

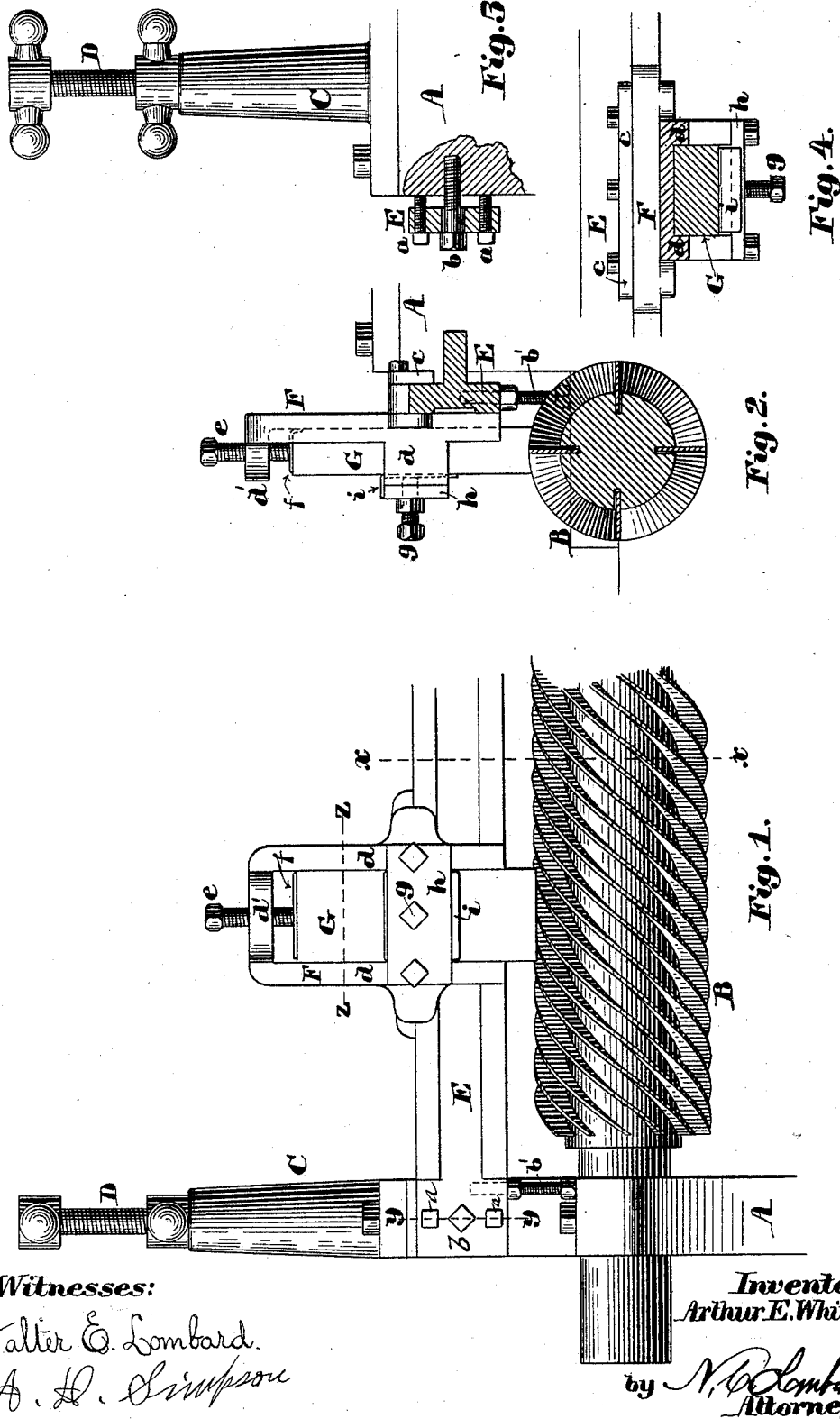
(No Model.)

A. E. WHITNEY.

DEVICE FOR GRINDING THE BLADES OF ROTARY CYLINDERS.

No. 476,938.

Patented June 14, 1892.



Witnesses:

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ARTHUR E. WHITNEY, OF WINCHESTER, MASSACHUSETTS.

DEVICE FOR GRINDING THE BLADES OF ROTARY CYLINDERS.

SPECIFICATION forming part of Letters Patent No. 476,938, dated June 14, 1892.

Application filed November 14, 1891. Serial No. 411,896. (No model.)

To all whom it may concern:

Be it known that I, ARTHUR E. WHITNEY, of Winchester, in the county of Middlesex and State of Massachusetts, have invented certain new and useful Improvements in Devices for Grinding the Blades of Rotary Cylinders, of which the following, taken in connection with the accompanying drawings, is a specification.

My invention relates to mechanism for grinding the peripheries of rotary cylinders and is especially adapted to grinding the spirally-arranged blades of the fleshing-cylinders of the hide-fleshing machine which forms the subject of another application of mine filed November 14, 1891, Serial No. 411,895; and it consists in certain novel features of construction, arrangement, and combination of parts, which will be readily understood by reference to the description of the drawings and to the claims hereinafter given, and in which my invention is clearly pointed out.

Figure 1 of the drawings is a side elevation of a portion of a hide-fleshing machine with my invention applied thereto. Fig. 2 is a transverse sectional elevation, the cutting-plane being on line *xx* on Fig. 1. Fig. 3 is a vertical section through a small part of the upper end of one of the end frames of the machine on line *yy* on Fig. 1, to illustrate the manner of mounting and adjusting the grinder-guide bar; and Fig. 4 is a horizontal section on line *zz* on Fig. 1 and showing a portion of the guide-bar and the grinder-stone holder in plan.

In the drawings, A is one of the end frames of a hide-fleshing machine.

B is the fleshing-cylinder, and C is the housing for holding the spring for acting upon the feed-roll, (not shown,) and D is a screw for regulating the tension of said spring, all constructed, arranged, and operating substantially as shown and described in said other application before cited.

E is a guide-bar adjustably connected at each end to a frame A of the machine by means of the set-screws *aa* and the clamping-bolt *b*, said bolt *b* passing through a hole in the bar E, that is slotted vertically and tapped into said frame A, and *b'* is an adjusting-screw for moving said bar vertically. The bar E has its front, top, and the upper part of its rear side planed and is adjusted into

true parallelism with the axis of the cylinder B.

F is the grinder-holding frame, fitted to rest upon and be movable endwise of said bar E, has the guiding-cap *c* bolted to its back side, and is provided on its front side with two lips *d d*, extending vertically thereof, one along each edge, and at its top with the broader lip *e*, or ear *d'*, in which is threaded the set-screw *g*, the lower end of which rests upon the metal plate *f* and serves to adjust the grinder-stone G, which is placed between the lips *d d* and is clamped in position by the set-screw *g*, threaded in the cap *h* and bearing at its inner end upon the metal plate *i*, interposed between it and the stone G, as shown in Figs. 1 and 2.

The guide-bar E, as shown, forms a part of the hide-fleshing machine and serves the double purpose of a tie-girt and a fixed or non-revoluble guide for the grinder-frame.

The operation of my invention is as follows: When the blades of the cylinder B require grinding, the frame F, with the stone G clamped therein, is placed upon the bar E at one end. The stone G is adjusted so that its lower end comes in contact with the edges of the blades of said cylinder, which is made to revolve by shipping the belt in the desired direction. The operator then moves the frame F along the bar E at a uniform speed until the opposite end of the cylinder is reached, when the stone may be slightly adjusted, and it is in like manner moved along the bar E in the opposite direction to the starting-point. These operations may be continued as long as necessary to put the blades in proper working condition, when the frame F, with its grinding-stone, is removed from the bar E, and the machine is then ready for use.

By the employment of my invention the knife-cylinder may be readily and easily put in good condition when it becomes dull without removing it from the machine or the employment of any expensive machinery.

It is obvious that this grinding mechanism is adapted to grinding such blades as have their edges substantially concentric to their axis of revolution, as in my fleshing-machine described in my before-cited other application.

The grinding-block G may be a piece of natural grindstone, a block of artificial stone, or

compacted emery. This device is equally adapted to grinding the peripheries of plain cylinders.

What I claim as new, and desire to secure by Letters Patent of the United States, is—

1. In a machine having a revolving cylinder that requires grinding at intervals, the combination, with said cylinder and its frame, of the guide-bar E, mounted upon and adjustable vertically and horizontally thereof, the grinding-tool frame or holder F, provided with the lips *d d*, the clamping-screw *g*, and the adjusting-screw *e*, and a grinding-tool of stone or other suitable abrading material, all constructed, arranged, and operating substantially as described.

2. The combination, with a revolving cylinder,

its frames A, and any suitable mechanism for imparting a rotary motion to said cylinder, of the bar E, adjustably secured to said frames, the grinder-holding frame F, provided with the lips *d d*, adjusting-screw *e*, and the clamping-screw *g*, the block of stone or other suitable grinding material G, and the plates *f* and *i*, all constructed, arranged, and operating substantially as described.

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, on this 10th day of November, A. D. 1891.

ARTHUR E. WHITNEY.

Witnesses:

N. C. LOMBARD,
WALTER E. LOMBARD.