

W. H. CROKE.

Machine for Forming Hat-Bodies.

No. 167,746.

Patented Sept. 14, 1875.

Fig 1.

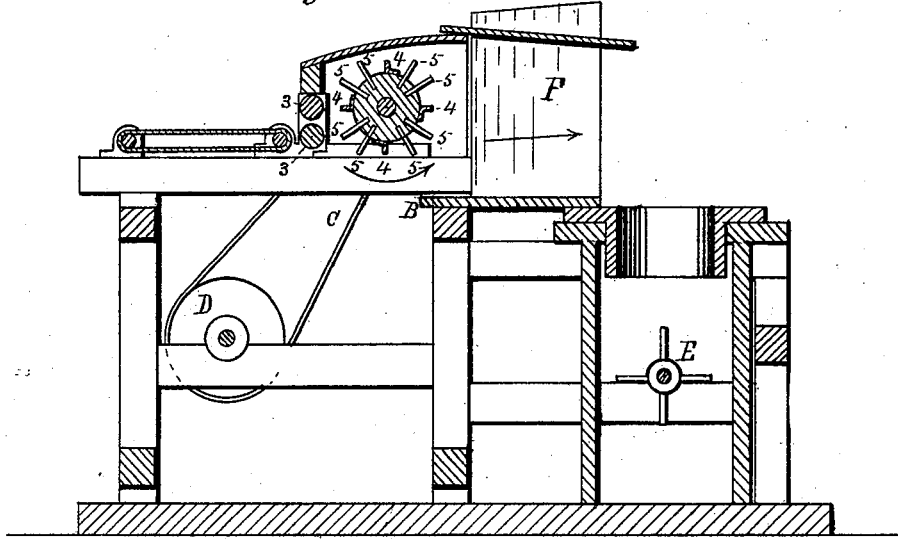
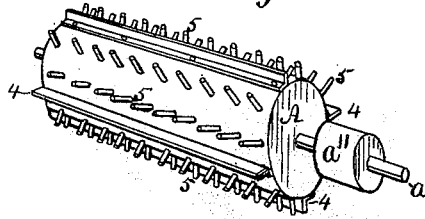


Fig. 2.



Witnesses:

Benj<sup>r</sup> Morison

W<sup>m</sup> H. Morison.

Inventor:

William H. Croke

# UNITED STATES PATENT OFFICE.

WILLIAM H. CROKE, OF PHILADELPHIA, PA., ASSIGNOR OF TWO-THIRDS  
HIS RIGHT TO THEODORE W. HAGAMAN, OF SAME PLACE.

## IMPROVEMENT IN MACHINES FOR FORMING HAT-BODIES.

Specification forming part of Letters Patent No. 167,746, dated September 14, 1875; application filed  
August 23, 1875.

*To all whom it may concern:*

Be it known that I, WILLIAM H. CROKE, of the city of Philadelphia, in the State of Pennsylvania, have invented an Improvement in Machines for Forming Felt-Hat Bodies, of which the following is a specification:

My invention relates strictly to the picking-cylinders of said machines; and has for its object the production of a more effective and durable cylinder for the purpose, by the combination, with a cylindrical body, of radial fan-plates and wire picker-teeth, constructed and arranged substantially as will hereinafter be fully and clearly described, with reference to the accompanying drawing, in which—

Figure 1 is a vertical central longitudinal section of the usual frame of the machine for forming the bodies of felt hats, embodying my said invention; and Fig. 2 a perspective view of my improved picking-cylinder detached from the frame.

The body of the cylinder A I generally make of wood, in one solid piece, with a metallic shaft, *a'*, fixed longitudinally through its center, with projecting ends for its journals, and one of them long enough to receive a band-pulley, *a''*, whereby the rapid rotary motion of the cylinder, supported upon suitable bearings in the frame B, is given by a band, C, driven by a larger pulley, D, in the usual manner, so as to rotate the completed picker-cylinder A about thirty-seven hundred times per minute.

The fan-plates 4 4 4 4 are made of thin sheet metal, and secured firmly and at equal distances apart from each other, parallel with the shaft *a'*, so as to project radially from the surface of the body A of the cylinder about two-eighths of an inch. The length of each fan corresponds with the length of the body of the cylinder.

The picker-teeth 5 5 consist simply of wire (about No. 15) cut off in short pieces and driven into the cylinder A, so as to project radially therefrom, each about three-eighths of an inch, or one-eighth of an inch further than the fan-plates 4. These picker-teeth 4 4

are arranged in two longitudinal rows between each pair of the fan-plates 4 4, at equal distances apart from each other and from the fan-plates, substantially as represented in Figs. 1 and 2. The length of the body of the cylinder is about twenty-six inches, and it is about seven inches in diameter. In the drawing, the fan-plates and picker-teeth are shown much larger in proportion to the size of the body of the cylinder, in order to show them distinctly or more accurately.

The cylinder, rotating at thirty-seven hundred times per minute in the direction of the arrow, (see Fig. 1,) takes the fur from the usual rolls 3 3 by means of the picker-teeth 5 5, while the fan-plates 4 4 produce a strong current of air in the same direction, which carries the fur into the air-current produced by the usual exhausting-fan E, which operates beneath the usual perforated hollow cone, (not shown,) in combination with the usual adjustable hood F.

I have had one of my said improved picker-cylinders A in use for a month to the present time, and there does not appear any indication of wear in either the fan-plates 4 or picker-teeth 5, and believe that a year of such steady use will not require a renewal of either the fan-plates or the picker-teeth, and, consequently, that my said picker-cylinders will be far more durable in use than either the usual brush-cylinders or those having teeth formed by serrated plates, which wear out in less than a year's use, and are also much more costly of construction.

It is believed that the construction and operation of my improved picker-cylinder will be fully and clearly understood without any further description or explanation.

I claim as my invention—

The within-described picker-cylinder, consisting of the body A, sheet-metal fan-plates 4, and the picker-teeth 5, substantially as and for the purpose set forth.

WILLIAM H. CROKE.

Witnesses:

BENJ. MORISON,  
WM. H. MORISON.