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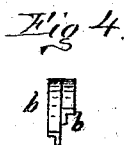
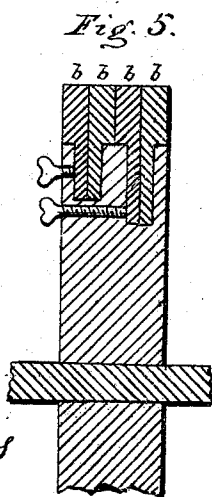
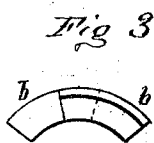
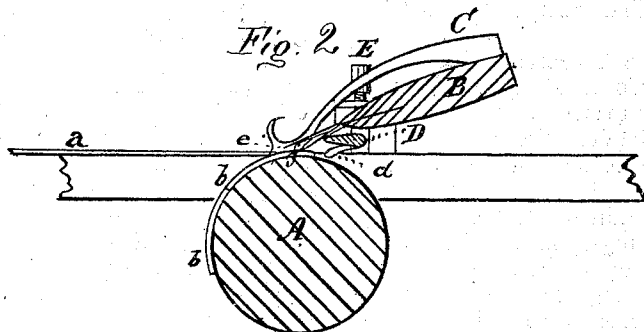
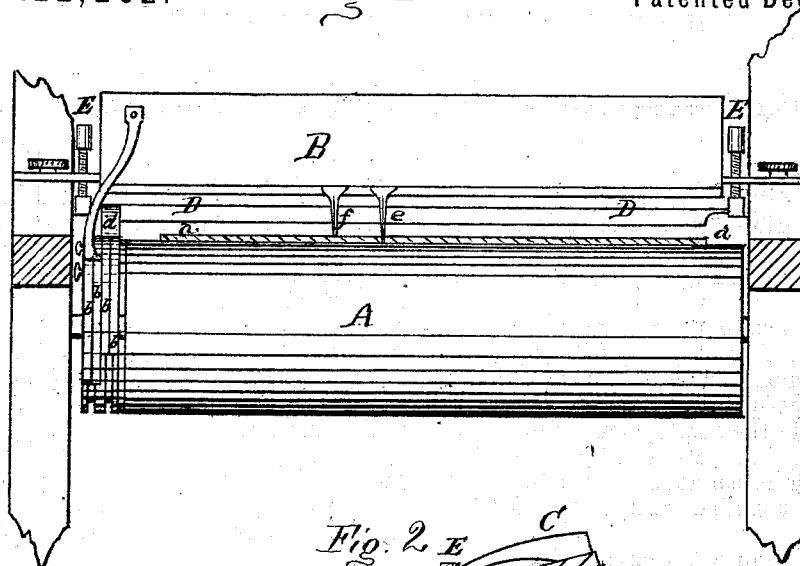
D. W. LANDVOIGT.

Ruling Machine.

No. 122,262.

Fig 1

Patented Dec. 26, 1871.



Witnesses
Chas. L. Coombs
W. H. Holey

Inventor
D. W. Landvoigt

UNITED STATES PATENT OFFICE.

DORUS W. LANDVOIGT, OF WASHINGTON, DISTRICT OF COLUMBIA.

IMPROVEMENT IN RULING-MACHINES.

Specification forming part of Letters Patent No. 122,262, dated December 26, 1871.

SPECIFICATION.

Specification describing certain Improvements in Machines for Ruling Paper, invented by DORUS W. LANDVOIGT, of Washington, in the District of Columbia.

My invention relates to an improvement upon a patent granted to J. F. Tapley of Springfield, Massachusetts, January 21, 1868, for certain improvements in paper-ruling machines; and my invention consists in the employment of an independent pen-lifting bar, actuated by an adjustable extensible cam in connection with the pen-beam, actuated by a similar cam, as hereinafter described.

In the drawing, Figure 1 represents a transverse section of a portion of a ruling-machine immediately in front of the driving-cylinder, showing the pen-clamp and the vibrating rod. Fig. 2 is a longitudinal section through a portion of a ruling-machine, showing my invention; and Figs. 3 and 4 are views of the adjustable cam.

A represents the driving-cylinder of the machine, and *a* the cloth upon which the paper travels, said cylinder having at one end a series of recesses in which the cams *b b* are clamped, as in the patent above referred to. B is the pen-clamp, which is mounted in the usual manner and actuated by means of the cams *b b* through the medium of the arm or lever C, Fig. 2. D is a flat rod or bar, having journals at its inner edge on each end, and mounted similarly to the pen-clamp B, and so arranged by means of an arm, *d*, which falls over the cams *b b*, as to have a motion similar to the pen-clamp. The said rod is secured in adjustable bearings at each side of the machine, and can be adjusted longitudinally in order to bring its arm over any of the cams, as may be desired. The said rod extends across the machine a little below and in front of the clamp, and can be adjusted either vertically or horizontally by means of set-screws E E, so as to

bring its outer edge against the pens in the clamp. It will be seen that when the edge of the rod D is raised it will lift the pens which rest against its edge from the paper independently of any motion of the pen-clamp. By having a series of long pens, *e*, and short pens, *f*, in the clamp, as shown, the long pens overreaching the edge of the rod D, and the short pens resting against said edge, it will readily be seen that two heads may be struck automatically at different places on the paper, one by the short pens operated by the bar D, and the other by the long pens, which are lifted and dropped by the pen-clamp B, thus greatly increasing the usefulness and capacity of the machine.

The cams *b b* in the patent referred to consist of solid segments of metal conforming to the periphery of the driving-cylinder, and constructed so as to be clamped in the recesses in the end of said cylinder, as fully described in said patent.

My cam consists of a similar segment, divided longitudinally, as shown, and so arranged that the parts may be extended or set together longitudinally, which will increase or diminish the length of the cam, as shown by the dotted lines in the drawing.

By so constructing the cams one will serve the purpose of many, thus materially diminishing the expense of a machine, and making it much more convenient to manipulate.

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

The vibratory pen-lifting plate D, pivoted in adjustable bearings E and actuated by the extensible cam *b b* independently of the cam-actuated pen-clamp B, substantially as and for the purposes herein described.

D. W. LANDVOIGT.

Witnesses:

CHAS. L. COOMBS,
J. SERGEANT BLANKMAN.

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