 different-sized sets of printing-characters, consisting of the alphabet, the numerals, points, &c., one set on each side of the wheel, which letters, &c., are in corresponding positions—that is to say, the letter "A" on one

side is over the letter "A" on the other—so  
50 that although the under set of characters is out of sight the position of each character of said under set can be readily seen. Between each two characters there is a notch to receive a spring finger or catch, I, which holds the  
55 wheel in the proper position for printing.

At J is shown a gage having a ledge, *j*, and which is provided with a spring-finger, K, to rest on the card being printed. This gage is connected with the bed-plate B by means of a  
60 rod, L, which slides into a hole in the end of the bed-plate, and is fastened there by means of a set-screw, *l*, so that the gage can be set in any desired position.

A pad, M, of soft rubber or other suitable  
65 material, is secured to a raised portion of the bed-plate in any suitable manner, and on this pad rests the card or other material to be printed. Above this pad, and attached to upward-bearing spring-arms *n*, is a perforated  
70 plate, N, which serves the purpose of a frisket and prevents any of the letters except the one that is intended to be used from touching the card. At each end of the frisket is a  
75 plate, O, whose outer end is turned slightly downward and serves to depress the card on each side, so as to keep that portion of it not covered by the frisket out of contact with the type-wheel. On the under side of the frisket  
80 are points *n'*, which keep the card from actual contact with the under side of the frisket, and thus prevent the ink on the letter just printed from "setting off" on the under side of the frisket, and afterward again setting off on the card at succeeding impressions.  
85

Around the rock-shaft D are coiled two springs, P, one end of each resting on the base B, and the other end passing into a hole in one of the collars Q, which are securely fastened by set screws *q* to the shaft D, and the springs  
90 are so arranged as to tend to raise the wheel, &c., a slight distance—say from two to four inches—off of the impression-pad. Between the collars is secured a casting, R, which is so arranged as to turn loosely on the rock-shaft  
95 D, and is provided with an extension, *s'*, having vertical sides *r'* to form a socket, S', which receives the end of a hand-lever, S, which lever



has a bearing on the center of the yoke F, and also on the rim of the wheel immediately over the letter that is being printed. At this latter point there is a broad bearing-surface, T, attached to the lever, so that the latter will bear not only on the letter corresponding to the one being printed, but also on a part of the letter on each side of the same, whereby there is less danger of damage to the wheel or the letters formed thereon. We may sometimes cover this bearing-surface with a coating of rubber or other similar material, which would be very necessary if the letters were made of very soft material—as type-metal—but is not required where the type-wheel is made of cast-iron with the letters cast thereon of the same metal. As is shown a hook, which is pivoted to the lever and hooks under the yoke to rigidly fasten the two together. Secured to the under side of the lever S is a wooden strip, *t'*, extending beneath the extension *s'* of the casting R, to prevent the latter from striking the type on the rim of the printing-wheel.

Any suitable mode of inking the letters may be adopted at the option of the maker or user; but we prefer the ordinary printing-ink and roller, and for this purpose we mount upon the lever, or any other convenient place, an ordinary circular distributing-plate, U, which turns in its bearing and forms a support for a small inking-roller, V, which can be used for giving ink to the letters or type by rolling the same over the type to be printed in the ordinary manner.

The operation is as follows: The gage being set at the proper distance, a card or other object to be printed is set so as to rest upon the impression-pad M and gage J, under the frisket N and spring-finger K, with the part of the card where the letter is to be printed immediately under the perforation in the frisket. The letter to be printed is then inked with the inking-roller V, and the wheel is turned until the proper letter is over the hole in the frisket, when the lever is depressed, and the letter, passing through the hole in the frisket, prints its face on the card. As soon as the pressure on the lever is released, the springs P raise the wheel and the spring-arms *n* the frisket, as shown in Fig. 2, when the card can be moved the proper distance to print the next letter, and the operation is repeated until the desired word or line is finished. After all the letters are printed that are to appear on one line, the gage is drawn outward sufficiently to allow that portion of the card that is to be printed next to appear under the hole in the frisket, when the operation of printing is again resumed until another line is printed, and so on until the card or ticket is printed.

If it is desired to change the size of the type the lever and wheel are raised to a perpendicular position, and then the hook *s* is moved to one side and the lever swung away from it. The wheel and yoke can then swing on the journals of the yoke and the wheel be

reversed, so as to change the letters that were on top to the bottom when the wheel and lever are again set in operating position.

The main use of this invention, as will have been seen from the foregoing description, is for the purpose of printing cards, such as show-cards, price-tickets, &c., for dry goods, clothiers, and other merchants, for whom it will be especially convenient, inasmuch as a merchant who might want a single show-card or to print a notice or ticket of any kind can immediately and readily print such at once, without the necessity of sending to a card or ticket writer for it, and thus save both time and expense. and in large establishments, where many show-cards or price-tickets are required, the saving will be immense.

We deem it important that there shall be on each side of the impression-surface a sunken space wherein the card or other object being printed may be held away from the types on each side of that immediately over the printing-surface, as it is by this feature that printing with a rigid wheel having type on its side is made practicable.

It will be found very convenient to have a perforation or perforations through the frisket, or a portion of the frisket cut out, as shown at *n''*, through which the letter last printed can be seen, in order to properly space the letters.

If more than two sizes or forms of type are desired, additional wheels may be provided with different sizes or forms of characters, which may be readily substituted for the one in the yoke by simply taking out the bolt H, changing the wheels, and replacing the bolt.

We do not limit ourselves to the precise construction shown, as it is evident that it may be varied without departing from the spirit of our invention. For instance, instead of the type being cast with the rim, they may be made or cast on separately, and the wheel may be provided with printing-letters on one side only, if only one size of type is desired. A single spring may be used on the rock-shaft, if desired; or some other form of springs may be substituted for the springs shown.

Although we use the words "impression-bed" and "printing-plate" in the following claims, we do not intend to limit ourselves to the form of bed or plate shown, as it is evident that other forms of printing and impression surfaces may be used.

We do not claim to be the inventors of the combination, in a type-writer, of a printing-wheel, a platen, and a frisket having a hole for the passage of the type, and a series of small projections on the under side of the frisket to depress the material being printed upon about the printing-point to prevent blurring of the printed part by contact with the frisket.

What we claim as new is—

1. In a card-printer, a printing-wheel having printing-characters on both sides of its rim, substantially as described.



2. In a card-printer, a printing-wheel running in reversible bearings, and having printing-characters on both sides of its rim, substantially as described.

5 3. The combination, in a card-printer, of a printing-wheel, a pair of vibrating arms partly surrounding said wheel, and a yoke carrying said wheel mounted in said arms and adapted to turn therein, substantially as and for the  
10 purpose specified.

4. The combination, in a card-printer, of a pair of reciprocating arms mounted on a rock-shaft, a yoke mounted in the free ends of said arms, a printing-wheel turning in said yoke,  
15 and a lever having its fulcrum near the cen-

ter, on which the arms vibrate and acting upon the wheel, substantially as described.

In testimony whereof we affix our signatures in presence of two witnesses.

WELLINGTON P. KIDDER.  
JOHN R. CARTER.

Witnesses to the signature of Wellington P. Kidder:

WALTER C. COGSWALL,  
ARTHUR LEONARD.

Witnesses to the signature of John R. Carter:

T. J. W. ROBERTSON,  
E. H. BOND.