

F. W. MERRICK.
STAMPING, MARKING, OR NUMBERING MACHINE.
APPLICATION FILED JAN. 10, 1910.

1,065,885.

Patented June 24, 1913.

2 SHEETS—SHEET 1.

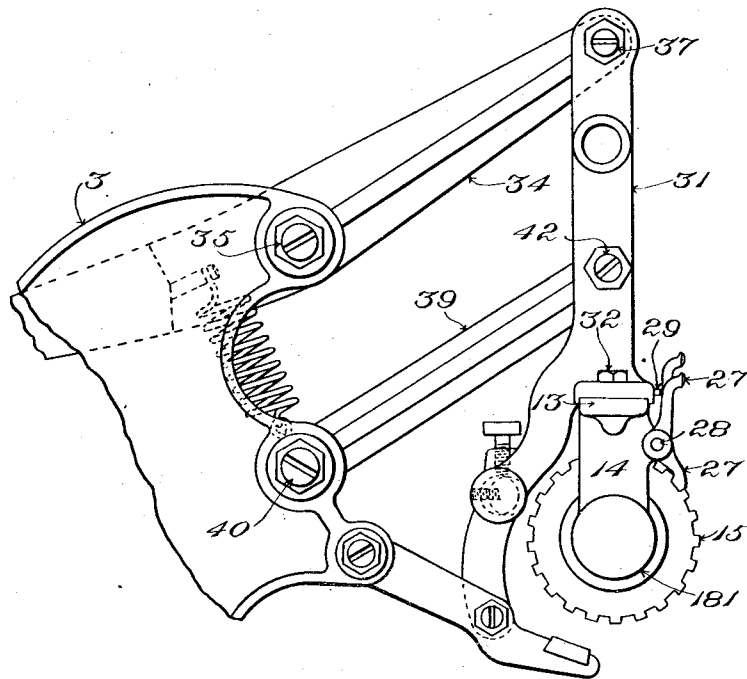
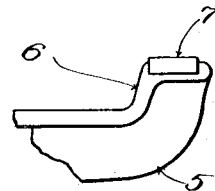


Fig. 1.



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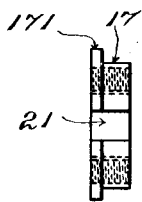
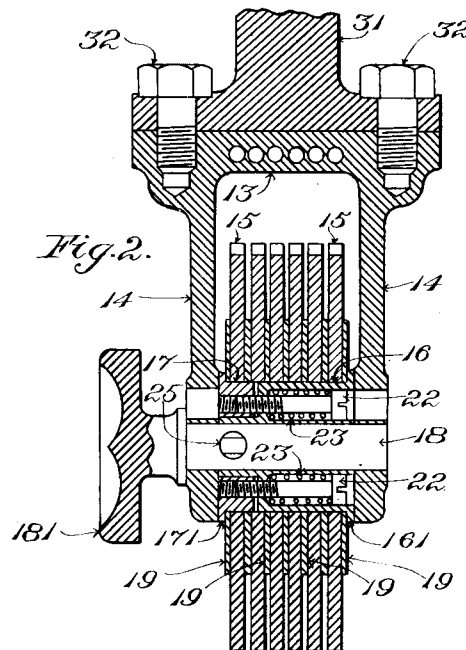


Fig. 3.

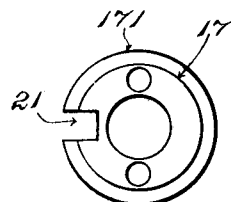


Fig. 4.

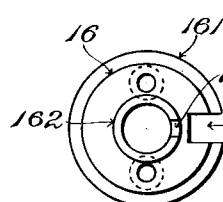


Fig. 6.

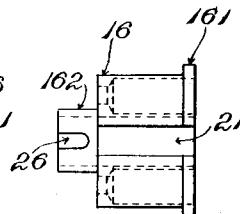


Fig. 5.

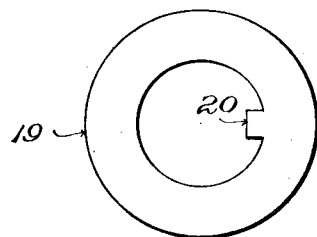


Fig. 7.

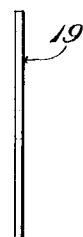


Fig. 8.

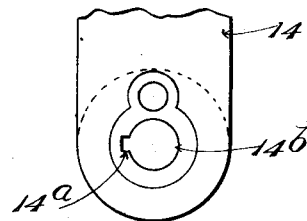


Fig. 9.

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UNITED STATES PATENT OFFICE.

FRANK W. MERRICK, OF BOSTON, MASSACHUSETTS, ASSIGNOR TO POWER NUMBERING MACHINE COMPANY, OF BOSTON, MASSACHUSETTS, A CORPORATION OF MASSACHUSETTS.

STAMPING, MARKING, OR NUMBERING MACHINE.

1,065,885.

Specification of Letters Patent.

Patented June 24, 1913.

Original application filed June 12, 1907, Serial No. 378,609. Divided and this application filed January 10, 1910. Serial No. 537,101.

To all whom it may concern:

Be it known that I, FRANK W. MERRICK, a citizen of the United States, residing at Boston, in the county of Suffolk, State of Massachusetts, have invented a certain new and useful Improvement in Stamping, Marking, or Numbering Machines, of which the following is a specification, reference being had therein to the accompanying drawings.

The invention has relation to stamping, marking, or numbering machines, of the class containing a type-head or printing-head having a plurality of wheels located side by side and bearing at their peripheries printing characters in the form of letters, numerals, and the like, the respective type-wheels being set to present the required characters thereof in position for printing by being turned or rotated in the said type-head or printing-head. As the printing characters, and the wheels themselves, become dirty and clogged with ink, lint, etc., they require to be cleaned. The cleaning is effected from time to time by means of a brush and some suitable solvent of the ink that is used for the marking or printing. The cleaning operation is performed with more or less inconvenience and difficulty if the printing-wheels remain in the machine, and is accompanied by more or less spattering of cleaning liquid and dissolved ink upon other portions of the machine and the surroundings, for instance articles requiring to be or which have been marked or printed, and the clothing of the operator, and the hands and face of the operator become discolored and stained.

One object of my invention is to remedy this inconvenience and obviate these undesirable features.

Another is to facilitate the operations of assembling the parts of a machine and subsequently taking them apart.

Another is to render it possible to quickly substitute a different set of wheels for the set previously in use.

The invention consists in a stamping or numbering machine having a series of settable type-wheels or type-carriers, assembled and connected together, and so combined with the type-head or printing-head as to render the series removable and replaceable as a unit. The capacity for removal of the

series of wheels *en masse*, without disassociating them from one another, enables the series to be taken out of the type-head or printing-head at any time, and placed in a liquid which will dissolve out accumulations of ink, thereby permitting the wheels to be kept clean without the labor and inconvenience of brushing them out by hand while in place in the machine. It enables also quick substitution of another set of wheels to be effected.

The preferred embodiment of the invention is represented in the drawings, in which latter,—

Figure 1 shows in side elevation sufficient of a stamping, marking, or numbering machine to enable the invention and its application to such machine to be explained. Fig. 2 is a sectional view of a type-head, showing the said preferred embodiment of the invention. Fig. 3 is a front view, and Fig. 4 a side view of one section of the barrel for the type-wheels. Fig. 5 is a front view, and Fig. 6 a side view, of the other section of such barrel. Figs. 7 and 8 are views of one of the washers hereinafter mentioned. Fig. 9 is a detail view showing in side elevation a portion of one of the side-pieces or cheeks of the type-head.

Having reference to the drawings,—At 3 is one of the side-pieces of the machine-frame, at 5 a portion of the arm of the work-support, at 6 a relatively raised portion of the work-support at the outer end of the latter, and at 7 a work-rest upon such portion, consisting of a block or pad which may be composed of rubber or other yielding material. The series of type-wheels or type-carriers 15, 15, are mounted in a type-head comprising a top-piece 13 and opposite side-pieces or cheeks 14, 14, the type-wheels or type-carriers being arranged between the said side-pieces or cheeks. The type-head is fastened by screws 32, 32, to the lower end of the type-head carrier 31, the latter being supported by the actuating rocker 34 and radius-arm or link 39, the type-head carrier being connected pivotally with the said rocker and radius-arm or link by center-screws 37, 42, respectively, and the rocker and radius-arm being pivotally mounted upon the machine-frame by center-screws 35, 40. For printing, power is transmitted to the rocker 34 to

depress the type-head carrier, type-head, and type-wheels, and cause the proper printing characters of the said type-wheels to touch the surface of the article supported by the work-rest 7.

All of the parts thus far referred to, and their construction, connections, etc., may be as set forth in my application for United States Letters Patent for stamping, marking, or numbering machine filed June 12, 1907, Serial No. 378,609, the present invention being a division of that of the said application, and the mode of operation may be described in the specification of such application.

The type-wheels 15, 15, are mounted upon a supporting barrel which preferably is composed, as in the application aforesaid, of cylindrical sections 16 and 17, upon the peripheries of which the type-wheels are capable of turning, and the type-wheels are separated from one another and spaced at the proper distance apart by washers 19, 19, also mounted upon the outside of the barrel 16, 17, a washer also being placed at the outside of each of the end type-wheels of the series. The combined series of type-wheels and washers is confined in place upon the barrel by means of rims or flanges 161, 171, with which the respective sections of the barrel are provided. Section 17 fits upon a reduced cylindrical extension 162 of section 16, and the two sections are held together by means of longitudinally-extending screws 22, 22, and expanding spiral springs 23, 23, the said springs being compressed between the enlarged or flanged heads of the screws and the shoulders at the inner ends of the holes which are bored in the section 16 to accommodate the said heads. Each section of the barrel is formed with a groove or key-way 21, to receive the inwardly-projecting bits or keys 20 of the washers, and when the sections are fitted together the grooves or key-ways are in line with each other. As thus constructed and combined, the type-wheels, barrel, etc., form an assemblage which can be handled as a unit, in putting the machine together or in removing or replacing the series of type-wheels. The specific features of the construction form no part of the present invention. The said assemblage is mounted in the type-head on a supporting shaft 18 extending crosswise of the type-head and having bearings in holes formed in the side-pieces or cheeks 14, 14, one of such bearings or holes being marked 14^b in Fig. 9. The said shaft 18 is engaged with the barrel, so as to cause the barrel to turn in unison with the shaft 18, when the latter is turned by hand for the purpose of setting the type-wheels. In this connection I employ for such purpose, and in addition for the purposes of the invention, a projection 25, Fig. 2, ex-

tending radially from the said shaft and constituting a key or the equivalent of a short spline, it entering a notch 26, Figs. 5 and 6 in the extension 162 of section 16. For convenience in turning the shaft 18 by hand, it is furnished with a knurled head 181, Figs. 1 and 2.

It may be explained that the type-wheels are locked in the positions to which they have been adjusted in being set, and are held from undesired turning movement, by means of movable detents 27, 27, which in this instance are mounted upon a pivotal pin 28, Fig. 1, located at the front of the type-head and carried by the side-pieces or cheeks 14, 14, of the latter. One of these detents is provided for each type-wheel. Each detent is provided with an acting portion to correspond with the spaces or notches between successive types or printing-characters of the type-wheel with which such detent coacts, and to engage with the types or printing-characters between which it may be entered, so as thereby to hold the type-wheel from rotation in either direction. The detents are caused to engage with the type-wheels and normally are kept in engagement therewith by means of spring-actuated plungers 29, one for each detent, as in the application aforesaid. Should the shaft 18 be rotated by hand, without any of the detents having been disengaged from the type-wheels, the shaft, barrel, and washers will turn without turning the type-wheels, which last will be kept from moving by the detents. But should one of the detents, or more than one, be disengaged from the corresponding type-wheel or type-wheels, and be kept out of engagement therewith while the shaft 18 is rotated, then such type-wheel or type-wheels will be caused by the frictional engagement of the adjacent washers therewith to turn in unison with the said washers and the shaft relative to the remaining type-wheels, which, continuing to be held by their detents, will remain stationary. These features form no part of the present invention.

In carrying the present invention into effect, and for the purpose of facilitating the removal and replacement of the assembled series of type-wheels bodily from the type-head, and the replacement of such series therein, the cheek or side-piece 14 of the type-head next adjacent the knurled head 181 of shaft 18 is made with a notch 14^a, Fig. 9, opening radially from the bearing hole 14^b that is made for the reception of the shaft 18. This notch is large enough to allow the key or short spline constituted by the pin or projection 25 of the shaft 18 to pass therethrough. To accomplish the withdrawal of the shaft 18, the latter is turned by force applied to the said knurled head 181 until the said pin or projection 25

registers with the notch. and then the shaft is pulled endwise, withdrawing it from the center of the said series of wheels and from the bearings in the side-pieces or cheeks 14, 14, the pin or projection moving through the notch. The withdrawal of the shaft permits the series of wheels to drop or be taken out from between the side-pieces or cheeks. As hereinbefore expressed in part, this capacity for convenient removal of the series of wheels *en masse* is very important, because it enables them to be taken out at any time as a unit and be placed to soak in a liquid that will dissolve out accumulations of ink, thereby enabling the wheels to be kept clean without the labor of brushing them out by hand while in place within the machine, and without the objectionable drawbacks hereinbefore set forth. It provides also for quick replacement of the set of wheels. and for ready substitution of another set of wheels.

What I claim is:—

1. In a stamping or numbering machine, in combination, a series of settable type-wheels and a barrel constituting a carrier therefor, said wheels and barrel secured together and constituting an organized unit removable as a whole and remaining intact after removal, a central support for said unit, rotatable for effecting the setting of said type-wheels, and adapted to be disen-

gaged from the said unit to permit removal thereof as a whole, and a type-head constructed to permit ready removal of said unit after such disengagement without disorganization of said type-head.

2. In a stamping or numbering machine, in combination, a series of settable type-wheels and a barrel constituting a carrier therefor, and on which said type-wheels are respectively rotatable for setting the same, said wheels and barrel combined and secured together to constitute an organized unit removable as a whole and remaining intact after removal, a type-head constructed to permit ready removal and replacement of said unit, and a rotatable shaft occupying bearings in connection with said type-head, passing through said barrel and supporting the latter in working position, serving as a means of turning the barrel and type-wheels in setting the latter, also adapted to be withdrawn to permit the said unit to be removed bodily from the type-head, and provided with locking means for securing it removably in working position.

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

FRANK W. MERRICK.

Witnesses:

C. J. LINTWEILER,
FREDERICK SOMES.