(No Model.)

J. HAWLOWETZ.

MACHINE FOR SCRAPING THE QUILLS OF FEATHERS.

No. 347,486. Patented Aug. 17, 1886.

Fig. 1.

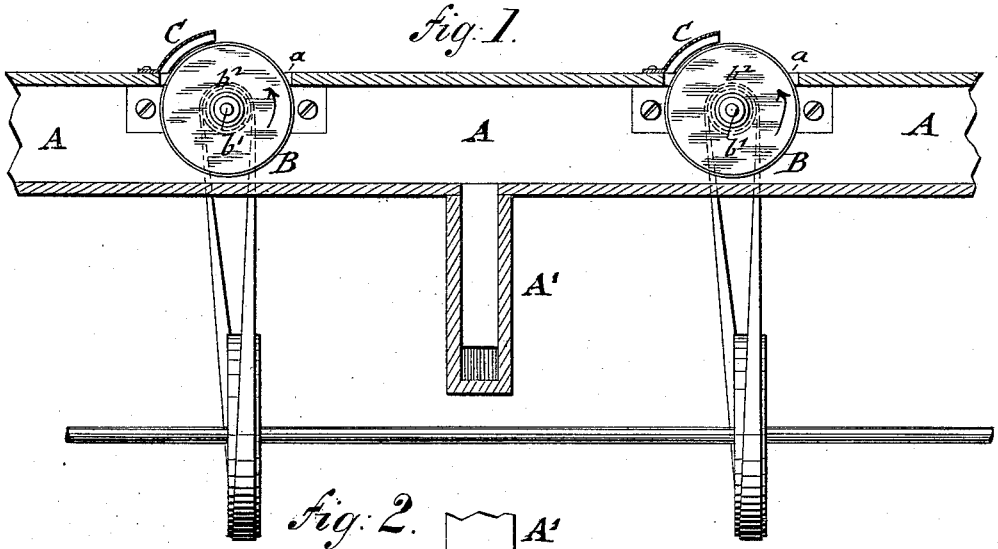


Fig. 2.

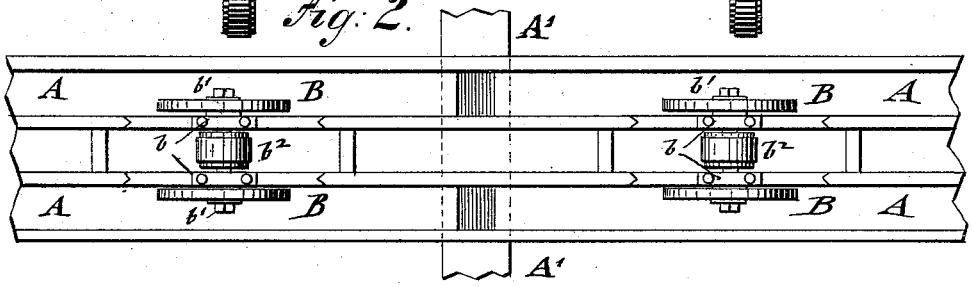


Fig. 3.

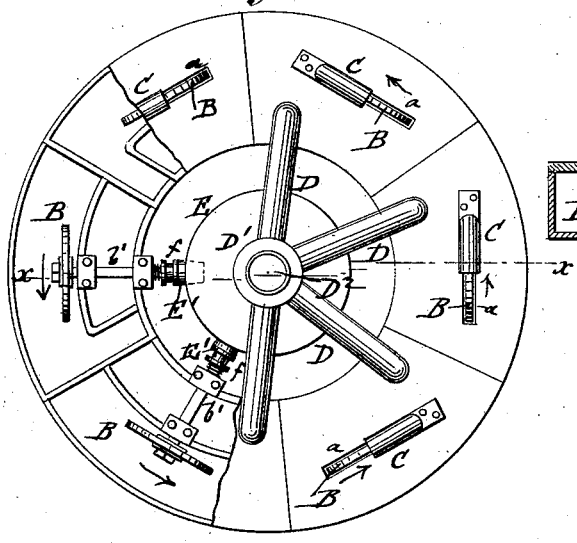
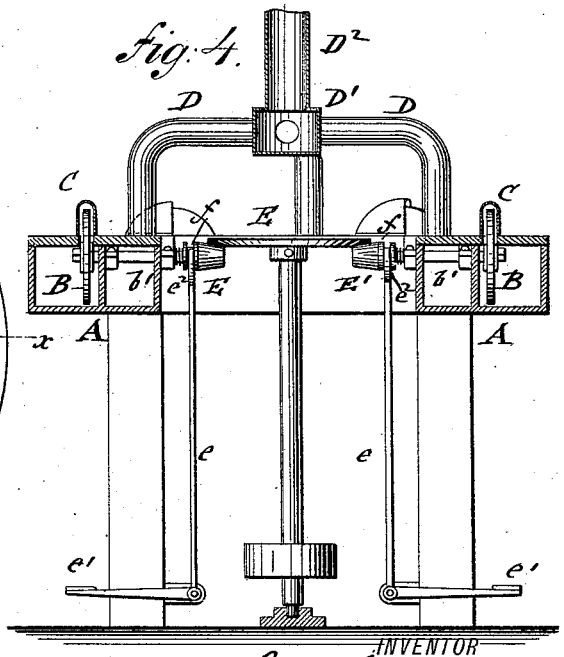


Fig. 4.



WITNESSES

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MACHINE FOR SCRAPING THE QUILLS OF FEATHERS.

SPECIFICATION forming part of Letters Patent No. 347,486, dated August 17, 1886.

Application filed October 23, 1885. Serial No. 180,782. (No model.)

To all whom it may concern:

Be it known that I, JOHN HAWLOWETZ, of the city, county, and State of New York, have invented certain new and useful Improvements in Machines for Scraping the Quills of Feathers, of which the following is a specification.

The object of this invention is to furnish a machine by which the quills of feathers to be used for feather trimmings and other purposes may be quickly and uniformly scraped and reduced to a uniform thickness, and the slicing of the quills by cutting-knives is dispensed with; and the invention consists of a machine for scraping the quills of feathers, formed of a chamber having a slotted top opening and a rotating scraping-roller projecting through said opening. The chamber is connected by a channel to a suction-fan for drawing off the dust, while a guard is attached to the top of the chamber and extended partly over the scraping-roller.

In the accompanying drawings, Figure 1 represents a vertical longitudinal section of my improved machine for scraping the quills of feathers. Fig. 2 is a plan of the same with the top plate removed. Fig. 3 is a plan, with part of the top plate broken of, of a modified construction of my scraping-machine. Fig. 4 is a vertical transverse section on line *x x*, Fig. 3.

Similar letters of reference indicate corresponding parts.

Referring to the drawings, A represents a chamber, which is made of wood or other suitable material, and provided in its top plate with a slotted opening, *a*, through which an abrading roller or wheel, B, projects. The chamber A is provided with journal-bearings *b b* for the axle *b'* of an abrading wheel or roller, B, which receives rotary motion by any suitable transmission. The chamber A is supported by suitable standards at such a distance from the floor that a girl or other attendant can sit sidewise of the machine and hold the feathers in proper position toward the abrading-roller. The abrading-roller B is made of wood or other suitable material and covered with sand-paper, ground glass, or other equivalent abrasive material glued thereto. Two abrading wheels or rollers B are preferably arranged on the same axle, with a pulley, b^2, between the same, as shown in Figs. 1 and 2, in which case rotary motion is transmitted from the driving-shaft by a belt to the pulley b^2 on the axle of the wheels. Two chambers A A are in this case arranged parallel to each other, and the axle of the abrading-rollers B supported in journal-bearings *b* of the adjoining walls of the chambers A A. A series of pairs of abrading wheels or rollers may be arranged in line, in which case the chambers A are extended to the length required by the rollers, as shown in Fig. 2. The chambers A are connected by channels A', which are arranged at suitable intervals between the abrading-rollers with a suction-fan, by which the dust caused by the abrading action of the wheels on the quills is drawn off and conducted to the outside of the building within which the scraping-machines are located. A guard or hood, C, extends over a part of the abrading-wheel B, and serves as a rest for one hand while exposing the quills to the action of the abrading-rollers, and as a protection against injury to the hand.

In Figs. 3 and 4 a modification of my improved machine for scraping the quills of feathers is shown, in which the scraping wheels or rollers are arranged in a circle, instead of in line with each other, as in Figs. 1 and 2, and in this case motion is transmitted to the action of the abrading-wheels by a rotating disk, E, and friction-rollers, E', which are splined to the axles *b' b'*, so as to slide thereon, but rotate axially therewith. The friction-rollers E' on the axles *b' b'* of the abrading-wheels B B are thrown in contact with the motion-transmitting disk E by fulcrumed bell-crank levers *e*, provided with a treadle, *e'*, at the lower end and a fork, e^2, at the upper end, the fork engaging a grooved collar, *f*, on the shaft of the friction-roller, so as to shift the latter on the axle against the tension of an interposed spiral spring, *f'*, away from the transmitting-disk E when the treadle is depressed, and into contact with the same, so as to rotate the abrading-wheels when the treadle is released. The chambers A are separated by radial partitions and are connected by channels D with a central receiver, D', which latter is connected by a pipe, D^2, to the suction-fan, so that the dust is drawn off and conducted through the chimney to the outside.

In operating the machine, the quills of the

feathers are taken hold of by both hands at the butts and tips, one hand resting on the guard D, and exposed to the abrading action of the roller, first at one side and then at the other side. While the action of the wheel takes place the feather is moved in longitudinal direction over the roller, so that the quill is abraded in part or entirely at one side, after which the feather is turned and the other side exposed to the abrading action of the roller in the same manner. The flues are forced away from the wheel during the scraping action by the motion imparted to the air by the rapid rotation of the scraping-roller, so that the flues are not injured or scraped off. The dust is carried along by the rapidly-rotating scraping-wheel and deposited in the inclosing-chamber and sucked off by the fan. The quills of feathers of all kinds are thus scraped off to uniform thickness in a quick and convenient manner without injury to the flues, whereby the feathers are better adapted to be woven into trimmings or other textile fabrics.

I am aware that scraping and abrading machines have been provided with suction devices for carrying off the dust, &c., and I do not claim, broadly, machines of this class. The machines of this kind used heretofore have not been provided with curved guards or hand-rests so located as to extend partly over the projecting top part and above the highest point of said top part of the abrading wheel or disk, which latter is rotated toward the guard, whereby all the dust ground from the quills is carried below the guard into the chamber and then carried off by the suction device. This is an essential feature of my machine.

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

1. The combination, with a chamber connected with a suction apparatus, of a rotary abrading-disk extending through a slot in the top of the chamber, and of a curved guard extending partly over the rim of the disk, the highest point of the guard being above the highest point of the rim of the disk, substantially as herein shown and described.

2. The combination, with a chamber connected with a suction apparatus, of a rotary disk or wheel, and a curved guard extending partly over the top part of the rim of the disk, said disk being rotated toward the guard, substantially as shown and described.

In testimony that I claim the foregoing as my invention I have signed my name in presence of two subscribing witnesses.

JOHN HAWLOWETZ.

Witnesses:

CARL KARP,

SIDNEY MANN.