

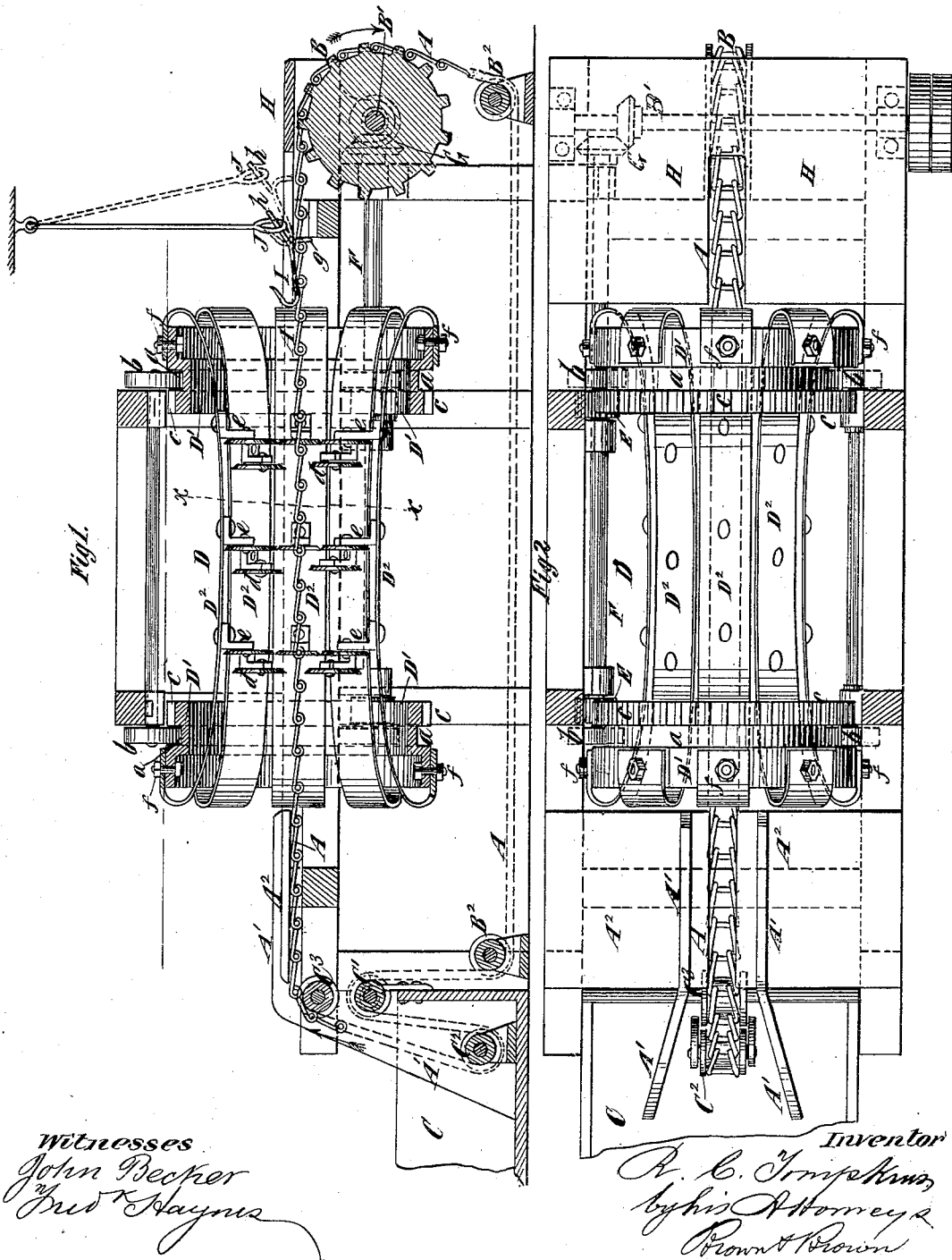
(No Model.)

2 Sheets—Sheet 1.

R. C. TOMPKINS.  
HOG SCRAPING MACHINE.

No. 264,796.

Patented Sept. 19, 1882.



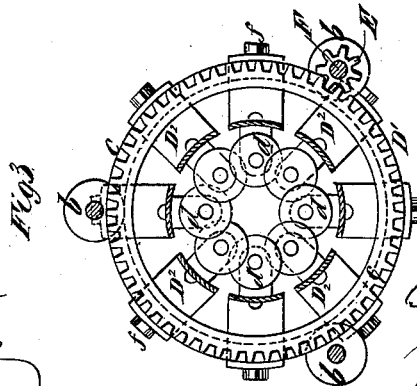
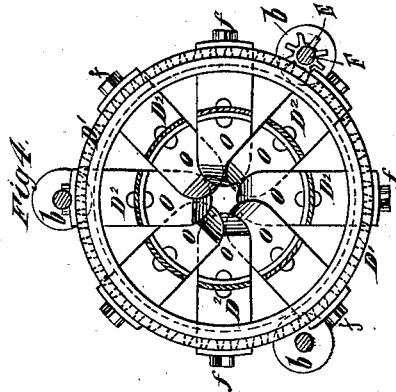
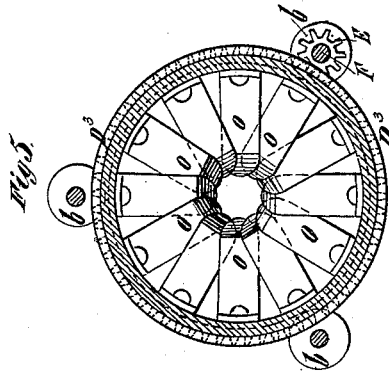
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Witnesses

John Becker  
and  
Fred W. Haynes

Inventor

R. C. Tompkins  
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Brown & Brown

# UNITED STATES PATENT OFFICE.

RHINELANDER C. TOMPKINS, OF NEW YORK, ASSIGNOR OF ONE-HALF TO  
AMASA SPRING, OF WHITE PLAINS, N. Y.

## HOG-SCRAPING MACHINE.

SPECIFICATION forming part of Letters Patent No. 264,796, dated September 19, 1882.

Application filed October 21, 1880. (No model.)

*To all whom it may concern:*

Be it known that I, RHINELANDER C. TOMPKINS, of the city and county of New York, in the State of New York, have invented certain  
5 new and useful Improvements in Hog Scraping or Depilating Machines, of which the following is a specification.

My invention relates to hog scraping or depilating machines in which the carcasses, after  
10 scalding, are attached by hooks to an endless chain or carrier, and by it drawn over or past scrapers or scraping devices.

The invention consists in the combination,  
15 with such chain or carrier, of a trunk, which is capable of rotating or turning, through which the carcasses are drawn, and the interior of which is provided with or has attached to it scrapers or scraping devices, which act upon the carcasses as they are drawn past them  
20 by the chain or carrier, and mechanism for imparting a rotary motion to said trunk.

The invention also consists in a novel means of automatically detaching the carcasses from the chain or carrier after passing through the  
25 trunk; in a novel manner of arranging the chain or carrier relatively to the scalding-tub, whereby I enable an ascending portion of the chain or carrier to be arranged inside the scalding-tub without passing through the bottom thereof, and in details of construction, to be hereinafter described.

In the accompanying drawings, Figure 1 represents a longitudinal section through a machine embodying my invention. Fig. 2 represents a plan thereof. Fig. 3 represents a transverse section upon the dotted line *xx*, Fig. 1,  
35 and Figs. 4 and 5 represent transverse sections of trunks and scrapers of modified forms.

Similar letters of reference designate corresponding parts in all the figures.

A designates the chain or carrier, to which a regular progressive motion is imparted in a forward direction by means of a sprocket-wheel, B, mounted on a shaft, B', which receives a rotary motion from a belt or gearing.  
45 (Not here shown.)

B<sup>2</sup> designates guide-pulleys under which the chain passes.

O designates a scalding-tub, into which the  
50 carcasses are plunged and from which they are withdrawn by the chain or carrier.

In order to provide for conveniently taking the carcasses from the tub, it is desirable that an ascending portion of the chain or carrier be arranged within the tub, and in order to effect this without passing the chain or carrier  
55 through the bottom of the tub I employ a novel arrangement of pulleys, C' C<sup>2</sup> C<sup>3</sup>, over which the chain or carrier passes. The pulley C' is arranged at the upper edge of the tub, 60 and the chain or carrier ascending from the pulley B<sup>2</sup> passes over the pulley C', and thence, descending, passes down under the pulley C<sup>2</sup> at the bottom of the tub, after which it again ascends and passes over the pulley C<sup>3</sup>, as shown  
65 clearly in Fig. 1.

In order to hold the carcasses upon the chain or carrier when first hooked on, I employ two guards or guides consisting of boards or plates A', flaring outwardly upon opposite sides of  
70 the ascending portion of the chain or carrier within the tub, and constituting a trough, through which passes the chain or carrier.

At the end of the scalding-tub is a table, A<sup>2</sup>, upon each side of the chain or carrier, and as the carcasses are drawn past the said tables  
75 the long hair can be pulled off by men upon the tables and saved for brush-making.

D designates a trunk, through the center of which the chain or carrier A passes, and which  
80 is supported in bearings which admit of its being rotated. As here represented, the trunk is cylindrical in cross-section, and is composed of two rings, D', to which are attached ribs or bars D<sup>2</sup>, which form the sides or walls of the  
85 trunk, and are to be more fully hereinafter described. Each of the rings D' is constructed with an annular recess or groove, *a*; and *b* designates rollers which fit in the grooves or recesses *a*, and serve to support the trunk so  
90 as to admit of its rotation.

The mechanism here shown for rotating the trunk consists of pinions E, fixed to a shaft, F, and engaging with gears or toothed rims *c* upon the rings D'. The shaft F derives its rotary motion through bevel-gear wheels G from the shaft B'.  
95

The scrapers or scraping devices, which are attached to the interior of the trunk D, are represented as consisting of disks *d*, loosely pivoted  
100 to arms *e*, which project from the ribs or bars D<sup>2</sup>, the latter forming supports for said arms.

These scrapers are arranged so that the scrapers on adjacent ribs overlap each other.

In lieu of the cylindric trunk here shown, composed of the rings  $D'$  and bars or ribs  $D^2$ , a trunk or frame of polygonal, rectangular, or any other form, provided with cylindrical portions forming journals which may fit in bearings, may be used, and it may consist simply of a large rotary tube provided internally with scrapers which converge toward the center, and are of any desirable form. The trunk being rotated slowly as the carcasses pass through it, all parts of the carcasses are subjected to the scrapers or scraping devices, and the scraping more effectually accomplished.

In order to enable the scrapers or scraping devices to act properly upon carcasses of different sizes, they should be capable of yielding or receding laterally when a large carcass passes through the trunk. This result may be conveniently attained by making the ribs or bars  $D^2$  of thin spring metal, as here shown, bent over at the ends and secured to the outside of the rings  $D'$  by bolts  $f$ . The same result might be attained, however, by making the ribs or bars  $D^2$  of wood or metal having little or no elasticity, and securing them to the trunk by yielding connections. After the carcasses are drawn through the trunk  $D$  they are deposited by the chain or carrier  $A$  upon a delivery-table,  $H$ , and I preferably employ a novel means of automatically disengaging the carcass-hooks from the chain or carrier, though any other means may be employed in lieu of that here shown.

The hook  $I$  (shown in Fig. 1) is provided with a downwardly-projecting arm or prong,  $g$ , which engages with the links of the chain or carrier to move the carcass along, and also with another arm or prong,  $h$ , which projects slightly upward.

$J$  designates a ring which depends by a rod, chain, or other connection from a ceiling or support, and hangs just above the path of the chain or carrier. As the hook  $I$  is carried forward by the chain its arm or prong  $h$  engages the ring  $J$ , as shown in full outline in Fig. 1, and the ring, being carried forward by it, travels in the arc of a circle, and thus rises sufficiently to lift the prong or arm  $g$  of the hook out of engagement with the chain or carrier, whereupon the carcass may be rolled or drawn onto the delivery-table  $H$  at the side of the chain or carrier.

Though I have here represented the trunk in a horizontal position and the chain or carrier as moving principally in a horizontal plane, the trunk might be arranged in a vertical position or at any incline, the chain or carrier being correspondingly arranged.

In lieu of the scrapers shown in Figs. 1, 2, and 3, I may employ scrapers  $o$  of the kind shown in Fig. 4, which are composed of thin strips of elastic metal—such as steel—having salient rounded faces and converging toward the center of the trunk. These scrapers are fixed to ribs  $D^2$ , as shown in Fig. 4, or to the

side of a tubular trunk or cylinder,  $D^3$ , as shown in Fig. 5, and their free ends overlap each other, and are also preferably arranged one upon the other, so as to mutually support each other.

I am aware that it is old to employ in a hog-scraping machine a trunk or ring provided internally with elastic scraping-blades, and therefore I do not claim such a trunk as of my invention.

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

1. The combination, with a chain or carrier, of a trunk through which the carcasses are drawn, and which is provided internally with scrapers or scraping devices, bearings for said trunk, which permit of its turning or rotating, and mechanism for turning or rotating said trunk, substantially as and for the purpose specified.

2. The combination of the chain or carrier  $A$ , the trunk  $D$ , provided internally with scrapers or scraping devices, and having the gears or toothed rims  $c$ , the supporting-rollers  $b$ , and the pinions  $E$ , and pinion-shaft  $F$ , all substantially as specified.

3. The combination, with the chain or carrier  $A$ , of the trunk  $D$ , composed of the rings  $D'$  and the spring-metal ribs  $D^2$ , bent over at the ends and secured to the outside of said rings, and scrapers or scraping devices attached to said ribs, substantially as specified.

4. The combination, with a chain or carrier, of a trunk, through which the carcasses are drawn, comprising elastic or yielding ribs or bars, scrapers or scraping devices attached to the inner sides of said ribs or bars, bearings for said trunk, which permit of its turning or rotating, and mechanism for turning or rotating said trunk, substantially as and for the purpose specified.

5. The combination, in a hog scraping or depilating machine, of a scalding-tub, a pulley arranged in said tub, and two pulleys arranged above and in close proximity to the same, and a chain or carrier passing around said pulleys, and having a descending and an ascending portion arranged in said tub, substantially as specified.

6. The combination, with a scalding-tub and the ascending portion of a chain or carrier arranged therein, of guards or guides  $A'$ , arranged substantially as and for the purpose specified.

7. The combination, with a chain or carrier and a hook comprising a downwardly-projecting arm or prong for engaging with said chain or carrier, and also comprising an upwardly-projecting arm or prong, of a depending ring or loop with which the upwardly-projecting arm or prong may engage, substantially as and for the purpose specified.

R. C. TOMPKINS.

Witnesses:

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