

G. DAMON & E. S. PEETS.
MACHINE FOR SHAVING PRINTERS' LEADS.

No. 454,153.

Patented June 16, 1891.

FIG. 2.

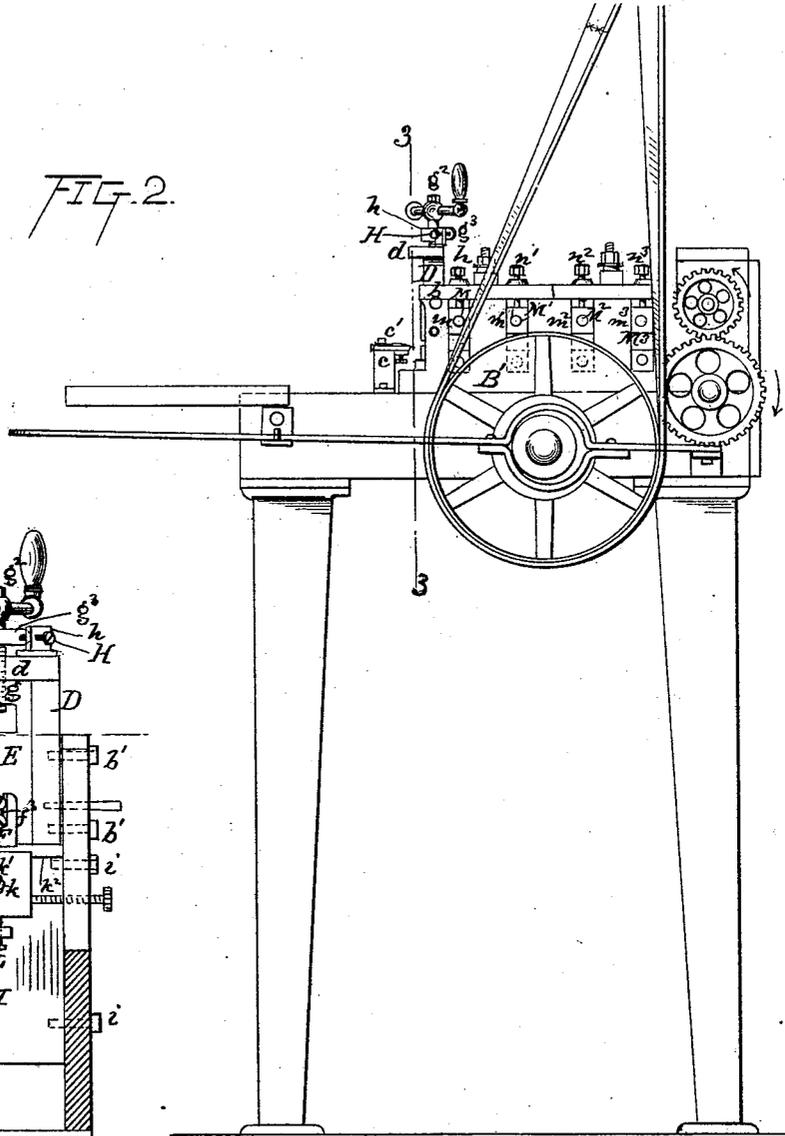


FIG. 3.

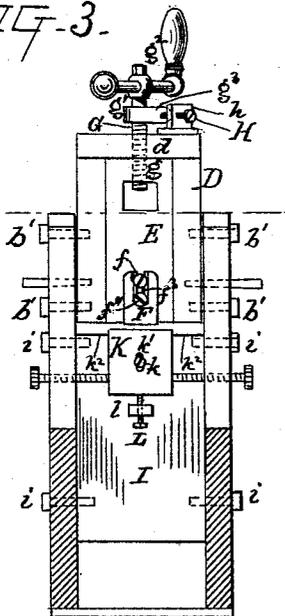
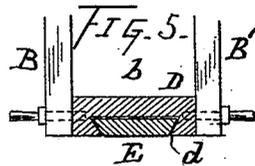
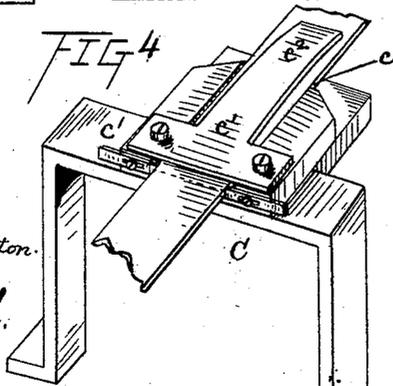


FIG. 4.



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(No Model.)

3 Sheets—Sheet 3.

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FIG. 6.

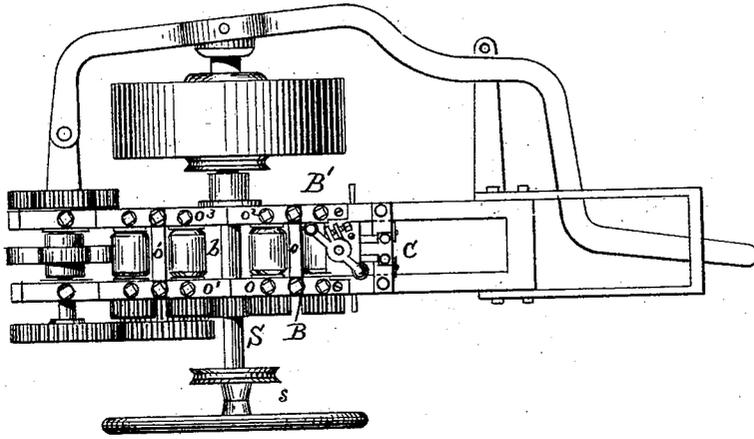
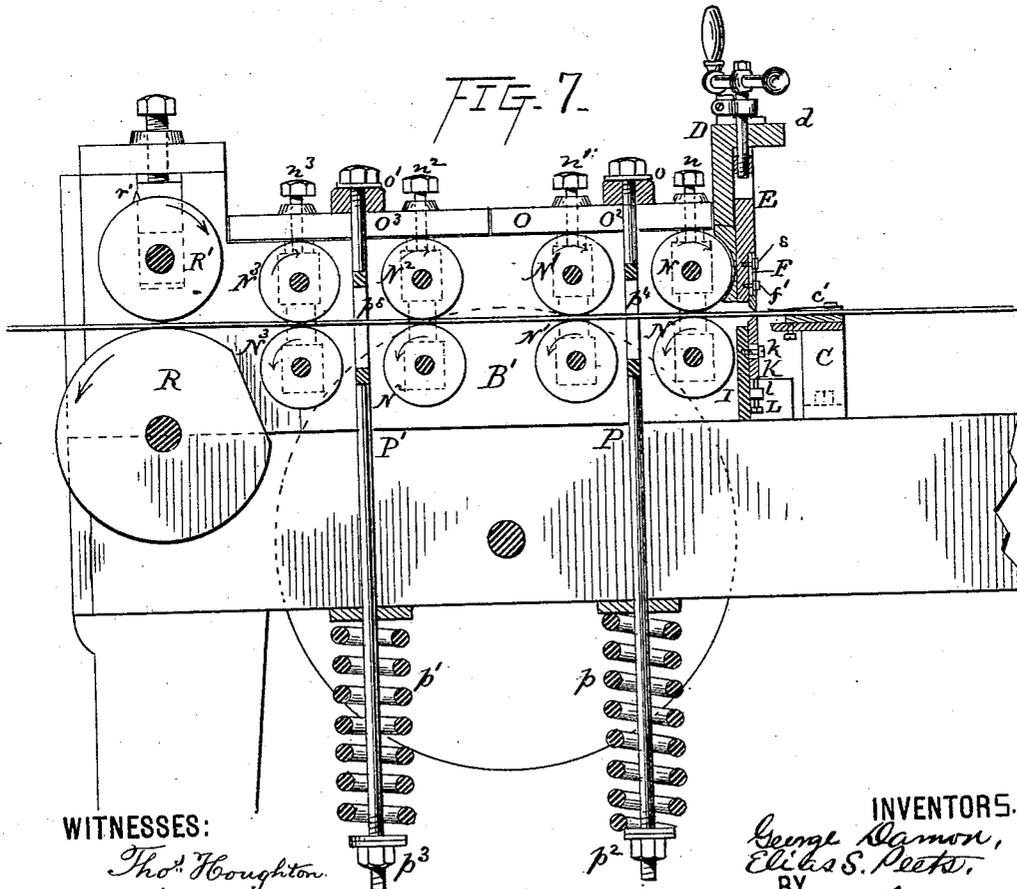


FIG. 7.



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UNITED STATES PATENT OFFICE.

GEORGE DAMON, OF CRANFORD, NEW JERSEY, AND ELIAS S. PEETS, OF
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MACHINE FOR SHAVING PRINTERS' LEADS.

SPECIFICATION forming part of Letters Patent No. 454,153, dated June 16, 1891.

Application filed November 14, 1890. Serial No. 371,441. (No model.)

To all whom it may concern:

Be it known that we, GEORGE DAMON, of Cranford, county of Union, and State of New Jersey, and ELIAS S. PEETS, of the city, county, and State of New York, citizens of the United States, have invented certain new and useful Improvements in Machines for Shaving Printers' Leads; and we do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

Figure 1 is a side view opposite to the power side. Fig. 1^a is an enlarged detail. Fig. 2 is the opposite or power side. Fig. 3 is a vertical section on line 3 3, Fig. 2. Fig. 4 is a detail perspective of the clamping-guide for the strip and the edge-cutters. Fig. 5 is a section on line 5 5, Fig. 3. Fig. 6 is a top view, and Fig. 7 is a longitudinal section.

This invention relates to improvements in machines for shaving printers' leads, the object of the present invention being to produce a machine wherein the leads in a continuous strip or ribbon may be fed and shaved on top, bottom, and sides at one continuous operation.

The invention consists in a machine having the construction hereinafter pointed out.

In the annexed drawings, the letter A indicates a suitable stand having at its top the vertical side frames B B', with the space *b* between them. In front of these frames is a guide C. This guide has a top channel *c*, adapted to the strip or ribbon, and above this channel is fastened a spring-plate *c'*, with its free end *c''* toward the side frames B B'. At the sides of the channel *c*, to the front of the guide C, are secured the edge-cutters C' C', made adjustable, as shown. Rising from the end of these frames back of the guide C is a bracket D, the upper end *d* of which extends out toward the guide. This bracket D is held between the frames B B' by pins or bolts *b' b'*. The bracket has a vertical way *d'*, which is dovetail-shaped in cross-section, as shown in Fig. 5, and in this way is placed the upper cutter-head E, carrying at the bottom the upper cutter or knife F. This knife F is held adjustably to the head E by the screws *f f'*, which pass through a groove *f''* in

the cutter and take into the head. Passing down through the upper end *d* of the bracket D is a set-screw G, threaded on its lower end *g*, which takes into the upper end of the cutter-head E. At the top this screw passes through an eye *g'* and has a handle *g''*. This eye *g'* is rigidly secured to the screw G and has a tail or projection *g'''*. In proper correlation with this tail-piece *g'''* a gage-guide *h* is secured to the top of the bracket D, and through the gage-guide *h* passes a gage-screw H, threaded in this gage-guide and having its end bearing against the tail *g'''*, by which means the adjustment of the screw G is maintained. Just below and aligned with the upper cutter-head E is the lower cutter-head I, held in place by the bolts or screws *i*. Adjustably secured to this cutter-head I is the lower cutter or knife K by the screw *k* passing through the vertical slot *k'*. Adjusting-screws *k'' k''* bear against the sides of the lower cutter, and a screw L, passing through an eye *l* on the cutter-head I, bears against the under side of the cutter K.

In the side frames B B' and opposite, so as to be in pairs, are the housing-guides *m m' m'' m'''*, and in these fit the boxes M M' M'' M''', in which are journaled the pairs of rollers N N' N'' N''', the bites of these rollers being in the plane of the edges of the cutters E and K. Bearing on the tops of the top boxes of these rollers are set-screws *n n' n'' n'''*, and they are held in pairs by yoke-bars O O' O'' O'''. Tie-bars *o o'* connect in pairs the opposite yoke-bars, as shown. Passing down through the shaver and between the pairs of rolls are two rods P P'. These rods are connected to the tie-bars *o o'* at the top and carry at their lower ends springs *pp'*, which bear between the bottom of the stand and adjusting-nuts *p'' p'''* on the rods. These rods P P' are made with loops *p'' p'''* in line with the rolls. This arrangement of the top rolls, the yoke-bars, tie-bars, and rods with the springs exerts a yielding pressure on the strip of metal. At the rear end of the stand A and in the frames B B' are journaled the severing-rolls R R', having a ratio of two to one. The lower roll R is the larger and has the flat place *r*. The upper roll R' is adjustable vertically and has

the knife r' on its periphery. At every other revolution this knife comes opposite the flat place r of the roll R and does not cut the strip. The periphery of the roll R is of a length to give the proper length to the lead.

The various rolls described have their shafts connected by suitable intermeshing gear-wheels, and are all driven by the main shaft S, on which is the power-wheels, connected up to suitable driving mechanism.

In use the various parts are adjusted for the proper size of lead. The lead X is a continuous strip and is fed through the guide C where the knives C' C' trim its edges. Then between the knives F and K, which trim or smooth its faces or top and bottom. It then is drawn by the rolls through the loops $p^4 p^5$ and fed to the severing-rolls R and R'. At every second revolution of the roll R' the knife r' severs a piece of the strip, making a completed lead of the proper length. With such a shaver and such a method of using it there is no waste, the slight amount taken off by the cutters being practically nothing. The leads are cut the exact length at once. At the same time

they are trimmed at one operation, requiring no rehandling.

Having described our invention, what we claim is—

1. The combination of the edge-cutters, the top and bottom cutters, the feeding-rolls, and the severing-rolls, as set forth. 30
2. The top cutter and its head, in combination with the supporting-bracket, the adjusting-screw, and the screw-gage, as set forth. 35
3. The feeding-rolls arranged in pairs, the yoke-bars, the tie-bars, and the rods carrying the springs, as set forth.
4. The combination of the spring-guide C, the top, bottom, and side cutters, and the yielding feeding-rolls and severing-rolls, as set forth. 40

In testimony whereof we have affixed our signatures in presence of two witnesses.

GEORGE DAMON.
ELIAS S. PEETS.

Witnesses:

CLARENCE H. MINER,
LEWIS M. SWEET.