

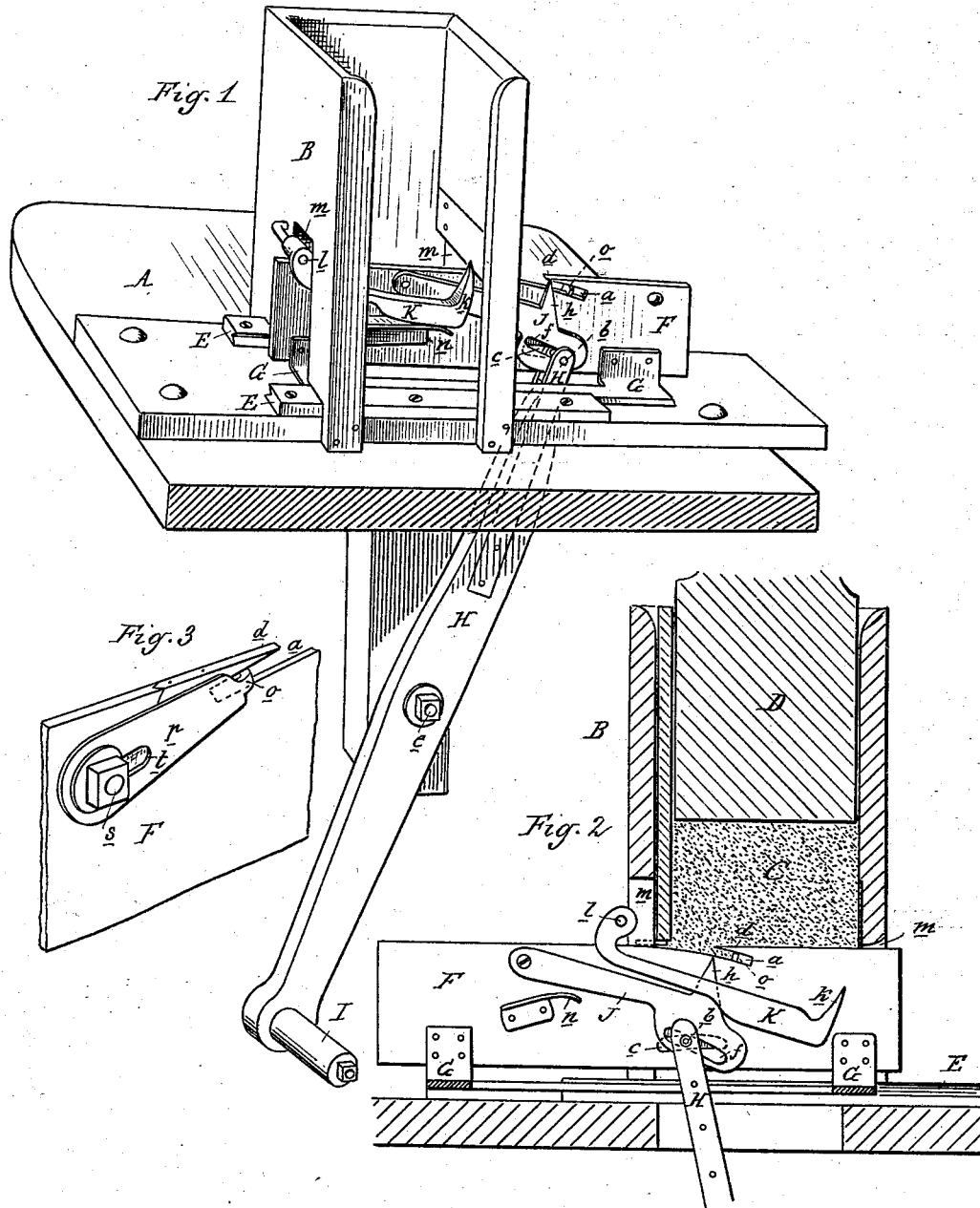
(No Model.)

L. STRICKEL.

BRUSH PUNCHING MACHINE.

No. 261,273.

Patented July 18, 1882.



Attest:

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UNITED STATES PATENT OFFICE.

LOUIS STRICKEL, OF DETROIT, MICHIGAN.

BRUSH-BUNCHING MACHINE.

SPECIFICATION forming part of Letters Patent No. 261,273, dated July 18, 1882.

Application filed December 28, 1881. (No model.)

To all whom it may concern:

Be it known that I, LOUIS STRICKEL, of Detroit, in the county of Wayne and State of Michigan, have invented new and useful Improvements in Brush-Bunching Machines; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, which form a part of this specification.

The nature of this invention relates to certain new and useful improvements in the construction of cheap, durable, and efficient machines for delivering bunches of bristles of uniform size to the operator to be sewed or otherwise secured to the head of a brush. Before machines of this class were put into use it was common to make such bunches by hand, and great skill and experience were required to so gather these bristles that the bunches would be uniform in size, the latter being a necessity in all well-made brushes. To obviate this difficulty is the object of the invention hereinafter described.

The invention consists in the peculiar construction and operation of parts and their combinations, as more fully hereinafter set forth.

Figure 1 is a perspective view of my machine with one side of the case removed and the plunger not inserted. Fig. 2 is a vertical section, showing the bristle-stock in place in the case pressed down by the superincumbent plunger. Fig. 3 is an enlarged sectional detail, showing an adjustable attachment on the rear side of the reciprocating plate.

In the accompanying drawings, which form a part of this specification, A represents a table which supports the operating devices of the machine. B is a hopper resting upon said table, within which the bristle-stock C strains, so that all the bristles lie in one direction, and upon which the plunger-weight D rests to hold such stock in position. Upon the table, and at the bottom of the hopper, are the guides E; and F is a plate of thin metal, to the bottom of which are secured on each side slides G, which engage with the guides E, and such plate F is adapted to receive a reciprocating motion, as hereinafter described. Near the top edge of this plate F there is cut a recess, *a*, as shown in the figures, leaving a tooth or sharpened tongue, *d*. In the plate there is

cut a slot, *c*, through which passes a pin, *b*, in the head of the lever H, which is pivoted by means of the bolt *e* to any convenient part of the table or frame, so that as the foot of the operator upon the treadle I forces such treadle backward or forward it communicates a reciprocating motion to the plate F. Pivoted to the side of this plate F is the dog J, as shown in Fig. 1, and this dog is provided with a slot, *f*, through which the pin in the head of the lever H passes, as well as through the slot in the plate F; and this dog is provided with a tooth or stop, *h*.

K is another dog, provided with a tooth, *k*, and this dog is pivoted, as shown at *l*, to the hopper, which is provided in its two opposite sides with openings *m*, to allow of the reciprocation of the plate F through the center of the hopper and the withdrawal of limited quantities of the bristle-stock.

n is a detent upon the side of the plate F, to hold up the free end of the dog K.

In operation, the hopper being filled partially with the bristles, the plate F, in its reciprocation, is carried into the hopper until the slot *a* is filled with bristles, and the reverse motion of the plate, by means of the treadle and lever, throws up the tooth of the dog J to part the bristles within the slot from the mass in the hopper and hold them in place, while the plate withdraws the bunch from the hopper, and the same movement throws up the dog K with its tooth *k* to retain the balance of the bristle from following the motion of the plate.

The slot *a* is provided with an adjustable stop, *o*, such stop being the tongue of a plate, *p*. (Shown in Fig. 3.) This plate is secured to the plate F by means of the bolt *s* passing through the latter-named plate to the slot *t* in the plate *p*. This adjustability and stop is for the purpose of increasing or diminishing the size of the bunches as may be desired.

The tongue or slot *d* is made of a separate piece, as shown in Fig. 3, and secured to the top of the plate F by suitable screws. This is for the purpose of allowing this part *d* to be removed for sharpening when required or to be replaced when worn out.

What I claim as my invention is—

1. In a brush-bunching machine, a reciprocating plate having an inclined slot and means

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for adjusting its capacity at will, a detent for holding the bristles in the slot during the withdrawal, and a hook adapted to automatically prevent the withdrawal of the bristles not confined in the slot, as set forth.

5 2. In combination with the reciprocating plate F, provided with an inclined slot, *a*, and means for adjusting the capacity of said slot, the pivoted dog J, the treadle H, and suitable
10 connections between the treadle, the dog, and the plate, whereby the movement of the treadle will impart a horizontal movement to the plate and a horizontal and vertical movement to the dog, substantially as described.

15 3. The reciprocating plate F, provided with an inclined slot, *a*, an adjustable stop, *o*, and a pivoted dog, J, in combination with the dog K, the hopper B, the detent *n*, and suitable means for imparting movement to the plate F,
20 substantially as described.

4. The plate F, having slot *a*, stop *o*, and slot *c*, and the dog J, having the hook *h* and

inclined slot *f*, combined with the treadle H and hopper, as and for the purposes set forth.

5. The reciprocating plate F, having slot *a*,
25 stop *o*, and spring-stops *n*, combined with the dog K, having hook *k*, adapted to be thrown automatically into operation as the plate is withdrawn, as specified.

6. The combination of the plate F, dog J,
30 stops *n*, lever H, dog K, and adjusting-stop *o*, as set forth.

7. In a device for the purpose described, and in combination with the plate F, dog J, and lever H, the dog K, the parts being constructed,
35 arranged, and operating substantially as and for the purpose specified.

In witness that I claim the foregoing described invention I hereunto affix my signature this 3d day of December, A. D. 1881.

LOUIS STRICKEL.

In presence of—

CHARLES J. HUNT,
E. SCULLY.