

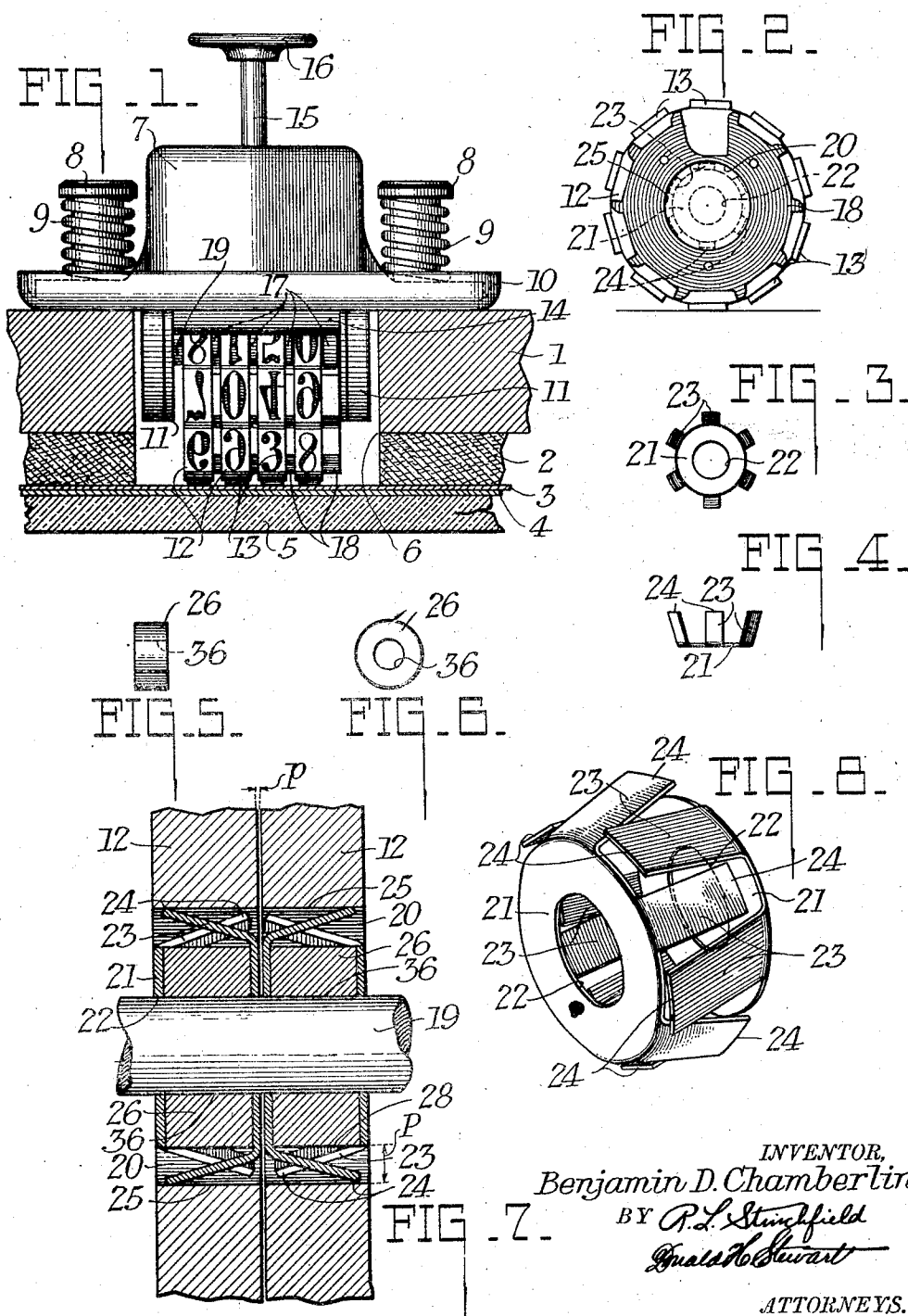
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1,572,233

RESILIENT TYPE DISK NUMBERING STAMP FOR PHOTOGRAPHIC PRINTING MACHINES

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RESILIENT-TYPE-DISK NUMBERING STAMP FOR PHOTOGRAPHIC-PRINTING MACHINES.

Application filed July 21, 1924. Serial No. 727,118.

To all whom it may concern:

Be it known that I, BENJAMIN D. CHAMBERLIN, a citizen of the United States of America, residing at Rochester, in the county of Monroe and State of New York, have invented certain new and useful Improvements in Resilient-Type-Disk Numbering Stamps for Photographic-Printing Machines, of which the following is a full, clear, and exact specification.

This invention relates to numbering machines, particularly to machines wherein a plurality of number carrying disks are mounted upon a single shaft. It has for its object to provide an all metal numbering stamp having individually resilient stamp disks; to provide such a stamp disk which can be quickly and easily assembled; to provide a resilient member for carrying the disk which can be readily applied to the stamp disks now on the market; to provide a resilient support between a shaft and the disk which will permit a universal movement of the disk to a limited degree, and other objects will appear hereinafter from the following specification, the novel features being pointed out in the claims at the end thereof.

This invention is an improvement over the numbering stamp for photographic printing machine shown in Patent No. 1,518,415 issued Dec. 9, 1924, to C. F. Speidel and J. Christie.

As described in the above mentioned patent, the problem of providing a numbering stamp for photographic printers is more difficult than is first apparent due to the stamp having to operate upon a glass plate upon which plates or films of varying thickness may lie, so that undue pressure may fracture the glass or injure the film. The most prolific source of difficulty however is "pressure markings" which are caused by undue pressure desensitizing the photographic light sensitive emulsion of the printing paper. If there is a rubbing action as well as pressure, abrasion markings result. In the first case numbers or parts of numbers will appear lighter than the remainder of the print, and in the second mentioned action—abrasion—the numbers will develop up darker; in both cases the print will be spoiled.

It is therefore necessary to have a firm even pressure, without a rubbing or sliding

contact, and a resilient mounting for each disk is desirable to overcome the uneven and inaccurate spacing of the characters on the disk. Such variations occurring in the ordinary commercial stamps are immaterial since the stamps are actuated with a force which is not permissible in a photographic printer.

In the drawings, wherein like reference characters denote like parts throughout:

Fig. 1, is a part section and part elevation, showing a stamp constructed in accordance with and illustrating a preferred embodiment of my invention;

Fig. 2 is an elevation of a stamp disk used with the stamp shown in Fig. 1;

Figs. 3 and 4 are respectively a plan view and a side elevation of my spring washer;

Figs. 5 and 6 are respectively a side elevation and a plan view of a washer spacer;

Fig. 7 is a section through a portion of a stamp showing several stamp disks positioned on a shaft; and

Fig. 8 is a perspective view of a pair of spring washers in their assembled relation.

Since this invention is concerned with the individually resilient mounts for the stamp disks, and not the completed stamp as a whole, only such parts of the stamp will be described as are necessary for understanding my invention.

Reference may be had to the above noted patent for further details of the entire stamp.

Referring to Fig. 1, a printing machine platen 1 faced with the usual felt 2 is adapted to press a sheet of photographically light sensitive paper 3 against a negative 4 lying on the glass printing panel 5. The platen and felt are apertured at 6 to receive a numbering stamp, the body 7 of which is carried by studs 8 about which springs 9 are mounted to press flange 10 downward resiliently. Downwardly extending flanges 11 carry disks 12 upon a shaft 19, and the disks carry characters 13 which may be turned in the usual manner by a yoke 14 operated by plunger 15 through a handle 16, and having hooks 17 engaging the ratchet 18 of the stamp disks.

Each stamp disk 12 is individually resilient, and all are similar. The disk 12 is centrally apertured at 20 to receive the resilient mount and the shaft 19. This mount consists of washers 21 centrally apertured

at 22 to embrace shaft 19 and having a plurality of spring fingers 23, here shown as six in number. These fingers are bent at an angle to the face of the washer in such a manner that a washer may be thrust into aperture 20 of disk 12 with the finger tips 24 engaging the wall 25 of the aperture. A spacer 26 also apertured at 36 to receive shaft 19 is next laid on the washer after which a second washer 21 is placed against the spacer. The assembled relation of the washers is indicated in Fig. 8 where the fingers are shown on one washer as extending between the fingers of the other washer, and the disk supporting ends 24 lie to one side of the plane of the washer 21.

In Fig. 7 the disks 12 are shown as being carried and supported by the tips 24 of fingers 23, and these tips are spaced at intervals on alternate sides of the wall 25 of aperture 20. Thus a slight sideways as well as considerable up and down movement of the disk is permitted. The sideways movement is of course limited by the spacing *p* between the disks and the up and down movement by the space *P* between the periphery 28 of spacer 26 and wall 25 of aperture 20 plus the thickness of a spring arm 23, although in use the actual movement of these members is not nearly as great as the possible movement.

The thickness or width of the spacers 26 is such that the total width of the spacers and two washers is preferably approximately that of the disk, so that these mounts may be applied to a rigid stamp by merely reaming out the disk opening to the desired size. Also it is preferable to have the spring arms 23 as long as possible so that the tips 24 are bent considerably to one side of the plane of the washer 21.

Having thus described my invention, what I claim as new and desire to secure by Letters Patent is:

1. In a numbering stamp for photographic printing machines, the combination with a shaft, a plurality of type disks supported thereon, of individually resilient mounts for each type disk including a washer adapted to engage the shaft, said washer having resilient portions adapted to engage the disks.

2. In a numbering stamp for photographic printing machines, the combination with a shaft, a plurality of type disks supported thereon, of individually resilient mounts for each type disk including an annular washer adapted to engage the shaft and having resilient portions spaced about its periphery adapted to engage the type disk.

3. In a numbering stamp for photographic printing machines, the combination with a shaft, a plurality of type disks supported thereon, of individually resilient mounts for each type disk including a pair of spaced annular washers adapted to engage the shaft,

said washers having a plurality of spring fingers adapted to engage the type disk.

4. In a numbering stamp for photographic printing machines, the combination with a shaft, a plurality of type disks supported thereon, of individually resilient mounts for each type disk including a pair of spaced annular washers centrally apertured, and having a plurality of spaced spring fingers about the periphery, said spring fingers of one washer lying between the spring fingers of the other washer, the spring fingers and the central apertures of the washers adapted to engage the type disk and the shaft respectively, whereby the former will be resiliently supported with respect to the latter.

5. In a numbering stamp for photographic printing machines, the combination with a shaft, a plurality of type disks supported thereon, of individually resilient mounts for each type disk including a pair of spaced annular washers centrally apertured, and having a plurality of spaced spring fingers about the periphery, and means for spacing the two washers upon the shaft, the spring fingers being bent at an angle to the washers and being adapted to support the type disk.

6. A type disk for a numbering stamp including an annular type carrying member supported upon an annular resilient metal member.

7. A type disk for numbering stamps including an annular type carrying member carried by an annular washer having a plurality of spring fingers spaced about its periphery.

8. A support for a type disk for printing stamps including a washer having a plurality of spring fingers, said spring fingers being bent at an angle from the washer.

9. In a numbering stamp for photographic printing machines, the combination with a main support, of a shaft carried by the support, a plurality of type carrying disks mounted thereon, each disk being mounted on a plurality of spring fingers carried by a washer, said washer and type disk lying in parallel planes, and the spring fingers contacting with the type disk in a plane spaced from the plane of the washer.

10. In a numbering stamp for photographic printing machines, the combination with a main support, of a shaft carried by the support, a plurality of type carrying disks mounted thereon, each disk being mounted on a plurality of spring fingers carried by a pair of washers, the spring fingers of one washer supporting one side of the type disk and the spring fingers of the other washer supporting the other side of the type disk whereby sideways as well as up and down movement of the type disk with respect to the shaft will be permitted by the spring fingers.

11. In a numbering stamp for photographic printing machines, the combination with a main support, of a shaft carried by the support, a plurality of type carrying disks mounted thereon, each disk being
5 mounted on a plurality of spring fingers carried by a pair of spaced washers, one washer lying adjacent to each side of the type disk and having its spring fingers bent
10 toward the opposite side whereby one side of the stamp disk is supported by spring fingers bent from a washer lying adjacent the opposite side of the disk.

12. In a numbering stamp for photographic printing machines, the combination with a main support, of a shaft carried by the support, a plurality of type carrying
15 disks mounted thereon, each disk being mounted on a plurality of spring fingers
20 carried by a pair of spaced washers, the

spring fingers being bent from the peripheries of the washers and being spaced apart, one washer being adapted to lie adjacent each side of the type disk with its spring fingers extending toward the opposite
25 washer.

13. In a numbering stamp for photographic printing machines, the combination with a main support, of a shaft carried by the support, a plurality of type carrying
30 disks mounted thereon, each disk being mounted on a plurality of spring fingers lying in crossed relation carried by a pair of spaced washers, the spring fingers of one
35 washer extending between the spring fingers of the other washer.

Signed at Rochester, New York, this 17th day of July, 1924.

BENJAMIN D. CHAMBERLIN.