

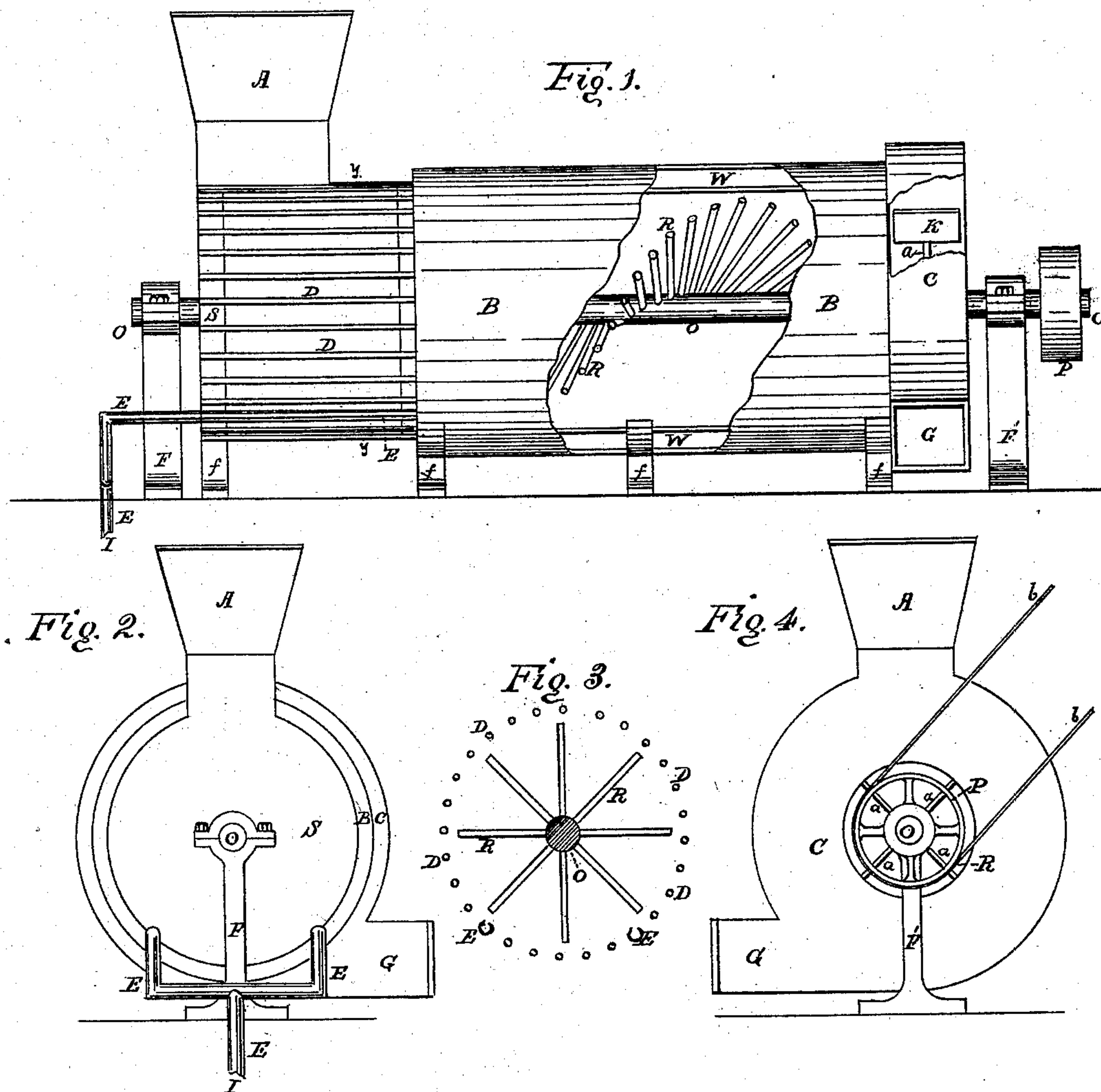
(No Model.)

F. COHNEN.

MACHINE FOR CLEANING FEATHERS AND SEPARATING THE DOWN THEREFROM.

No. 270,180.

Patented Jan. 2, 1883.



Witnesses  
Horace Turner  
Geo. H. Lothrop

Inventor.

Frank Cohnen



# UNITED STATES PATENT OFFICE.

FRANK COHNEN, OF DETROIT, MICHIGAN, ASSIGNOR OF ONE-HALF TO  
HORACE TURNER, OF SAME PLACE.

MACHINE FOR CLEANING FEATHERS AND SEPARATING THE DOWN THEREFROM.

SPECIFICATION forming part of Letters Patent No. 270,180, dated January 2, 1883.

Application filed June 16, 1882. (No model.)

*To all whom it may concern:*

Be it known that I, FRANK COHNEN, of Detroit, in the county of Wayne and State of Michigan, have invented a new and useful Improvement in Machines for Cleaning Feathers and Separating the Down therefrom, of which the following is a specification.

Figure 1 is a side elevation of my invention with a portion of the drying-cylinder and fan-case broken away. Figs. 2 and 4 are left and right end views of Fig. 1. Fig. 3 is a vertical section on line *y y*, Fig. 1.

This invention has for its object to provide a simple and efficient machine for steaming and drying feathers and for separating the down therefrom as the feathers are discharged from the machine.

The object of my invention I accomplish by the mechanism illustrated in the accompanying drawings, which I will now proceed to describe in detail.

D represents the bars of a cylindrical cage, having one end closed, S, and having on its upper side a hopper, A. The open end of this cage is attached to one end of a double-walled cylinder, B, and to the other end of the cylinder B is attached one side of a fan-case, C, which I prefer to make larger in diameter than cylinder B. Suitable legs, *f*, support the cage and cylinder. A shaft, O, runs through the center of the cage-cylinder and fan-case, and is journaled in suitable bearings, F F'. In said shaft O are fastened a number of pins, R, which are preferably of wood, and of such length that the shaft and pins will just revolve freely in the cage and cylinder and extend the whole length of the cage and cylinder. Pins R are so set in shaft O that they form a spiral thread around said shaft, as clearly shown in Fig. 1. A pulley, P, secured to one end of shaft O, serves to transmit power thereto.

*a* K are the arms and vanes of a rotary fan, hung on shaft O and rotating in fan-case C.

The side of fan-case C which is attached to cylinder B is open, and is provided with a damper by which it can be partially or wholly closed, and there is a central opening in the other side of said fan-case, which is provided with dampers by which it can be opened or closed.

G is the eduction-pipe of fan-case C.

E is a steam-pipe, divided into two branches which pass lengthwise under the cage, and

are perforated so as to discharge steam into the cage. Steam is also admitted into the space W between the walls of cylinder B, so as to keep said cylinder warm.

The feathers to be operated upon are fed into hopper A and fall into the cage. There they are beaten by the pins on shaft O, which is revolved at as high speed as will not injure the feathers (about three hundred revolutions per minute,) and are steamed by the steam from pipes E. The dirt and dust which are thus removed from the feathers fall through bars D. The spiral row of pins R carries the feathers from the cage into the hot cylinder D, where the feathers are dried, and thence into the fan-case C, from which they are forcibly ejected through the mouth or eduction-pipe G. The blast of air from the fan separates the down from the rest of the feathers, and the feathers fall to the floor at a short distance from the machine, while the lighter down is carried much farther and deposited entirely clear of the pile of feathers.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. In a machine for cleaning feathers, the combination of the drying-cylinder, the steaming-chamber at one end thereof for steaming and delivering the feathers to the drying-cylinder, and a fan-case and blast-fan arranged at the other end of the drying-cylinder and receiving the feathers therefrom, said feathers being discharged from the fan-case and the down blown off by the action of the air-blast, substantially in the manner and for the purpose described.

2. In a feather-machine, the combination of a cage in which feathers may be steamed, a heated drum or cylinder for drying the steamed feathers, and a revolving beater acting upon the feathers while being steamed and dried, and adapted to convey the feathers from the steaming-cage into the drying-cylinder, substantially as herein shown and described.

3. The combination of the cage D, cylinder B, fan-case C, and shaft O, having thereon pins R and fan *a* K, as and for the purposes set forth.

FRANK COHNEN.

Witnesses:

GEO. B. REMICK,  
GEO. H. LOTHROP.