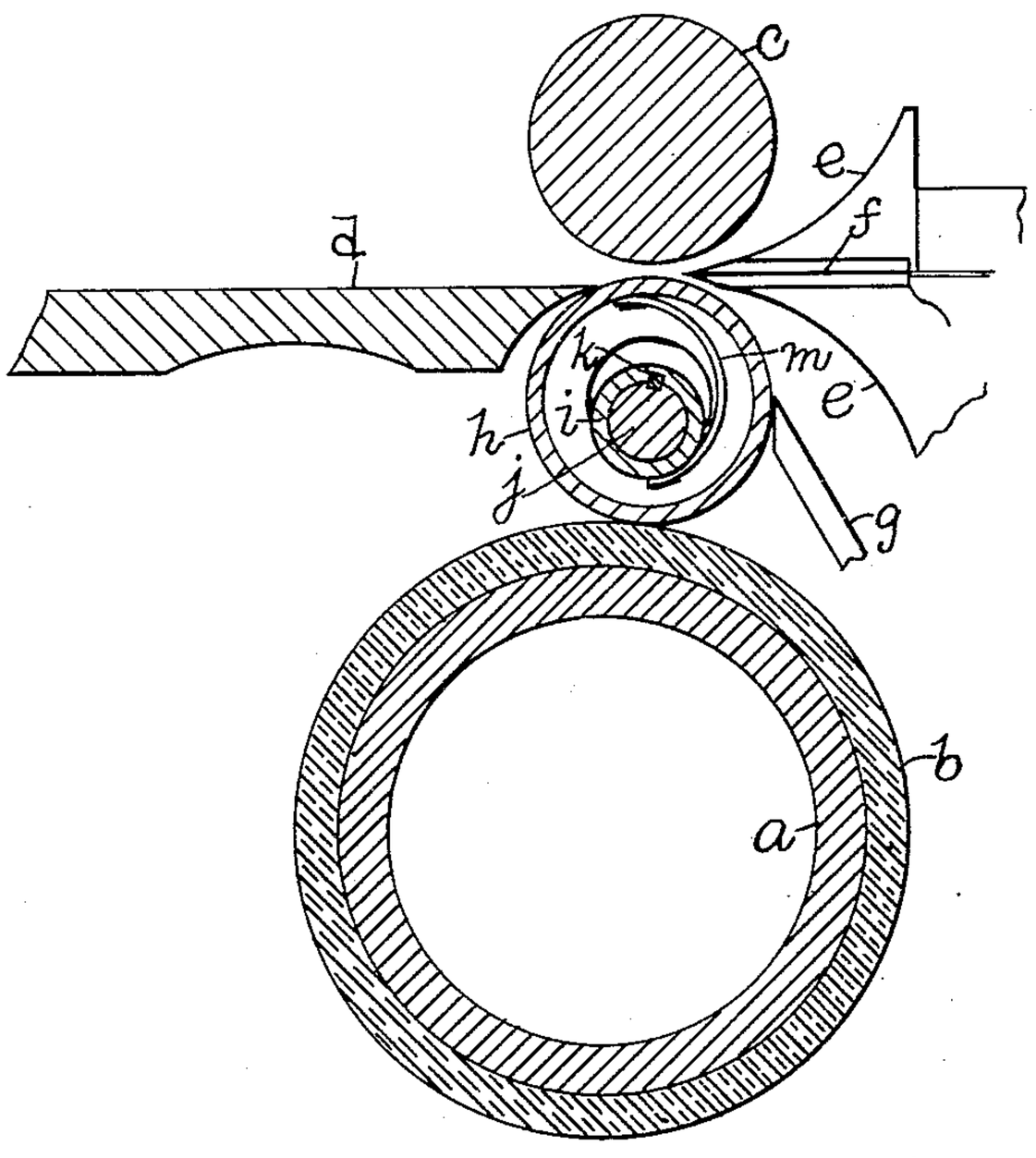
No. 733,264. PATENTED JULY 7, 1903.

D. P. O'BRIEN.

RING ROLL.

APPLICATION FILED APR. 4, 1902.

NO MODEL.



Witnesses.
C. H. Gannett
J. Murphy.

Inventor:
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No. 733,264. Patented July 7, 1903.

UNITED STATES PATENT OFFICE.

DANIEL P. O'BRIEN, OF WOBURN, MASSACHUSETTS.

RING-ROLL.

SPECIFICATION forming part of Letters Patent No. 733,264, dated July 7, 1903.

Application filed April 4, 1902. Serial No. 101,368. (No model.)

To all whom it may concern:

Be it known that I, DANIEL P. O'BRIEN, a citizen of the United States, residing in Woburn, in the county of Middlesex and State of Massachusetts, have invented an Improvement in Ring-Rolls, of which the following description, in connection with the accompanying drawing, is a specification, like letters on the drawing representing like parts.

This invention relates to a ring-roll of the character now commonly employed on belt-knife splitting-machines and comprising an inner ring and an outer ring, within the circumference of which latter the inner ring is located, said rings being disconnected, so that the outer ring can move bodily toward and from the inner ring and independent thereof. In practice a plurality of sets of rings are mounted on a shaft or rod, and the rings of larger diameter are designed to form a sectional feed-roll, which engages one surface of the leather or other material being split and is revolved by frictional contact with a bed-roll. The rings of larger diameter are bodily movable in a radial direction with relation to the shaft or rod on which the inner rings are mounted, so as to compensate for unevenness in the hide or skin being split.

In practice with splitting-machines provided with ring-rolls as now constructed and such as above referred to great difficulty has been experienced in feeding the hide or skin, which is especially true when the hide or skin is moist or wet, owing to the fact that the ring-roll refuses to turn or turns irregularly, thereby effecting an irregular feed of the hide, which results in an uneven splitting of the said hide.

Recently it has been attempted to split green hides, which are slimy and wet, and the defects above referred to are emphasized when this class of hides are put through the splitting-machine.

This invention has for its object to provide a ring-roll with which the objectionable features above referred to may be avoided, and for this purpose I have made provision for positively rotating both rings or members of the ring-roll without interfering with the bodily movement radially of the outer ring or member to compensate for unevenness of the material being acted upon.

In the present instance I have illustrated one embodiment of this invention; but I do not desire to limit my invention to the particular construction shown.

The drawing represents in section and elevation a sufficient portion of a belt-knife splitting-machine embodying this invention to enable it to be understood.

Referring to the drawing, *a* represents the bed-roll; *b*, the rubber cover therefor; *c*, the pressure-roll; *d*, the table upon which the hide, skin, or leather is placed; *e*, the guides for the belt-knife *f*, and *g* the guide or support for the lower split of the material. These parts are and may be of any suitable or usual construction, such as found in belt-knife splitting-machines as now commonly constructed. Intermediate the pressure-roll *c* and the bed-roll *a* is a ring-roll, which in accordance with this invention is positively driven, and this result may be accomplished, as shown, by operatively connecting the outer member or ring *h* with the inner member or ring *i*, which is rendered fast on its shaft *j* by a key *k* or in any other suitable manner. The connection between the members or rings *h i* may be effected, as shown, by means of a piece *m*, of spring-steel or other metal, riveted or otherwise fastened at one end to the inner circumference of the outer member or ring and at its other end to the outer circumference of the inner ring or member, so that rotation of the shaft *j* produces rotation of the inner ring *i* and also rotation of the outer ring *h*, while at the same time the outer ring is free to move radially with relation to the inner ring and its shaft, so as to compensate for unevenness in the hide or skin or other material being split.

By providing a ring-roll which is positively driven or rotated, while having the function of yielding to compensate for unevenness in the hide or skin, the action of the splitting-machine is rendered positive and sure and superior work is obtained, as the hide, skin, or leather, either wet or dry, is properly fed through the machine and presented to the knife in such manner as to insure the work being split in a uniform manner without danger of injuring or spoiling the work.

I have herein shown one construction of positively-driven ring-roll which I may pre-

fer; but believing myself to be the first to provide a ring-roll in which the inner member is positively attached to the outer member I do not desire to limit my invention to the particular construction shown.

I claim—

1. In a machine of the character described, a shaft, a ring-roll mounted thereon and comprising a ring fast on the shaft and a larger ring loose on said shaft to move bodily radially with relation to said shaft, and means attached to the said rings for connecting the larger ring with the smaller ring to effect rotation of the larger ring while permitting it to move radially, substantially as described.

2. In a machine of the class described, a ring-roll comprising an inner member or ring, an outer member or ring movable bodily toward and from said inner member or ring, and means within the circumference of the outer member for directly connecting it with the inner member to enable the outer member to be rotated by rotation of the inner member without interfering with the bodily movement of the outer member, substantially as described.

3. In a machine of the class described, a ring-roll comprising an inner member or ring, an outer member or ring movable bodily toward and from said inner member or ring, and a piece of spring metal secured to the outer ring and to the inner ring, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

DANIEL P. O'BRIEN.

Witnesses:

JAS. H. CHURCHILL,

J. MURPHY.