

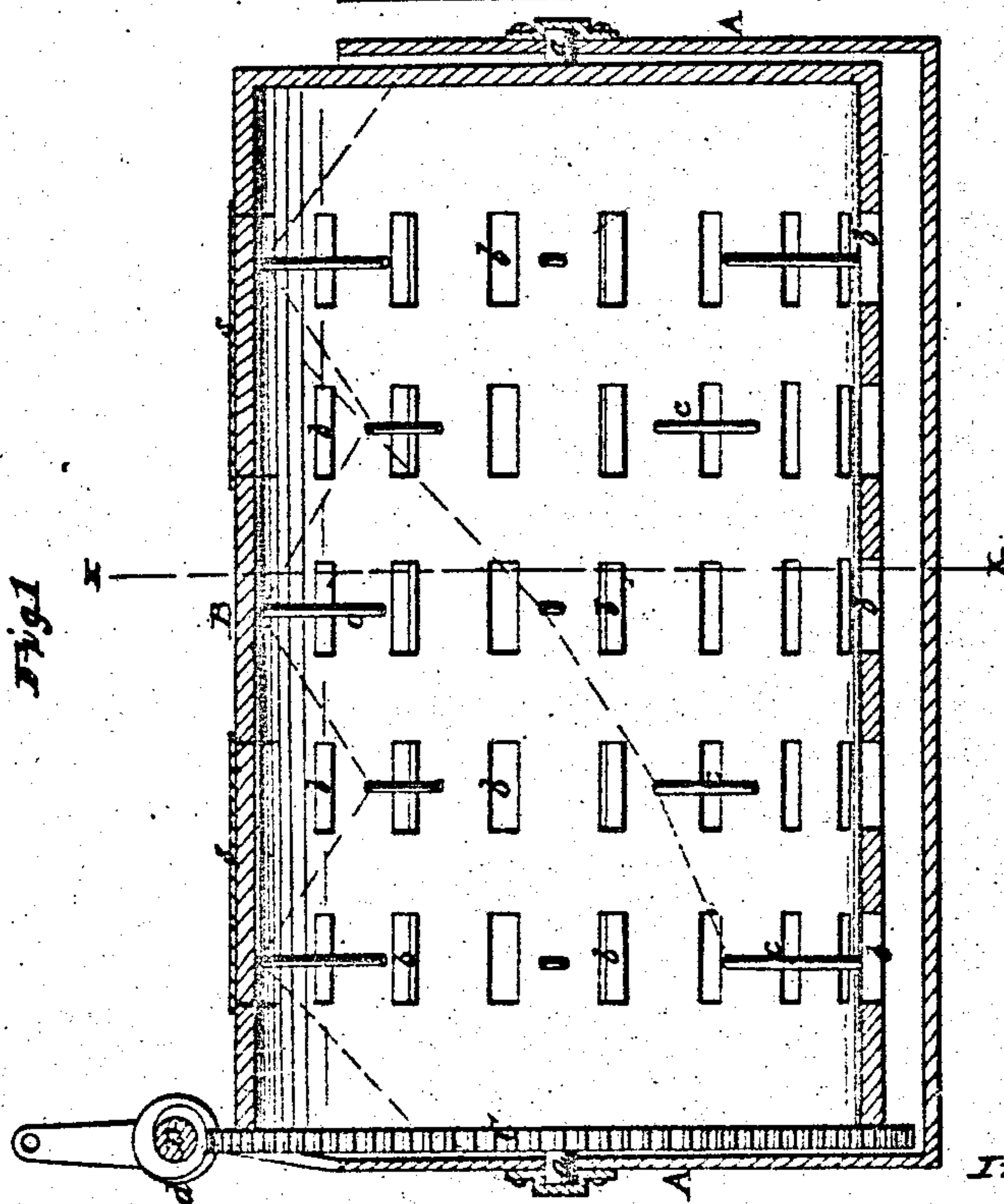
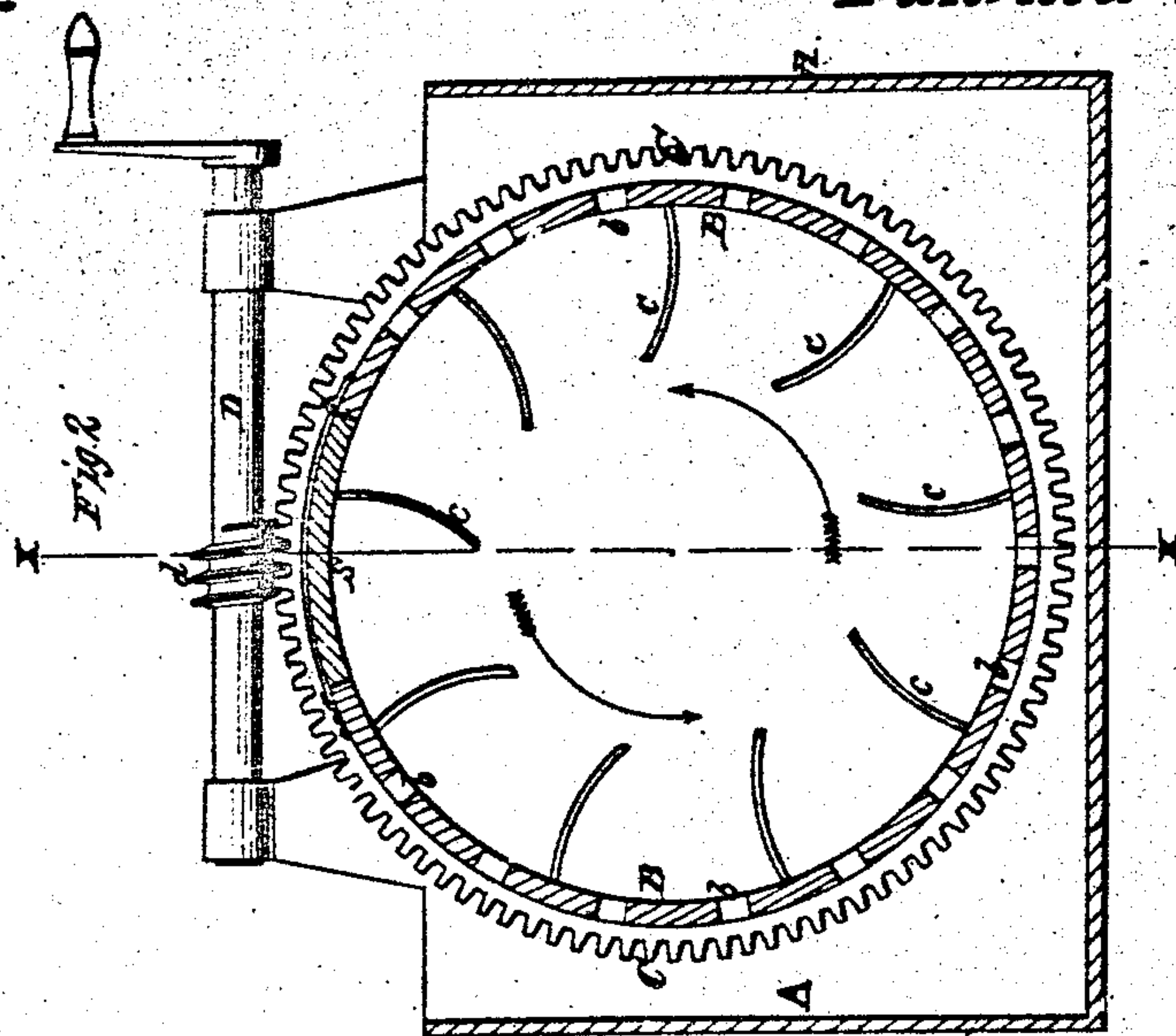
BEST COPY AVAILABLE

V. E. Rusco,

Tanning Machine,

Patented Nov. 10, 1863.

N^o 40575.



Witnesses
R. T. Campbell
J. Schaffer

Inventor.
V. E. Rusco
by his atty.
Messrs. Tamm & Hanna

UNITED STATES PATENT OFFICE.

VOLNEY E. RUSCO, OF CHICAGO, ILLINOIS.

IMPROVED MACHINE FOR TANNING.

Specification forming part of Letters Patent No. 40,575, dated November 10, 1863.

To all whom it may concern:

Be it known that I, VOLNEY E. RUSCO, of Chicago, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Machines for Tanning Hides; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a vertical longitudinal section of the machine, and Fig. 2 a vertical transverse section.

The red lines X X indicate the points where the sections are taken.

The object of my invention is to effect a thorough "handling" of the hides, and a perfect tanning of the same with a rotary cylinder revolved very slowly within a tannin-liquor vat. Rotating cylindrical devices for this purpose have been used, and in many instances openings have been formed in the circumference to allow the tannin liquor to flow from the vat into and out of the cylinder in which the hides are placed. The handling of hides by such cylinder devices has never been very satisfactory, on account of a tendency of the hides to roll together in a "bulk" or "heap," so as to prevent a thorough penetration through every part thereof, also on account of the irregularity and fastness with which the cylinder operates. To remedy these objections, a multiplication of gear-wheels has been resorted to, and it may be that pins and stretchers have been placed on the inside in different ways; but in no instance, to my knowledge, has that perfection which is so desirable been attained.

I have found from practical use of a machine such as I have represented in my drawings, and shall now proceed to describe, that it is an improvement to work the cylinder with what is known as "worm-gear," as such means insure the most regular and a very slow motion, and also that it is an improvement to set the hooks or pins, which carry the hides around as the cylinder revolves, on diagonal or spiral lines, or so that they would be intersected by a zigzag line running from end to end of the cylinder.

In the drawings, A represents a tan-vat of ordinary construction; B, a cylinder, with journals *a a* to support it on top of the vat in such manner as to bring about one-half of the diameter or circumference of the cylinder within the vat. The cylinder may be made of staves so put together that at suitable intervals openings *b b* shall be formed in the cylinder, as represented. On the inside of the cylinder bent pins or curved hooks *c c* are placed so as to run spirally or diagonally around the interior of the cylinder or be intersected by a zigzag line running from end to end of the cylinder, as illustrated in red lines, both dotted and in full. At one end of the cylinder, on the outer circumference, a toothed screw-wheel, C, is firmly secured, and on the same end of the vat a worm-shaft, D, with a worm, *d*, in its center, is located, the worm *d* gearing with the screw-wheel, and thereby giving a slow, regular motion to the cylinder, whether driven by power or by a hand-crank. The hides are introduced into the cylinder through hinged doors *s s*, and in their descent into the cylinder they are caught by the hooks or curved pins in such a manner as to be exposed very perfectly to the tannin liquor which flows through the openings into and out of the cylinder. The cylinder in its revolutions "handles" or lifts the hides through the aid of the hooks or curved pins in such a manner that they are raised out of and dropped into the liquor periodically, thus most effectually securing the result desired—to wit, the insinuation into the pores of the hides or skins (at every part) of the tannin liquor. It will be understood that the vat is filled up to the journals of the cylinder with ooze or tannin liquor, and that the cylinder will be submerged into the liquor to an extent about equal to half its diameter. The slow motion gives the hides, as they are being lifted, time enough to "drip" before they are again dropped into the liquor; but the main design of it is to keep them long enough immersed to allow the tannin to act upon them. The dropping back of the hides into the liquor is insured by the shape of the dull-pointed pins or hooks, the curve in them being just sufficient to insure a hold

upon them during the lifting, but not to prevent them slipping down after they are lifted. The zigzag set of the pins or hooks causes the hides to be presented with zigzag bends in them to the tannin liquor, which mode of exposure to the liquor is found very advantageous and essential to the operation of tanning with rotary cylinders.

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

The machine for tanning hides, constructed and operated in the manner set forth.

V. E. RUSCO.

Witnesses:

C. D. WOLF,
P. H. WILT.