

(No Model.)

2 Sheets—Sheet 1.

W. M. HOFFMAN.
FLESHING AND UNHAIRING MACHINE.

No. 335,197.

Patented Feb. 2, 1886.

Fig. 1.

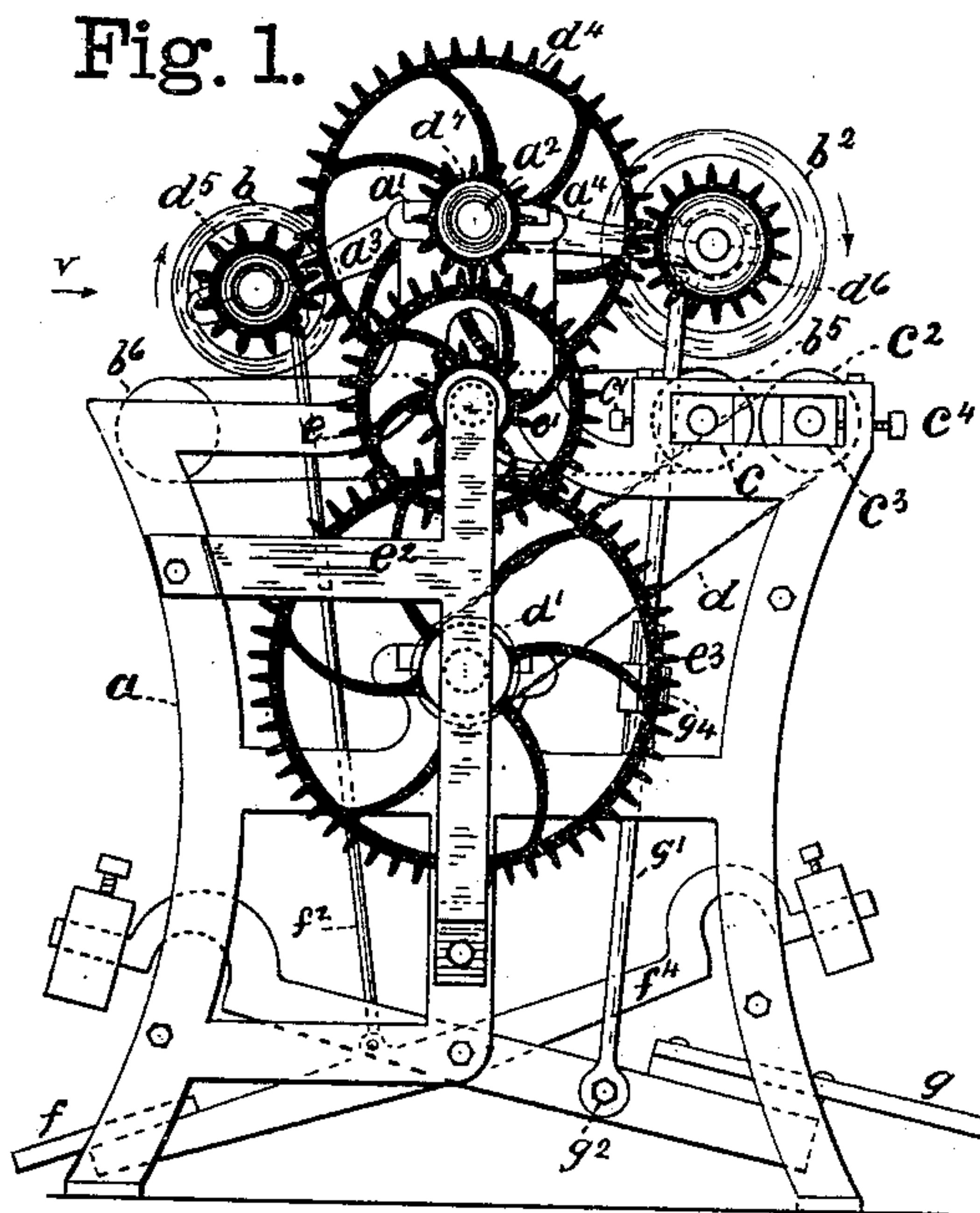


Fig. 2.

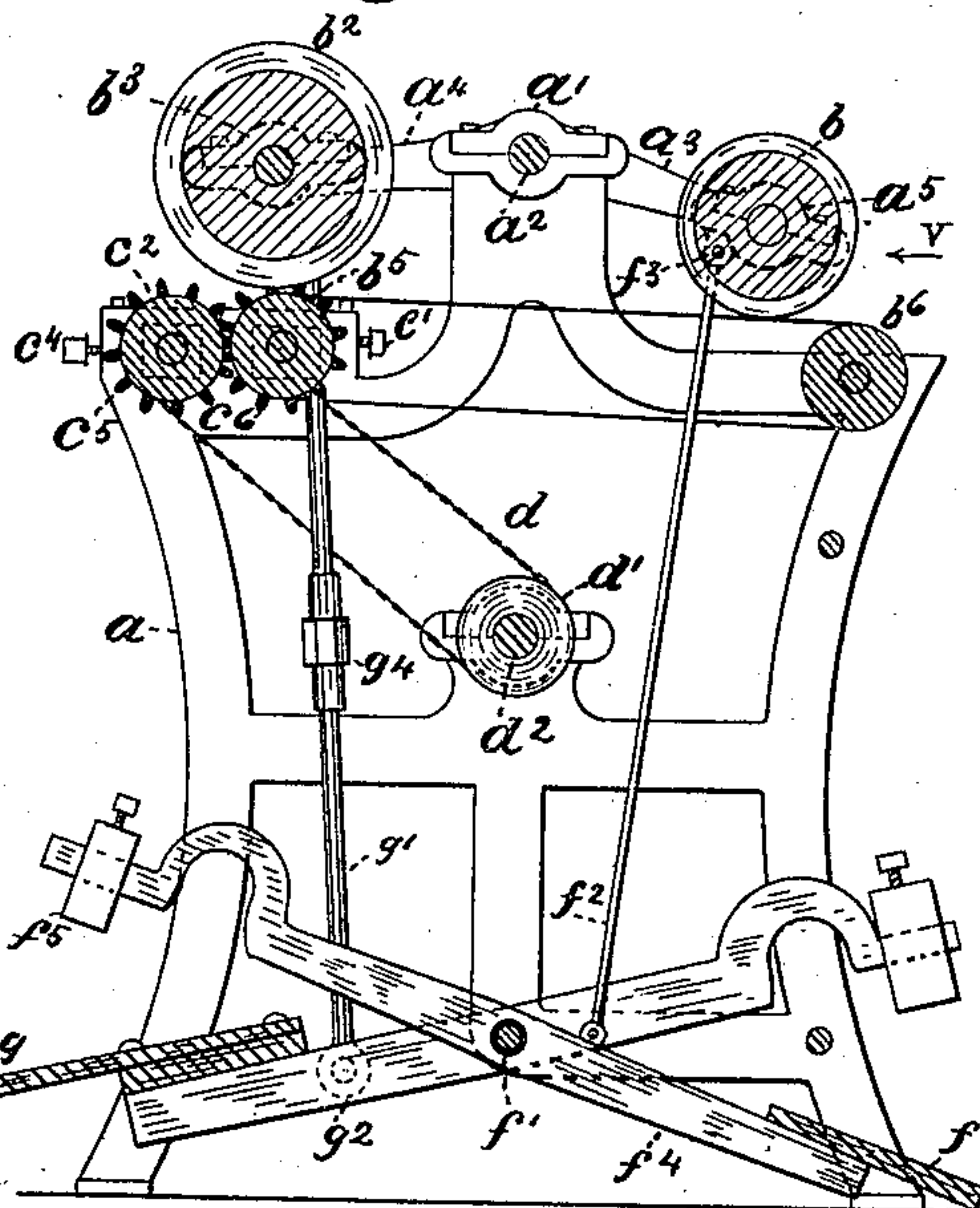
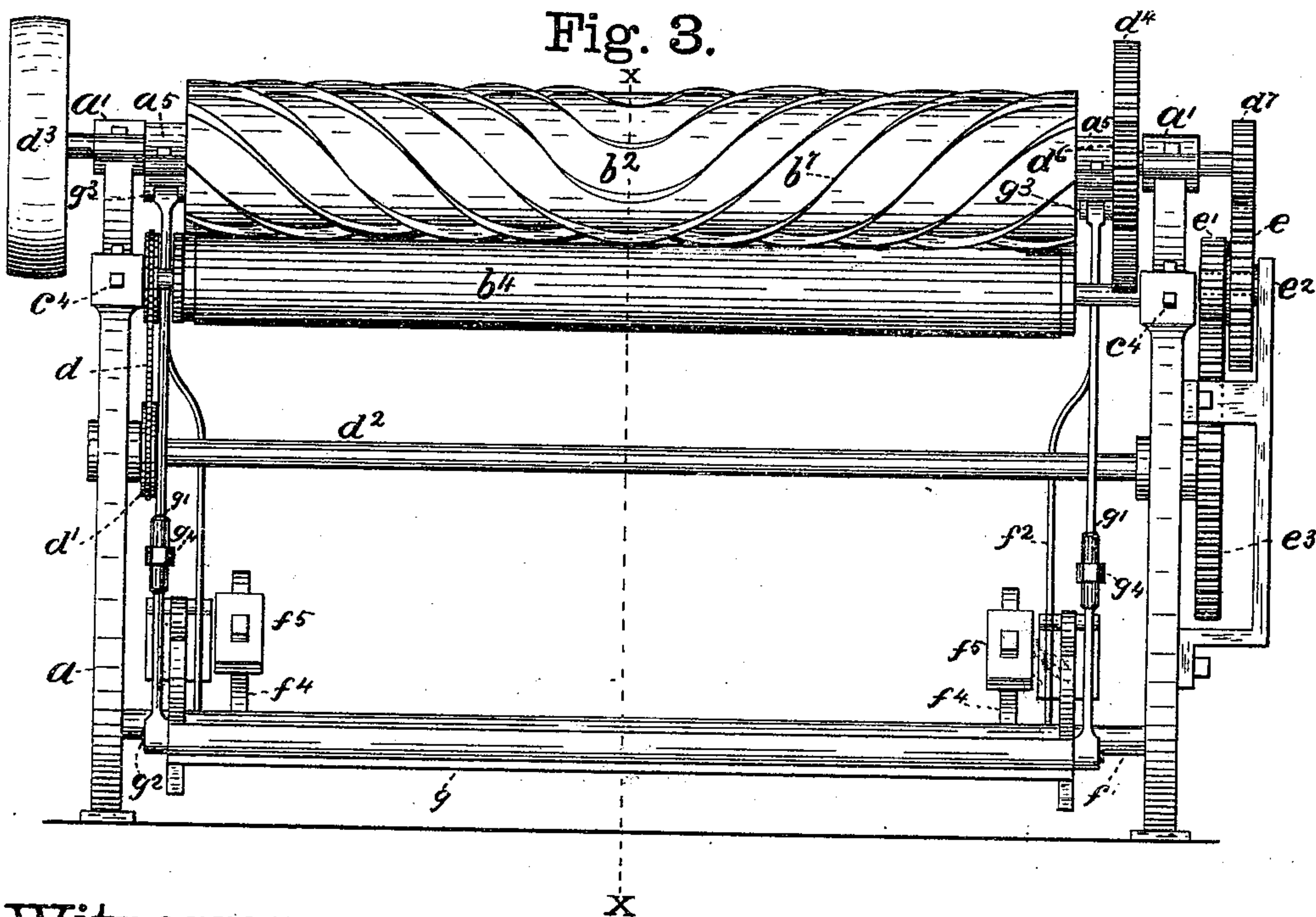


Fig. 3.



Witnesses.

Jennie M. Caldwell.
Henry Ashbery

Inventor.

William M. Hoffman
By James Sangster
Atty.

(No Model.)

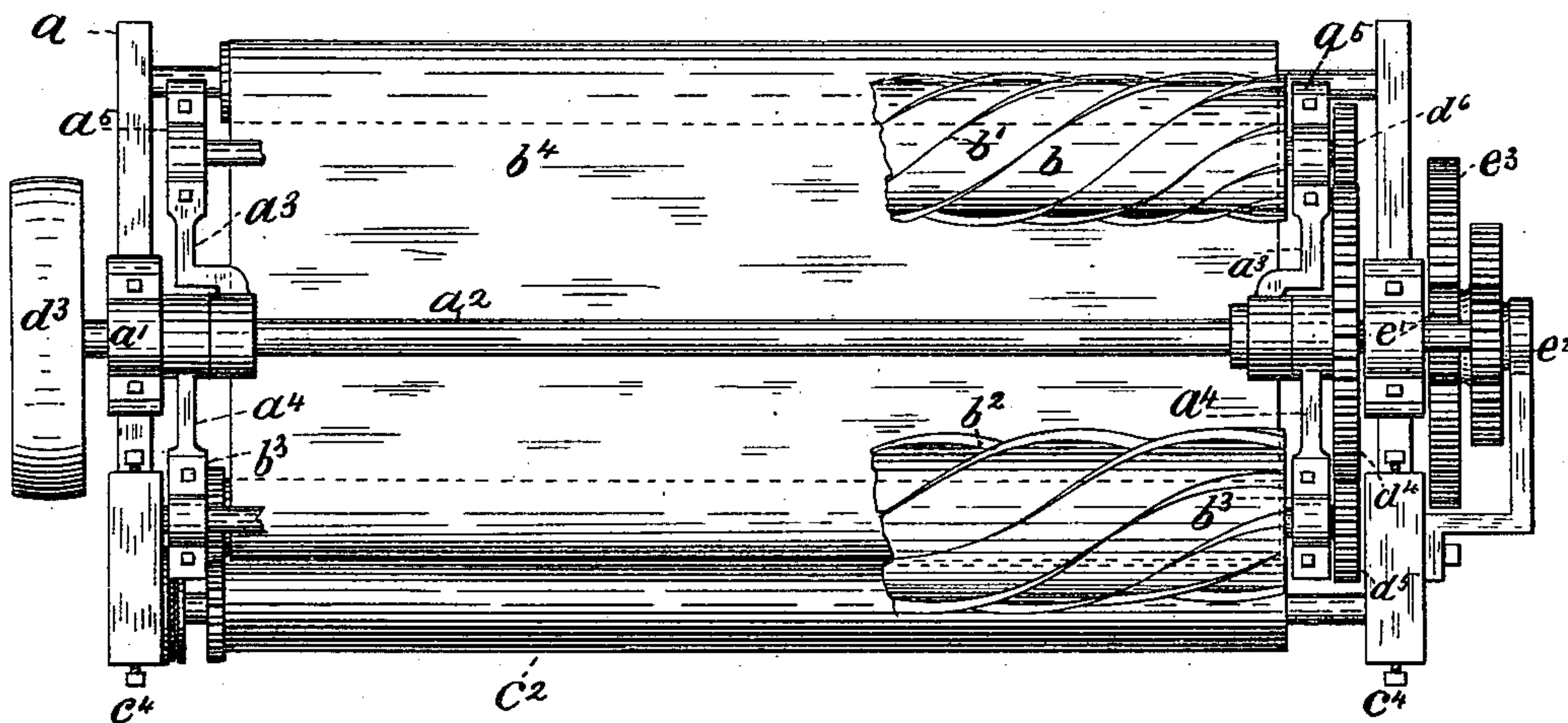
2 Sheets—Sheet 2.

W. M. HOFFMAN.
FLESHING AND UNHAIRING MACHINE.

No. 335,197.

Patented Feb. 2, 1886.

Fig. 4.



Witnesses.

Jennie M. Caldwell.
Henry Ashbery

Inventor.

William M. Hoffman
By James Sangster
Atty.

UNITED STATES PATENT OFFICE.

WILLIAM M. HOFFMAN, OF BUFFALO, NEW YORK, ASSIGNOR TO FARRAR & TREFTS, OF SAME PLACE.

FLESHING AND UNHAIRING MACHINE.

SPECIFICATION forming part of Letters Patent No. 335,197, dated February 2, 1886.

Application filed August 15, 1885. Serial No. 174,460. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM M. HOFFMAN, a citizen of the United States, residing in Buffalo, in the county of Erie and State of New York, have invented certain new and useful Improvements in Fleshing and Unhairing Machines, of which the following is a specification.

The object of this invention is to provide a convenient means for removing the flesh, dirt, and hair from hides and skins, and its construction and operation will be fully and clearly hereinafter described, shown, and claimed, reference being had to the accompanying drawings, in which—

Figure 1 is a side elevation. Fig. 2 is a vertical central section through line X X, Fig. 3. Fig. 3 is a front elevation of the machine complete, except the first roller, which is left off so as to show the endless belt or apron. Fig. 4 represents a plan or top view of the machine, a portion of the fleshing and spreading cylinders being broken away, so as to expose the endless belt or apron below them.

In said drawings, *a* represents the frame of the machine. It is made of cast-iron, as the best, strongest, and cheapest material, and is provided at the top with boxes *a'*, to receive the shaft *a²*, upon which is secured the arms *a³* *a⁴*, for carrying the spreading and fleshing cylinders. They are mounted so that the shaft may turn freely without moving the arms. The arms *a³*, which are bent (see Fig. 4) so that the spreading and fleshing cylinders may be of the same length, are provided with boxes *a⁵*, in which is mounted the spreading-cylinder *b*, having spiral brass blades *b'* rigidly secured to it in any well-known way. These blades are provided with dull edges and run diagonally around the cylinder from the center toward the ends, so as to adapt them for spreading and smoothing the skin preparatory to its being operated on by the fleshing-cylinder *b²*. The fleshing-cylinder is mounted in bearings *b³* in the arms *a⁴*, and is provided with spirally-arranged steel blades *b⁷*, having sharp edges, so as to adapt it to take off the small pieces of flesh or other matter adhering to the skin or hide. An endless apron or belt, *b⁴*, is secured on the rollers *b⁵* *b⁶*. These rollers are mounted in boxes in the frame. The roller *b⁵* works in the sliding box *c*, and the

endless apron can be tightened up by the set-screw *c'*. The front roller, *c²*, is also arranged in a sliding box, *c³*, (see Fig. 1,) and can be adjusted toward the roller *b⁵* by the set-screws *c⁴*. These two rollers *b⁵* and *c²* act as feed-rollers, and are geared together by the pinions *c⁵* *c⁶*. (See Fig. 2.) They receive their motion by an endless chain, *d*, and pulley *d'* on the driving-shaft *d²*.

d³ is the driving-pulley on the main shaft *a²*.

The spreading and fleshing rollers receive their rotary movements by toothed gearing, as follows: The large gear-wheel *d⁴* is mounted on the driving-shaft *a²*, and gears into the pinions *d⁵* *d⁶*, which pinions are rigidly secured to the spreading and fleshing cylinders. This construction moves both cylinders in the same direction.

The endless apron or belt receives its motion as follows: The pinion *d⁷* is secured to the main driving-shaft *a²* and gears into the spur-wheel *e*. This spur-wheel *e* is provided with a pinion, *e'*, and both are secured by a pin to a bracket, *e²*. The pinion *e'* gears into the spur-wheel *e³*, which is secured to the shaft *d²*. By this construction the motion of the shaft *d²* is slowed down, so as to give the proper movement to the endless apron and feed-rollers. The spreading-cylinder *b* is provided with a foot-step, *f*, secured on the shaft *f'*. To the foot-step is jointed a rod, *f²*—one near each side of the machine. The upper ends of these rods are jointed to the arms *a³* by pins *f³*. (See Fig. 2.) The opposite end of the arms *f⁴*, to which the foot-step is attached, is provided with a counter-weight, *f⁵*, so that when the pressure on the foot-step is taken off it will be raised up, and also the spreading-cylinder. The fleshing-cylinder is also provided with a foot-step, *g*, having rods *g'* jointed thereto by pins *g²*, and to the arms *a⁴* by joints *g³*, and to the rods is connected a swivel, *g⁴*, so that their length may be varied, or so that the foot-step may be adjusted to come down to the right point and give the exact pressure required of the cylinder on the skin or hide, whether the pressure of the foot varies or not.

When unhairing a skin, all that is necessary to do is to have the fleshing-roller up, and consequently out of action.

The operation of the machine is as follows:

The skin is fed in from the front of the machine in the direction of the arrow *v* and passes under the spreading-cylinder, (which has been brought down onto it by the foot-step,) where
5 it is stretched and smoothed out preparatory to its passage under the fleshing-cylinder. From the spreading-cylinder it passes along over the endless apron or belt and under the fleshing-cylinder, then down between the feed-
10 rollers *c*² *b*⁵. As soon as it reaches the feed-rollers, the fleshing-cylinder is brought down upon it by a pressure on the foot-step, which then removes the pieces of flesh or other mat-
15 ter as the skin passes under it. At this point one-half of the skin has been operated upon and completed, and it is taken and reversed

and the process repeated, thereby completing it, so as to leave it smooth and clean.

I claim as my invention—

In a fleshing and unhairing machine, the 20 combination of a dull-bladed spreading-cylinder with a sharp-bladed fleshing-cylinder, an endless apron and feeding-rollers located below them, the gearing for giving them their rotary movements, and independent foot-steps and 25 connections for operating the spreading and fleshing cylinders, substantially as described.

WM. M. HOFFMAN.

Witnesses:

JENNIE M. CALDWELL,
JAMES SANGSTER.