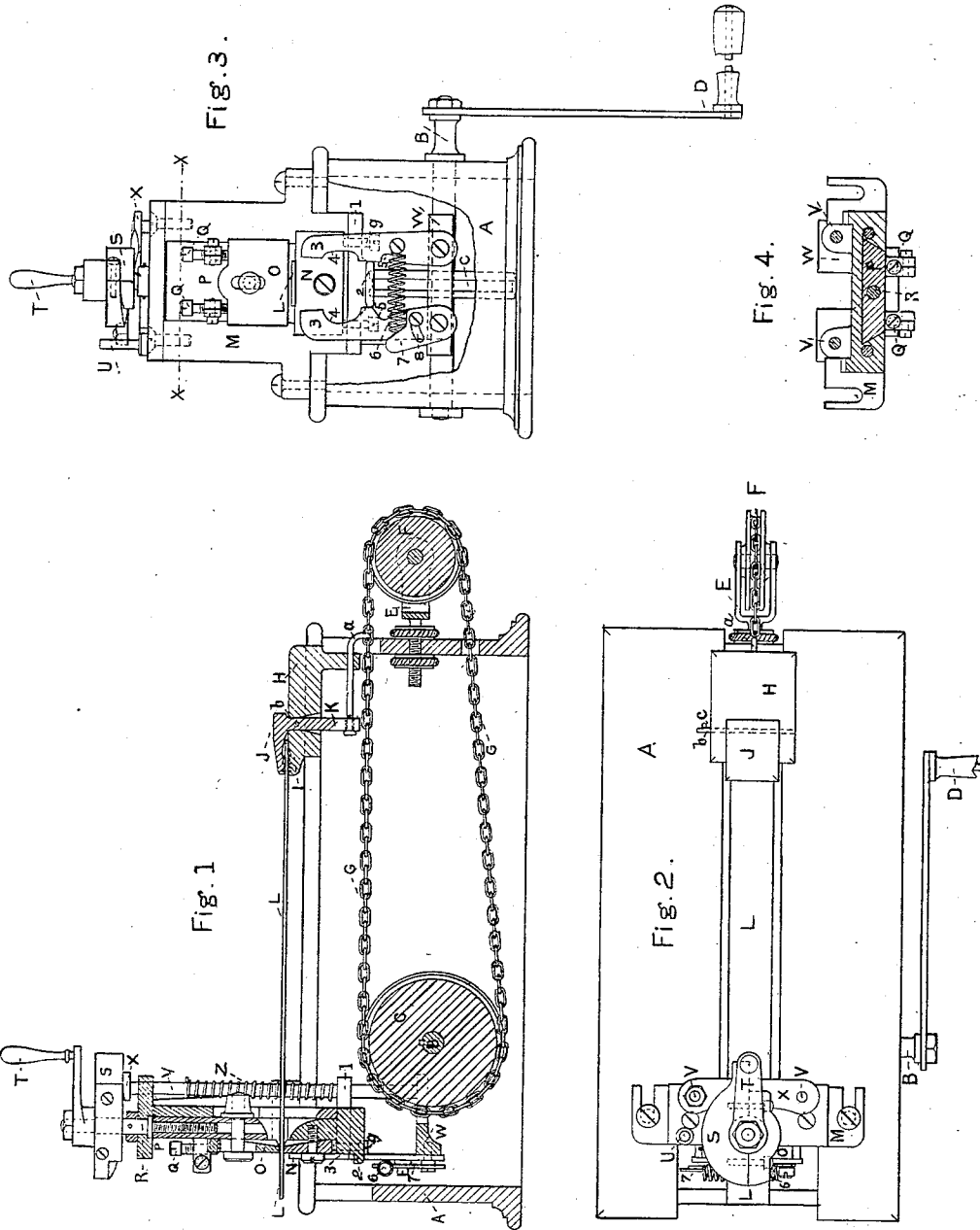


A. NIELSEN.

Machines for Dressing Printers' Rules.

No. 148,896.

Patented March 24, 1874.



WITNESSES.

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UNITED STATES PATENT OFFICE.

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IMPROVEMENT IN MACHINES FOR DRESSING PRINTERS' RULES.

Specification forming part of Letters Patent No. **148,896**, dated March 24, 1874; application filed
January 19, 1874.

To all whom it may concern:

Be it known that I, ALFRED NIELSEN, (assignor to FARMER, LITTLE & Co.,) of Brooklyn, Kings county, New York, have invented, made, and applied to use a new and useful Machine for Dressing Printers' Leads and Brass and Metal Rule; and that the following is a full, clear, and correct description thereof, reference being had to the accompanying drawing making part of this specification, and to the letters of reference marked thereon, in which—

Figure 1 is a vertical sectional view of my machine. Fig. 2 is a top view of the same. Fig. 3 is a front view of the same. Fig. 4 is a horizontal section through the line X X, Fig. 3.

In the drawing like parts of the invention are pointed out by the same letters of reference.

The nature of the present invention consists in the construction, as more fully hereinafter set forth, of a machine for dressing printers' leads and brass and metal rule, the object of the invention being the construction of a machine for such purposes that shall accomplish the work rapidly and effectually at a low cost.

To enable those skilled in the arts to make and use my invention, I will describe its construction and operation.

A shows a frame for supporting the operative parts of the machine; and B is a shaft inserted in said frame, having keyed upon it a grooved wheel, C, and attached at one end a crank or handle, D. At the rear end of the machine, supported by a loop, E, is placed a second grooved wheel, F, and over this wheel and the wheel C is passed the endless chain or belt G. The frame A is slotted about centrally to receive and allow of the passage of a plate or block, H, to the forward end of which is attached permanently a lower nipper, I, over which is placed an upper nipper, J, provided with a foot or elongation, K, passed through the block or plate H, and connected at its lower end to the chain G by means of a hook, a. This arrangement and construction of the upper nipper J is chosen that as movement is imparted to the chain or belt G the foot or elongation K will be drawn forward sufficiently to close the upper nipper J upon the lead or brass or metal rule L, and thus the

lead or rule, held tightly between the upper and lower nippers, will be drawn through the machine. The upper nipper J is free to turn upon a pin, b, passed through its elongation or support and the plate or block. A stop, c, upon the frame is employed to govern the extent of movement of the block or plate by the contact of the pin b against it. At the forward end of the frame A is secured a framework of metal, M, in which is secured a lower cutting-surface, N, made adjustable by screws g bearing upon its lower surface, and an upper cutting-surface, O, secured upon a plate, P, and slotted to receive a screw passed through the slot and into the plate P. The upper cutting-surface O may be adjusted to the extent of the slot in it by means of the regulating-screws Q, having a bearing upon its upper surface, and is thus adjusted to leads or brass or metal rules of different thickness. A threaded spindle, R, is also inserted into the upper portion of the frame M and plate P, and upon the upper end of the same is secured a cam, S, and crank or handle T, the object of which is more fully explained hereinafter. U is a pin or stop secured in the upper portion of the frame M for stopping the cam S. V are rods passed through the upper portion of the frame M, and having their lower ends fastened in a plate, W, while over their upper ends is passed a yoke, X, against which the cam S has a bearing. Over one of the rods V is passed a spiral spring, Z, held between a pin inserted in the rod and a boss upon the plate 1. 1 shows a plate secured to the under side of the frame M, and provided about centrally with a lip, 2. W is a plate of metal, into which the lower ends of the rods V are secured, and upon the face of which are hinged the cutting-surfaces 3, for trimming or dressing the edges of the leads or brass or metal rules. These cutting-surfaces 3 consist of plates of metal provided with the curved openings 4, and between them the lead or brass or metal rule to be dressed upon its edges is brought into contact, and the curved openings 5, which have a bearing, during the operation of the machine, upon the ends of the lip 2, and thus cause the upper or top ends of the cutting-surfaces 3 to approach each other, and have a

bearing upon the edge of the lead or brass or metal rule to be dressed. A spiral spring, 6, is connected at one end to one of the cutting-surfaces 3, and its opposite end is passed over a pin secured in a plate, 7, provided with an opening, 8, through which is passed a screw, and by loosening this screw and moving the plate 7 either one way or the other, and tightening the screw, the tension of the spring 6 is regulated, and through the spring the extent of bearing of the cutting-surface 3 upon the edge of the lead or brass or metal rule.

Such being the construction, the operation may be thus described: The cutting-surfaces N and O are first regulated to the thickness of the lead or brass or metal rule to be dressed by turning the cam S upon the spindle R toward the pin U, and then fastening it and the set-screw *q*, bearing upon the under side of the cutting-surface N. The bearing of the cutting-surfaces 3 upon the edges of the lead or brass or metal rule is also regulated by tightening or loosening the spiral spring 6, by adjusting the plate 7, provided with the opening 8, and tightening the screw having a bearing in the same. The nippers I and J are then brought directly behind the cutting-surfaces N and O by turning the handle D upon the shaft B, and thus moving the chain or belt G in the proper direction. The lead or brass or metal rule has one end passed through the cutting-surfaces N and O, and inserted between the nippers I and J. With the lead or rule in this position, the handle T, attached upon the upper end of the spindle R, and upon which spindle R the cam S is secured, is turned until the projecting end of the cam S is brought against the stop U. By this movement of the spindle R the upper cutting-surface is depressed sufficiently to shave the lead or rule upon its upper side as it is subsequently drawn through the machine, and the lower cutting-surface to shave or dress its under side during the same operation. By this movement of the spindle R the cam S is relieved from its bearing upon the yoke X, connecting the rods V at their upper ends,

and by the expansion of the spring Z the rods V rise, carrying with them the plate W, upon which the cutting-surfaces 3 are hung. The cutting-surfaces 3 are elevated, and the recessed portions 5 of the cutting-surfaces 3 receiving the ends of the lip 2, their straight portions are brought into contact with the edges of the lead or rule to be dressed. Motion is now imparted through the handle D upon the shaft B to the chain or belt G, and the upper nipper J, constructed and connected to the chain or belt G as already set forth, is closed firmly upon the end of the lead or rule inserted between it and the lower nipper, I, and as the lead or rule is drawn through the cutting-surfaces it is dressed or shaved upon both sides and upon its edges. When the chain or belt has been drawn a proper distance through the machine, the pin *b*, passed through the block or plate H, is brought into contact with the stop C, and as the movement of the handle D is reversed the upper nipper is tripped and releases its hold upon the lead or rule, which may be removed from the machine, and the nippers having been run forward to their former position, the operation first described may be repeated.

Having now set forth my invention, what I claim as new is—

1. The combination of the chain or belt G with the nippers I and J and the cutting-surfaces N and O, constructed to operate substantially as and for the purposes set forth.

2. The combination of the chain or belt G with the nippers I and J, the cutting-surfaces N and O, cutting-surfaces 3, rods V, cam S, springs Z and 6, yoke X, and plate having upon it the lip 2, constructed and operating substantially as and for the purpose set forth.

3. The combination, with the chain or belt G, of the nippers I and J, foot K, and hook *a*, as and for the purpose set forth.

ALFRED NIELSEN.

Witnesses:

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FRAS. DOMINICK.