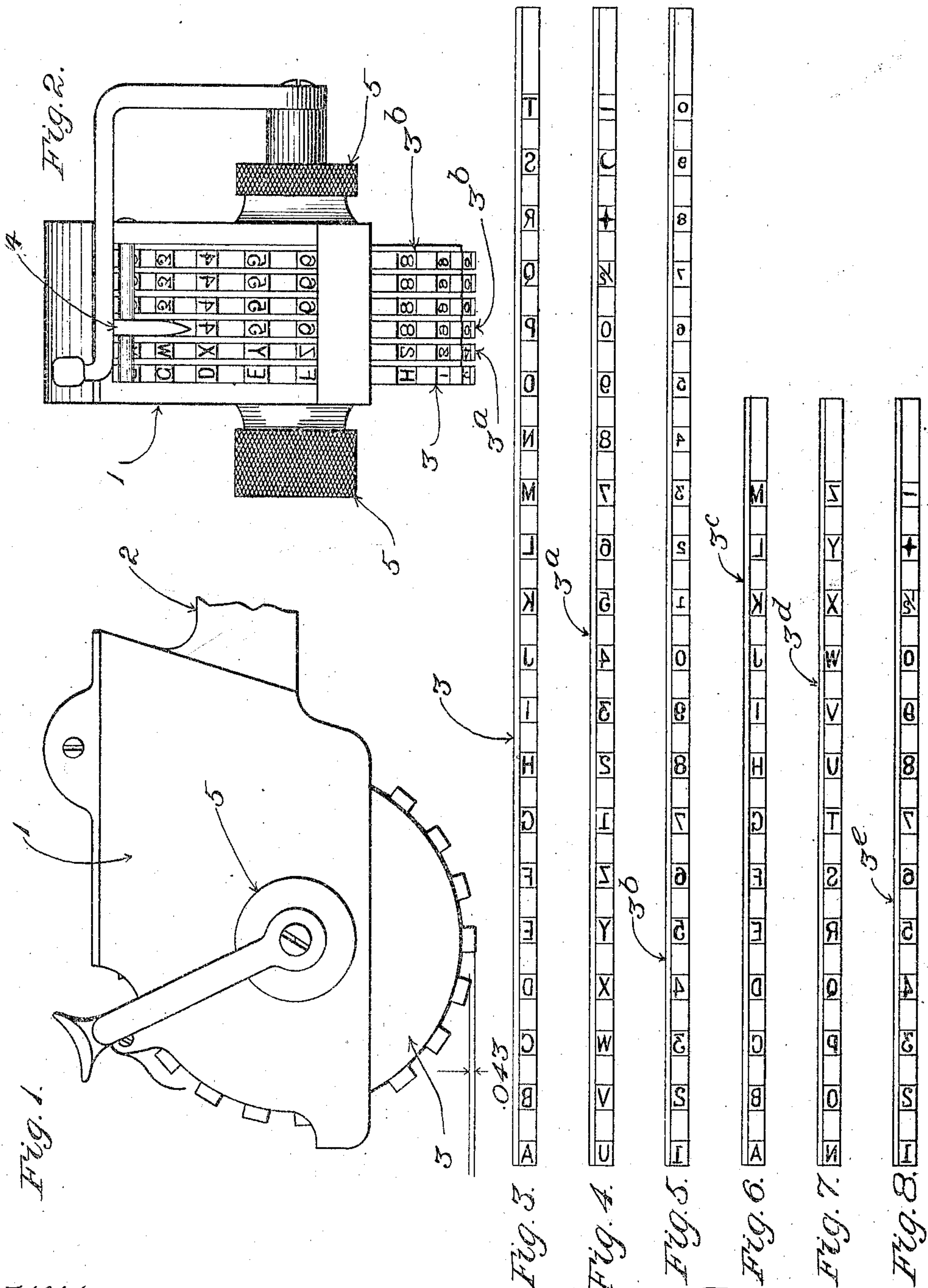


No. 850,425.

PATENTED APR. 16, 1907.

J. FRENCH.
STAMPING AND NUMBERING MACHINE.
APPLICATION FILED OCT. 30, 1906.



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UNITED STATES PATENT OFFICE.

JOSEPH FRENCH, OF WOONSOCKET, RHODE ISLAND.

STAMPING AND NUMBERING MACHINE.

No. 850,425,

Specification of Letters Patent.

Patented April 16, 1907.

Application filed October 30, 1906. Serial No. 341,323.

To all whom it may concern:

Be it known that I, JOSEPH FRENCH, a citizen of the United States, residing at Woonsocket, in the county of Providence, State of Rhode Island, have invented a certain new and useful Improvement in Stamping and Numbering Machines, of which the following is a specification, reference being had therein to the accompanying drawings.

The invention relates to stamping or numbering machines of the class in which the printing-head or type-head is equipped with settable type-wheels. An example of this class is shown and described in the United States Letters Patent to J. D. Humphrey and myself, No. 660,512, granted October 23, 1900.

The general object of the invention is to produce a machine characterized by the employment therein of printing or type wheels of small and uniform diameter and capable of printing any desired letter within the range of the alphabet combined with a number comprising one of more digits or figures.

My aim in general is to produce a practical machine for use in marking articles received by a laundry—as, for instance, with the initial of the owner's name, a book-letter, or other index-letter, combined with a suitable reference-number and in some instances accompanied also by special signs or marks.

By my invention I avoid the use of type-wheels of large diameter and enable the printing-head to be made of convenient and practicable proportions. A wheel containing the entire alphabet of twenty-six letters and in addition thereto a blank to be presented at the printing-line when it is desired that none of such letters shall print and having the letters spaced around its periphery at the proper distance apart to afford a sufficient clearance between proximate letters to insure that only one letter at a time shall make contact with the surface which is to be printed upon would require to have a diameter measuring about seven inches. A group or series of wheels of such diameter, together with the necessary carrying and inclosing framing and casing, would constitute a head of very considerable and undesirable size. Such a head would be too large and heavy for actuation by the means and in the manner heretofore usual. A machine containing a printing-head provided with type-

wheels measuring seven inches or even six inches in diameter is not practicable. The question of cost is important, moreover. The cost of a wheel is proportionate to its diameter. In addition the greater the diameter of a wheel, the thickness remaining the same, the more difficult is it to make the same true and flat, so that a series of wheels shall fit or rest closely together side by side. More expensive modes of production have to be adopted in the case of large wheels. One large wheel costs several times as much as one of half the diameter. Furthermore, in practice the type-wheels of machines at present in use have combined therewith detent devices to prevent accidental turning of the wheels. These devices comprise spring-actuated dogs or pawl-like retainers entering between adjacent characters on the peripheries of the wheels or entering notches on the sides of the respective wheels near the peripheries of the latter.

The setting of the wheels is effected with the aid of devices located at the center and provided with a thumb-wheel by means of which the individual wheels may be turned by hand to bring the required characters to the printing-line. The greater the diameter of the wheels the harder it is to turn the latter by hand with the aid of the centrally-located thumb-wheel, because the detent devices act proportionately farther from the center and with increasing leverage to oppose the turning movement. The difficulty and inconvenience of turning large wheels by means of the thumb-wheel has operated in practice to control the diameter of the wheels. Again, if in a machine equipped to print a letter and accompanying number the letter-bearing wheel should be of a diameter to carry the entire alphabet the numeral-bearing wheels if of the same diameter would be unnecessarily large—that is to say, they would be considerably larger around the peripheries thereof than the needs require and there would be useless space thereon.

The invention consists, essentially, in a printing-head provided with settable type-wheels or printing-wheels having the letters of the alphabet, in consecutive order, divided between two wheels which are located side by side and also having the ten digits upon each of a plurality of numeral-wheels next adjacent the second of the said alphabet-wheels.

The invention consists, further, in a printing-head having the characteristics just specified, and in which in addition the second of the alphabet-wheels also bears ten digits.

It consists, further, in a printing-head having the ten digits upon the second of the alphabet-wheels, as just mentioned, and in addition having upon each digital or numeral wheel two sets of digits differing from each other in appearance—as, for instance, in point of size, thereby greatly increasing the range of capacity of the machine.

My invention is illustrated in the accompanying drawings, in which latter—

Figure 1 shows in side elevation a printing-head with an embodiment of the invention applied thereto. Fig. 2 is a front elevation thereof. Fig. 3 is a development in a plane of the periphery of the first letter-bearing wheel of the printing-head of Figs. 1 and 2. Fig. 4 is a development of the second letter-bearing wheel. Fig. 5 is a development of one of the numeral-bearing wheels. Figs. 6, 7, and 8 show, respectively, developments of letter-bearing and numeral-bearing wheels containing a smaller number of printing characters than in the case of Figs. 1 to 5.

Having reference to the drawings, at 1, Figs. 1 and 2, is the body portion of a printing-head, and at 2, Fig. 1, is a portion of the carrying-arm.

At 3 3^a 3^b, &c., are type-wheels, at 4 the index or indicator of the setting devices, and at 5 5 are thumb-wheels pertaining to the said setting devices and by means of which the respective wheels may be turned by hand in setting the same.

As thus far referred to, the parts, with the exception hereinafter indicated, are or may be of any usual or preferred construction, and the remainder of the machine may be, if desired, constructed as shown and described in the Letters Patent aforesaid.

In the embodiment of my invention which is illustrated in Figs. 1 to 5 the letters of the alphabet are divided between the two wheels 3 and 3^a, which are located side by side, the consecutive order of the letters being maintained, and I have applied in addition to the second of the said wheels a set of digits. Each of the neighboring wheels 3^b 3^b, &c., is provided with a set of digits of large size and a second set of digits of small size. The layout of letters, digits, &c., is shown in Figs. 3, 4, and 5 and is intended for a series of wheels having twenty-one peripheral subdivisions on each, exclusive of the usual spaces or depressions between printing characters. The first wheel 3 (shown by Fig. 3) carries the first twenty letters of the alphabet—i. e., "A" to "T"—and one blank, where the projection is omitted to produce a space which may be presented at the printing-line when the wheel is desired not to print. The second wheel 3^a

(shown by Fig. 4) bears the remaining letters of the alphabet, and in addition thereto a set of digits, as aforesaid, together with four special characters to bring the number of printing characters up to twenty, there being finally the usual blank space. The numeral-wheels 3^b 3^b, &c., one of which is shown by Fig. 5, are each provided with two sets of digits differing from each other in size and the usual blank space.

The arrangement of Figs. 3, 4, and 5 are designed for employment upon wheels which are three and one-fourth inches over all and will afford ample clearance. The extent of this clearance is shown by the horizontal lines which in Fig. 1 touch the face of the character which is in position to print and the proximate shoulder of the next adjacent character at the left-hand side in such figure. This clearance amounts in practice to .043. In the case of the arrangements shown in Figs. 6, 7, and 8 the first wheel 3^a carries the first thirteen letters of the alphabet and has the usual blank space. The second wheel 3^a has the remaining letters of the alphabet and a blank space. Each of the numeral-wheels 3^b, Fig. 8, has the ten digits, three special characters, and a blank space. The wheels of Figs. 6, 7, and 8 are considerably less in diameter than those of Figs. 1 to 5, with increased clearance.

The number of printing characters upon each wheel admits of being varied still further. I prefer the arrangement which is represented in Figs. 3, 4, and 5, because it enables a letter to be printed from either of the alphabet-wheels followed by a number without intervening space or interval. In the case of the arrangement shown in Figs. 6, 7, and 8 when a letter is printed from the first alphabet-wheel followed by a number a space or interval intervenes between such letter and the first figure of the number, such space or interval corresponding with the width of the second alphabet-wheel.

What is claimed as the invention is—

1. In a stamping and numbering machine, a printing-head provided with settable type-wheels or printing-wheels, and having the letters of the alphabet, in consecutive order, divided between two wheels which are located side by side.

2. In a stamping and numbering machine, a printing-head provided with settable type-wheels or printing-wheels having the letters of the alphabet, divided between two wheels which are located side by side, and also having the ten digits upon each of a plurality of numeral-wheels next adjacent the second of the said alphabet-wheels.

3. In a stamping and numbering machine, a printing-head provided with settable type-wheels or printing-wheels having the letters of the alphabet, divided between two wheels which are located side by side, the second of such wheels also bearing the ten digits, and

also having the ten digits upon each of a plurality of numeral-wheels next adjacent the said second alphabet-wheel.

4. In a stamping and numbering machine,
5 a printing-head provided with settable type-wheels or printing-wheels having the letters of the alphabet, divided between two wheels which are located side by side, the second of such wheels also bearing the ten digits, and
10 also having two sets of digits differing in ap-

pearance upon each of a plurality of digital or numeral wheels next adjacent the said second alphabet-wheel.

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

JOSEPH FRENCH.

Witnesses:

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