

J. D. SMITH.
Numbering-Machines.

No. 145,598.

Patented Dec. 16, 1873.

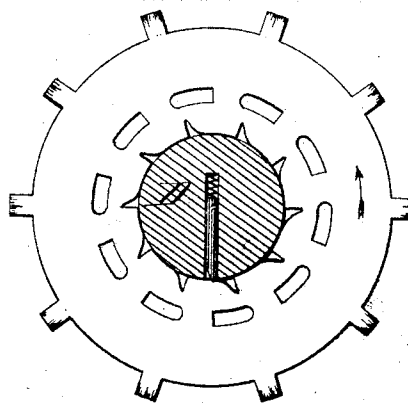
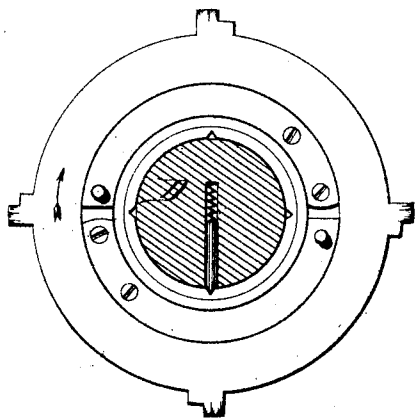
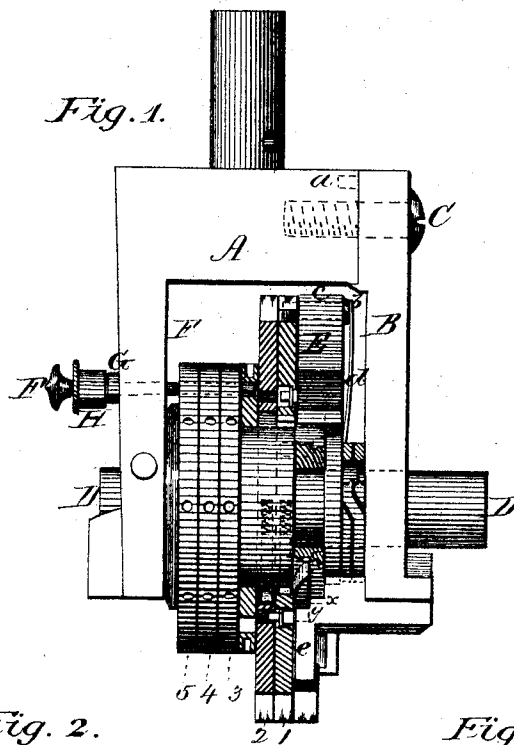


Fig. 4.



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UNITED STATES PATENT OFFICE.

JAMES D. SMITH, OF WASHINGTON, DISTRICT OF COLUMBIA.

IMPROVEMENT IN NUMBERING-MACHINES.

Specification forming part of Letters Patent No. 145,598, dated December 16, 1873; application filed October 2, 1873.

To all whom it may concern:

Be it known that I, JAMES D. SMITH, of Washington, in the county of Washington and District of Columbia, have invented certain new and useful Improvements in Numbering-Machines; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings making a part of this application.

My invention relates to numbering-machines of that class in which a series of disks with numbers on their peripheries are mounted in a bifurcated head or yoke, so as to rotate automatically. It has for its object to facilitate the rotation of the first or governing disk, and consists in the construction and arrangement upon the disk-spindle, and to the right of the series of disks, of a novel device which shall take hold of the projecting type upon the actuating-disk and pull down or rotate such disk, as will be hereinafter more fully set forth; and my invention has also for its object to provide a means for retaining any one or more of the extreme left-hand or high-number disks in any given or fixed relation, and consists in the construction and arrangement upon the left side of the yoke of a novel spring locking-pin, as will be hereinafter more fully set forth.

To enable those skilled in the art to which my invention pertains to more fully understand the same, I will proceed to describe its construction and operation, referring by letters to the accompanying drawing, in which—

Figure 1 is a front view of the yoke, and the various necessary parts secured thereto. Figs. 2 and 3 are side views, with the spindle in section of the first and second disks on the right; and Fig. 4 is a detailed edge view, showing the spring-catch behind the figure 6 on the first disk, which has been drawn around so as to present the figure 1 at the printing-point; this disk being provided with four types only, and arranged to make a quarter-turn each time the yoke ascends.

Similar letters indicate like parts in the several views.

A is the yoke, the right side B of which is adapted to be removed, and is held in proper position by suitable pins, *a*, and a screw, C. D is the spindle, upon which are arranged the

type-disks 1, 2, 3, &c., in the usual manner, except that the No. 1 disk is provided with only four types—viz., 1, 6, 1, 6—alternating, as shown, so that the increase is in the ratio of five, thus adapting the machine to the use of five type-heads, for numbering five notes on a sheet at once, the other type-heads being arranged accordingly. E is the cap which covers the side of the actuating-disk No. 1, and carries the spring-latch *b*, which takes hold of the types behind their printing-faces, and draws or pulls around the disk each time the yoke is elevated. A segment of this disk is cut away to allow the necessary rotation without conflict with the side B of the yoke, which is constructed so that the final character or “star” may be inserted therein. F is a splitting spring, arranged upon the spindle D between the side B of the yoke and the face of the cap E, thus allowing the latter to yield laterally to a slight degree. The cap E projects at *c*, radially, to form a bearing for a latch, *b*, which is suitably headed, and behind which is a pressure-spring, *d*, that shoots the latch toward the center of the yoke. The forward end of the latch *b* is beveled, so that contact with the projecting type will force back the latch until it passes the type, when it will at once shoot forward behind the type, in position to take hold of the posterior side thereof to draw around the disk. F is a locking-pin for holding any one or more of the left-hand disks in any given or fixed position. This pin is located within a tubular bearing, G, arranged within the side of the yoke A. The pin is provided with a suitable shoulder and a spiral spring, to force the pin toward the disks. The tubular bearing G is provided with a screw-head, H, by means of which the distance the pin F reaches toward the center is regulated, and consequently the number of disks it shall penetrate and hold. The point of the pin passes through holes in the sides of the disks, which are but the continuation of the necessary slots provided for the automatic turning-pins of each preceding disk. I have shown in the drawing an incline under each type on disk No. 1, to facilitate the throwing back of the spring-latch *b*; but this may be dispensed with, as I find in practice that it is not absolutely necessary, as the latch strikes

between the face of the type and the edge of the disk, and any slight wear that might take place will not affect the usefulness of the type.

The operation of my machine is as follows: The yoke being properly secured in place, and the cap secured to the pitman, and assuming that an impression has just been made, the yoke is lifted; the latch *b*, being behind the type, necessarily pulls against it, and causes the disk to make its regulated rotation, thus bringing a new type or figure in the printing line. When the yoke descends, the beveled face of the latch comes in contact with the next type, is forced back thereby, and springs into place behind it, ready to act upon the ascent of the yoke. The pin *F* is shown as locking the four left-hand disks, so that the progression shall only be in the ratio of ten, until one hundred is reached, when the pin is released, and the disk representing hundreds is allowed to make one movement, when it is again locked, and cannot, therefore, be accidentally disturbed. Of course, it is only desirable that this locking-pin should be used to retain the disks representing the higher numbers; but it may readily be entirely removed, if necessary, by simply detaching its tubular bearing from the side of the yoke. The side *B* of the yoke, which is preferably made in one piece, is re-

turned at its lower end, forming two right angles, as seen, so that the arm *e* thereof will lie in contact, or nearly so, with the side of disk No. 1, and it is stepped or cut away, as seen at *x y*, to avoid the hub of the cap *E* and the circular plate, which retains the cam upon disk No. 1. The lower end or extremity of arm *d* is adapted to receive a removable character, such as a star, or other suitable device, so that it may be changed without taking the yoke or disk apart.

What I claim as new, and desire to secure by Letters Patent, is—

1. In a numbering-machine having a yoke with rotating disks mounted therein, the cap *E*, with its spring-latch *b*, adapted to take hold of the type of the actuating-disk, and operating in the manner and for the purpose set forth.

2. The locking-pin *F*, constructed substantially as described, and adapted to lock any one or more of the numbering-disks in a given position, for the purpose set forth.

Witness my hand and seal this 11th day of September, A. D. 1873.

JAS. D. SMITH. [L.S.]

In presence of—

WM. C. MCINTIRE,
M. M. ROHRER.