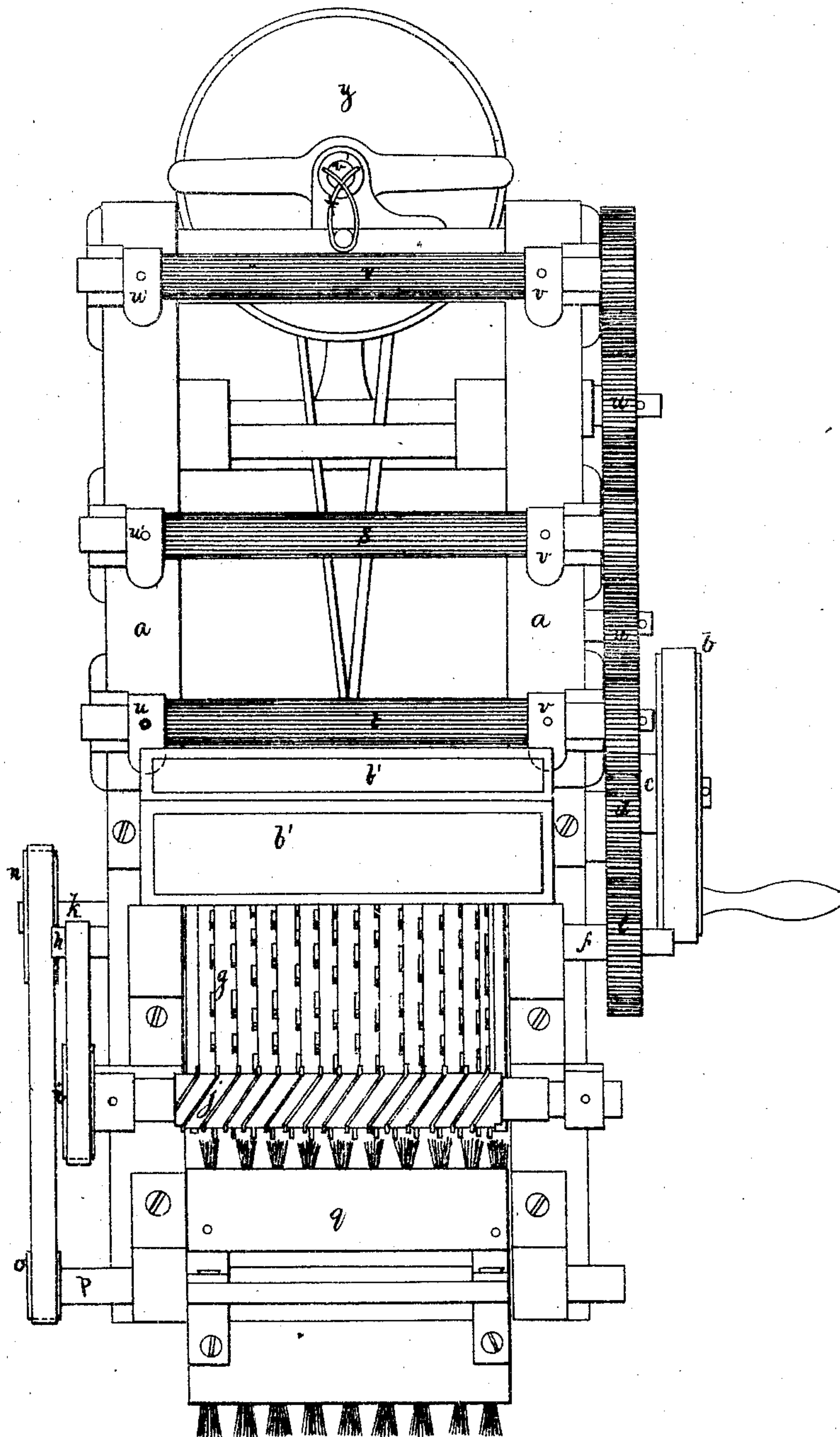


F. Calvert.
Hair-Picker.

N^o 76158

Patented Mar. 31, 1868.

Fig. 1.



Witnesses.
Gibbs & A. C. Perry.
Geo. C. Perry.

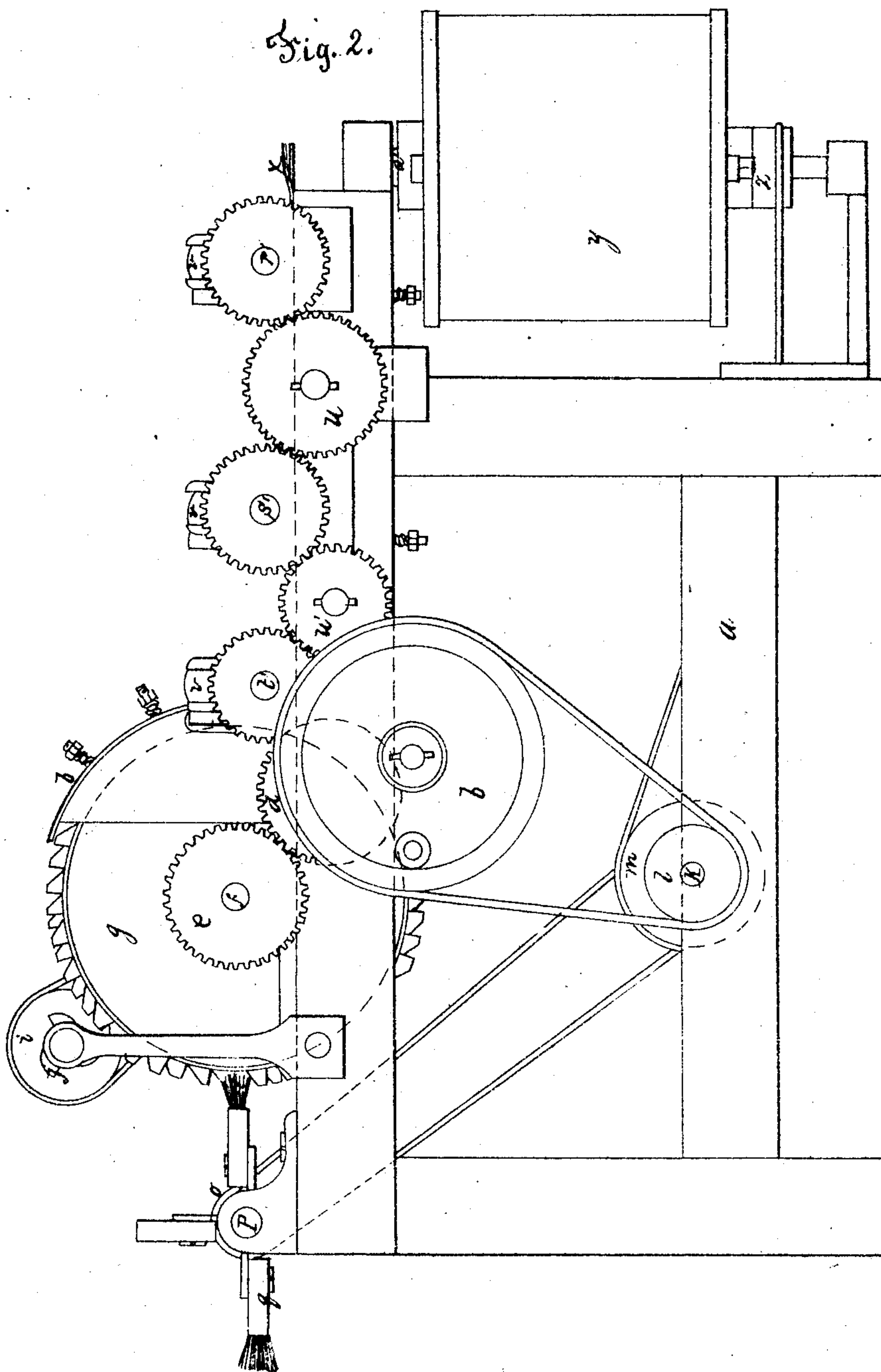
Inventor.
Frank Calvert.

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N^o 76158

Patented Mar. 31, 1868.

Fig. 2.



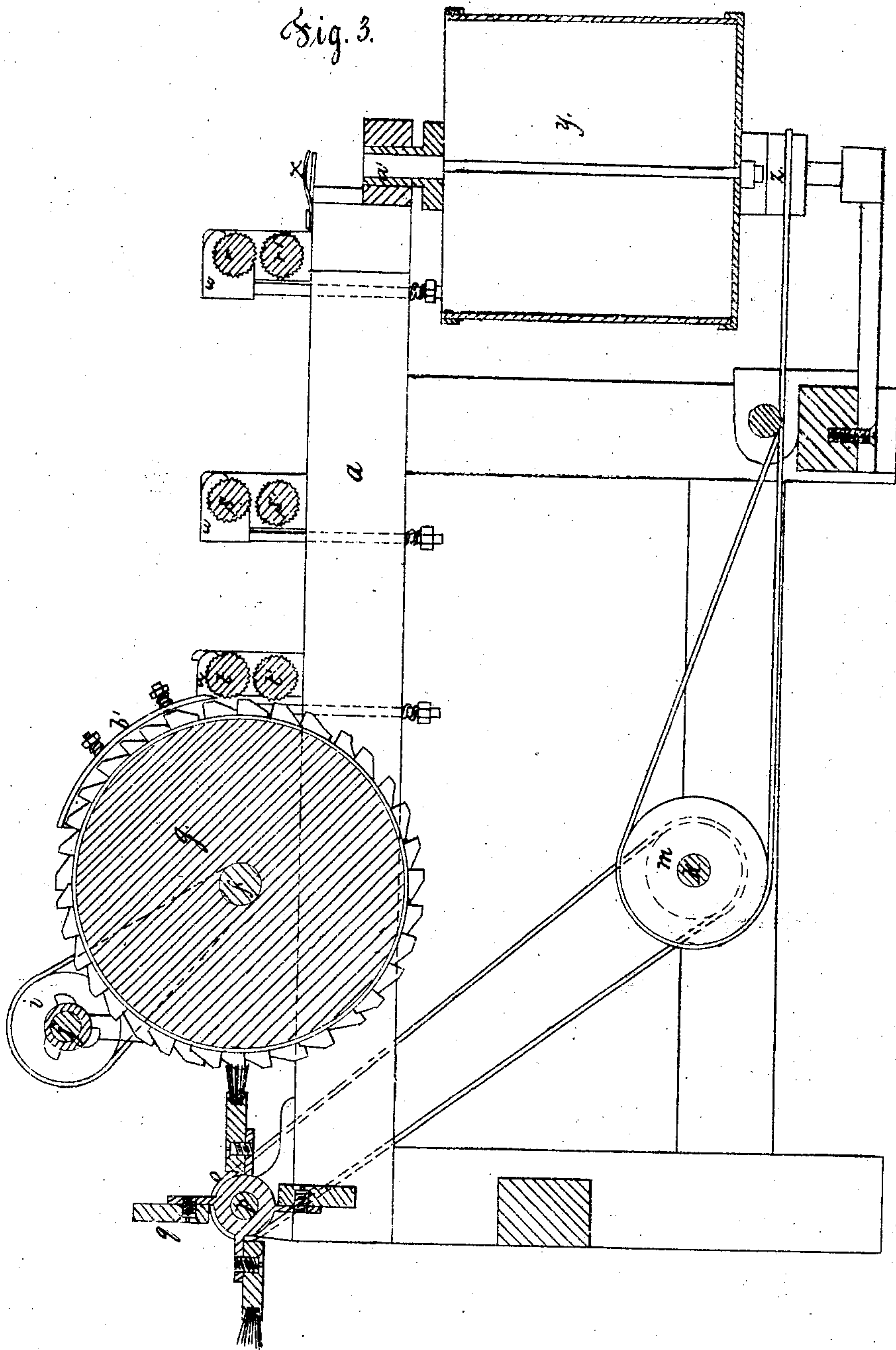
Witnesses.
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N^o 76158

Patented Mar. 31, 1868



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Inventor.
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United States Patent Office.

FRANK CALVERT, OF LOWELL, MASSACHUSETTS, ASSIGNOR TO HIMSELF
AND STEPHEN W. HUSE, OF SAME PLACE.

Letters Patent No. 76,158, dated March 31, 1868.

IMPROVEMENT IN HAIR-PICKER.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that I, FRANK CALVERT, of Lowell, in the county of Middlesex, and State of Massachusetts, have invented new and useful Improvements in Hair-Pickers; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

The nature of my invention consists in providing a hair-picking machine, its entire mechanism so constructed and arranged that a twisted hair rope may be untwisted, and during the process of untwisting, the untwisted end of the rope is operated upon, and each fibre is disconnected and separated one from another without injury to the staple, and is left in the desirable and suitable condition for upholsterers' use, or for stuffing purposes of all kinds.

To enable others skilled in the art to make and use my invention, I will proceed to describe its construction and operation.

Figure 1 represents a plan of my improved hair-picker.

Figure 2 represents a side elevation of the same.

Figure 3 represents a longitudinal section of the same.

Similar letters in the different figures indicate corresponding parts.

a represents the frame; *b*, the driving-pulley; *c*, the driving-gear, which connects with the intermediate gear *d*; this gear *d* connecting with the gear *e*, which is secured to the shaft *f*, the shaft *f* running in suitable bearings, and passing through the radiating concentric toothed cylinder *g*, which is firmly secured to the same. Attached to the shaft *f*, opposite the gear-end, is the pulley *h*, which connects with and drives, by a belt, the pulley *i*, which is attached to the clearer and finisher *j*, which runs in suitable bearings. *k* is the counter-shaft, which is provided with suitable bearings and pulleys *l*, *m*, and *n*, the pulley *l* connecting with the driving-pulley *b* by a belt, the pulley *n* connecting with and driving the pulley *o*, which is secured to the shaft *P*. Running in its required bearings, and passing through and driving the fan and cleaner *q*, *r*, and *r'*, are the front fluted feed-rolls *s* and *s'*, the middle fluted feed-rolls *t* and *t'*, the back fluted draught and feed-rolls, these fluted rolls being provided with bearings or stands, and located as desired. The fluted rolls *r'*, *s'*, and *t*, are provided with the requisite gears to give the required draught and feed. These gears are connected together and with the driving-gear *c* by the intermediate gears *u* and *u'*. The rolls *r*, *s*, and *t*, are held down by their respective caps *w w w* and *v v v*, and the pressure of these rolls is controlled by springs, or their equivalents, connecting with these caps. *x* is the guide. *y* is the receptacle-cylinder or revolving can, which is provided with its required bearings and pulley *z*, the pulley *z* connecting with the pulley *m* by a belt or cord. Through the top bearing of this can *y*, a hole is made, which forms the nose, *a'*, to the same; and *b'* are the pressure-plates, which are controlled by suitable springs.

Operation.

The machine being thus constructed, and its several parts arranged and adjusted in position, is then ready to operate. Twisted hair rope is placed in the receptacle-cylinder or can *y*, one end of which is passed through the nose *a'*. Power is then applied to the driving-pulley *b*. This, by aid of the gears and belts, sets the entire machine in motion. The end of the rope, which has previously been passed through the nose *a'* of the cylinder *y*, is then passed through the crotch of the guide *x*, coming in contact with the front fluted feed-rolls *r r'*; passing between the same, is brought in contact with the middle fluted feed-rolls *s s'*; passing through the same, then comes in contact with the back fluted feed and draught-rolls *t t'*. Passing through these, the fibres are then caught by the radiating concentric toothed cylinder *g*, and carried under the pressure-plates *b'* and over the cylinder *g*, where it is discharged by aid of the fan *q*. The revolving can *y*, by its inverse motion to the twist of the rope, untwists the same. The guide *x* aids in holding the rope, and prevents kinks from passing through the rolls *r* and *r'*, before untwisted. The middle rolls *s* and *s'* being speeded the same as the front rolls *r* and *r'*, keep the strands straight. The back draught-rolls *t* and *t'* being speeded faster than the middle rolls *s* and *s'*, give the required draught. This draught is so graduated as to draw and straighten the fibres and

leave them in proper and suitable condition for their reception on the radiating concentric toothed cylinder *g*, which separates and disconnects the fibres, one from another, without the least damage to the staple, leaving them in a curled mass. The clearer and finisher *j* serves as an additional aid to the radiating concentric toothed cylinder *g*, aiding it in its work. Thus the entire contents of the cylinder or can *y* are completely untwisted and carried through the guide *x* and several series of rolls *r r'*, *s s'*, *t* and *t'*, which leaves it in the required loose state for the finishing operation of the radiating concentric toothed cylinder *g* and clearer *j*, where it is discharged from the same by aid of the cleaner and fan *q* without breaking, mutilating, or damaging the hair in the least, at the same time preserving the original curl, crisp, and crimp of the hair, which it previously possessed.

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

1. I claim untwisting hair rope, by running it the reverse from the twist, so that the untwisted part may be operated upon continually and simultaneous with the untwisting, for the purposes substantially as described and set forth.
2. I claim the radiating concentric toothed cylinder *g*, in combination with the can or hair-receptacle *y*, for the purpose as described and fully set forth.
3. I claim the can or hair-receptacle *y*, with its nose *a'*, or their equivalents, when arranged to operate substantially as described and fully set forth.
4. I claim the application and arrangement of the fan and cleaner *q*, clearer or finisher *j*, radiating concentric toothed cylinder *g*, fluted draught and feed-rolls *r* and *r'*, *s* and *s'*, *t* and *t'*, and hair-receptacle *y*, when arranged to operate substantially as described and fully set forth.

Witnesses:

GILBERT A. A. PEVEY,
GEO. E. PEVEY.

FRANK CALVERT.