

No. 754,341.

PATENTED MAR. 8, 1904.

C. H. PELL.  
RAWHIDE SPLITTING MACHINE.

APPLICATION FILED SEPT. 10, 1902.

NO MODEL.

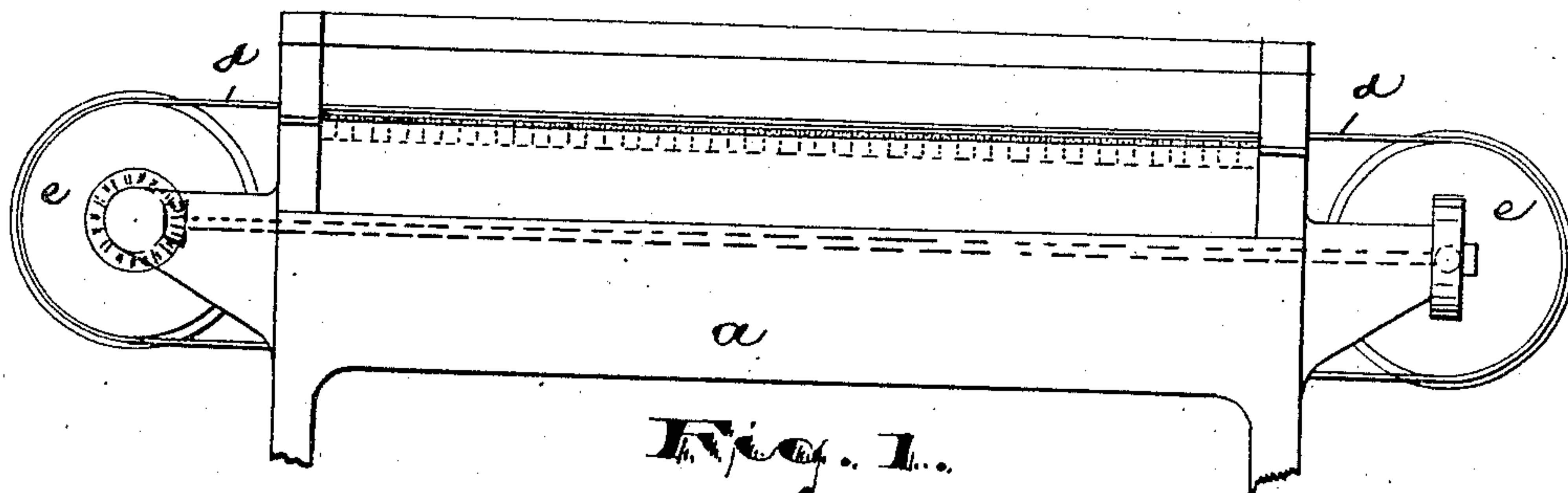


Fig. 1.

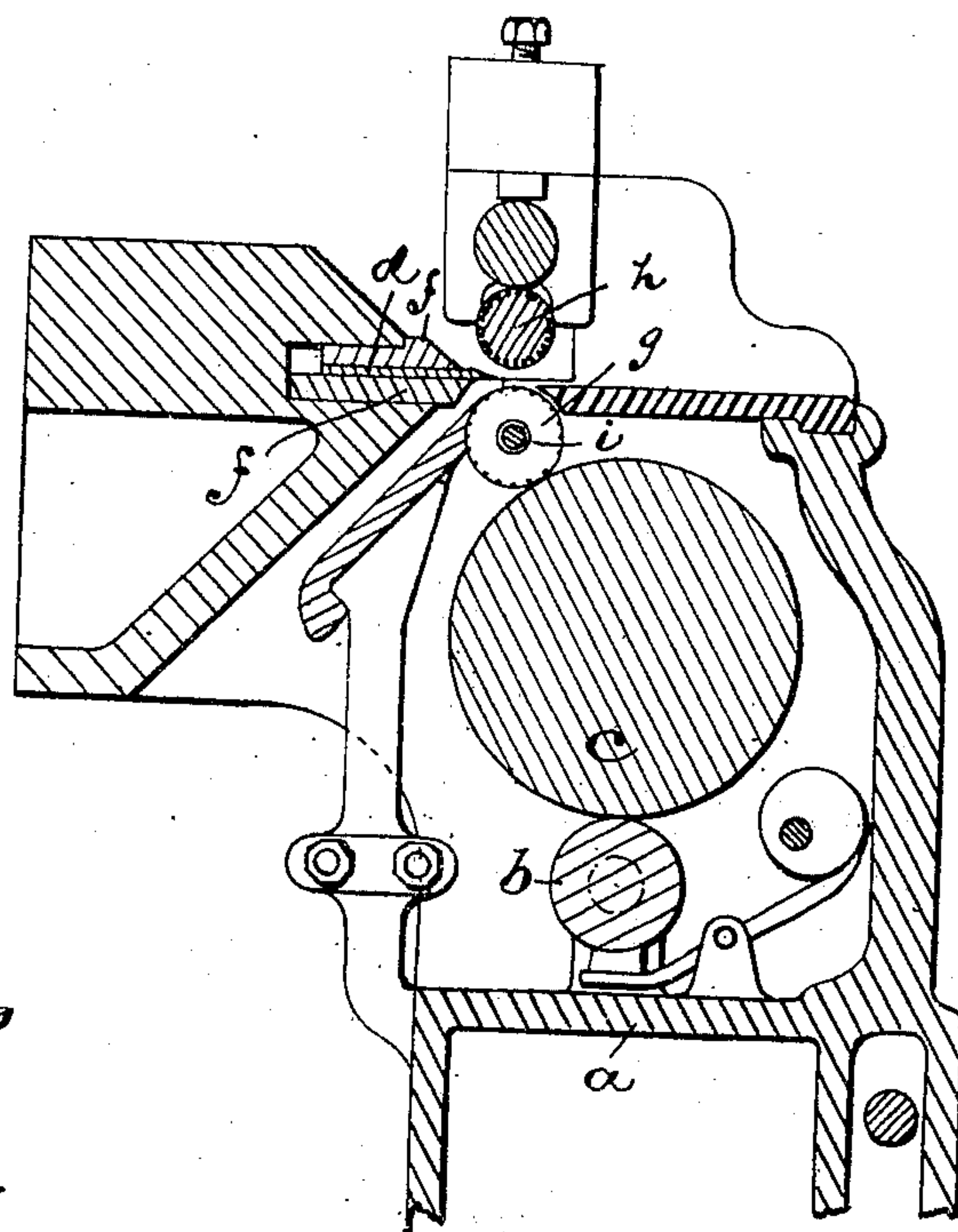


Fig. 2.



Fig. 3.

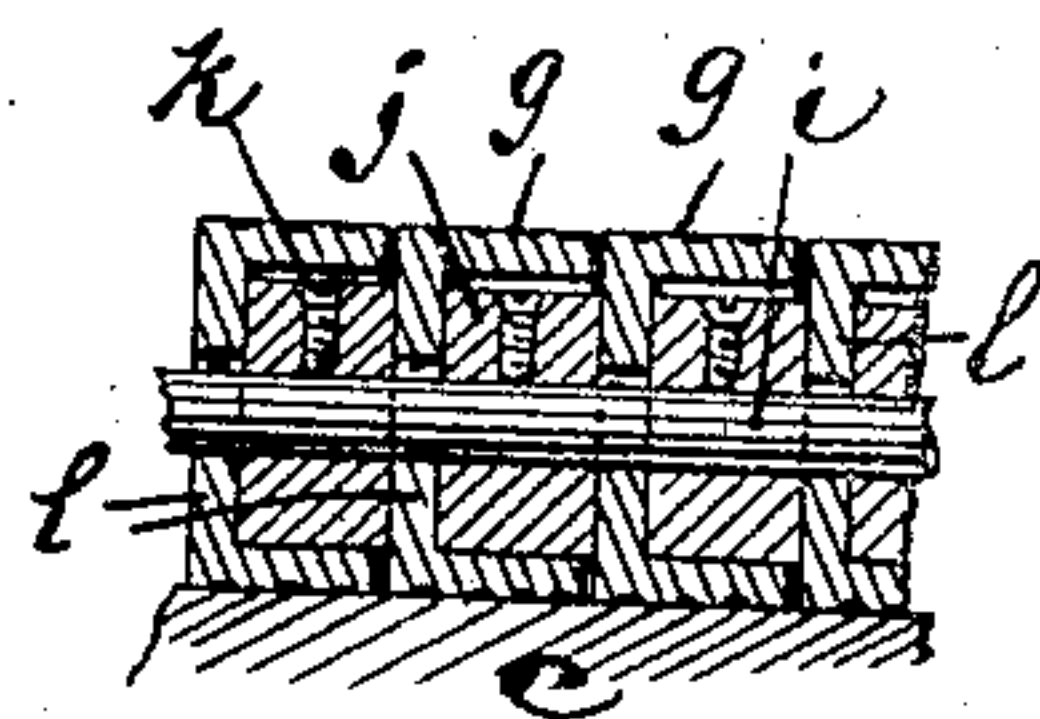


Fig. 4.

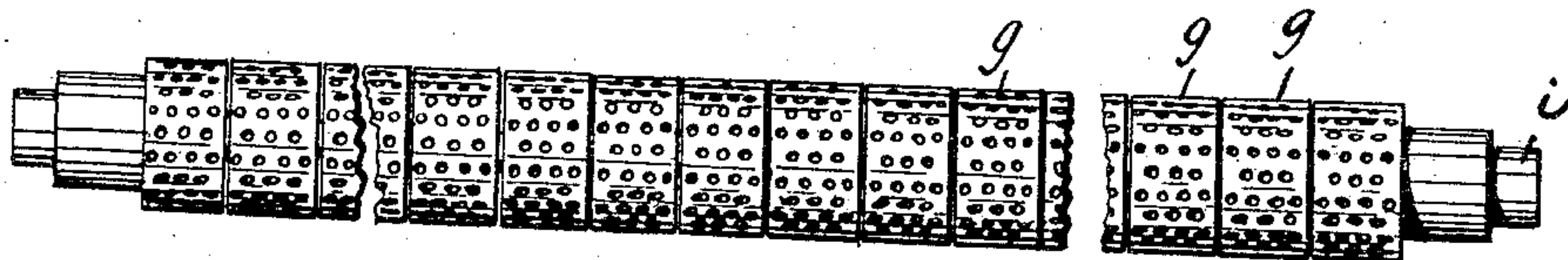


Fig. 5.

WITNESSES:

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# UNITED STATES PATENT OFFICE.

CHARLES H. PELL, OF NEWARK, NEW JERSEY, ASSIGNOR TO P. REILLY & SON, A CORPORATION OF NEW JERSEY.

## RAWHIDE-SPLITTING MACHINE.

SPECIFICATION forming part of Letters Patent No. 754,341, dated March 8, 1904.

Application filed September 10, 1902. Serial No. 122,816. (No model.)

*To all whom it may concern:*

Be it known that I, CHARLES H. PELL, a citizen of the United States, residing at Newark, in the county of Essex and State of New Jersey, have invented and produced new and original Improvements in Rawhide-Splitting Machines; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

The object of this invention is to secure a more perfect and finished piece of split leather; to enable the rawhide to be fed to the belt-knife without being cut, broken, or corrugated or so creased as that the finished leather will be marked and the value of the said finished leather reduced; to enable the soft rawhide to be effectually fed to the belt-knife and to prevent the feed-rollers from slipping over the said rawhide, and to obtain other advantages and results, some of which may be referred to hereinafter in connection with the description of the working parts.

The invention consists in the improved rawhide-splitting machine and in the arrangements and combinations of parts of the same, all substantially as will be hereinafter set forth and finally embraced in the clauses of the claim.

Referring to the accompanying drawings, in which like letters of reference indicate corresponding parts in each of the figures, Figure 1 is a front view of a portion of a rawhide-splitting machine embracing my improvements. Fig. 2 is a central vertical section of the same on an enlarged scale. Figs. 3 and 4 are detail vertical sections showing the construction and arrangement of certain ring-rolls and connections, and Fig. 5 is a plan showing a series of said ring-rolls loosely seated on a shaft in connection with an elastic roller.

In said drawings, *a* indicates the bed-frame of the machine, provided with a supporting-roll *b*, cushion-roll *c*, endless belt-knife *d*, ar-

ranged over pulleys *e e*, and moving between jaws *f* in any usual manner, said parts having any of the ordinary motive appliances whereby they are effectively operated.

Contiguous to the cutting edge of the endless knife are arranged ring-rolls *g* and a gage-roll *h*, the said ring-rolls being arranged in a series upon a suitable shaft *i*, provided with a series of wheels *j*, fixed thereon by set-screws *k* or otherwise. The said ring-rolls *g* are interiorly cored out at one side, the chambers therein being somewhat larger in diameter than the diameter of the fixed wheels *j*, so that said ring-rolls will have a limited freedom or independence of movement in a direction at right angles to the shaft in the ordinary manner, the flanges *l* of the ring-rolls entering between the fixed rings or wheels *j* upon the shaft, so as to prevent movement in the direction of the axis of the shaft also, as usual. Said ring-rolls arranged upon the shaft, as described, are seated upon the elastic or rubber roll also in the usual manner.

Heretofore it has been common to corrugate the surfaces of gage and ring rolls or form alternating ribs and grooves on said surfaces, and these have sometimes been given spiral shape around the peripheries of said rolls. When thus corrugated, the ribs have so impressed the soft rawhide that the effect has been frequently apparent on the surface of the finished split leather, and the strength and durability of said leather have been reduced. To avoid these defects and injuries, I have provided the ring and gage rolls *g h* with peripheries which are devoid of parallel ribs and grooves and are furnished with small round recesses or indentations *l*, preferably bored into the peripheral surface of the metal rolls by means of suitable drills or the like. The said indentations *l* are separate and apart from one another and when the rolls are in use are covered by the soft, wet, or damp rawhide, and each recess is closed thereby, so that the air is prevented from easily escaping therefrom, and thus serves as a cushion, preventing the soft hide from entering deeply and so that the surface of the hide is not injured or marred by cutting or the formation of im-



pressions or bosses, due to the hide entering the said recesses. Furthermore, should any marks due to the recesses be made upon the hide they will only have a "pebble" effect on the eye, and thus the markings will not be objectionable, even if apparent. The slight entrance of the hide into the recesses serves to prevent said rolls from slipping over said hide, and the latter is forced with regularity against the traveling cutting-blade. I prefer to make the recesses in the gage-rolls somewhat smaller than those in the ring-rolls, and thus the bosses due to said recesses will be small and in harmony with the natural "grain" of the surface of the finished leather when the latter is finally made. To entrap the air in the recesses, as above described, it is obvious that the recesses must not be such as to perforate the wheel; but, on the contrary, the recesses in my construction only extend partly through the ring, and thus I distinguish indentation from perforation in that there is no open communications, as by a perforation, between the exterior of the roll and the interior, the chamber thereof containing the fixed wheel. By this improved construction the chambers are maintained free of dirt, an accumulation of which would soon interfere with proper working of the machine.

By my construction both the gage and ring rolls are preferably provided with separate indentations or recesses, and thus there is no

danger of either of the surfaces of the rawhide from slipping in their relation to the rolls.

Having thus described the invention, what I claim as new is—

1. The improved rawhide-splitting machine in which is combined with a traveling splitting-blade and a cushion-roll, a series of ring-rolls in contact with said cushion-roll, and a gage-roll, the said ring-rolls being each furnished with indentations each separate and apart from the others and extending but partly through the roll and thus adapted to be closed by the rawhide, substantially as set forth.

2. The improved rawhide-splitting machine in which is combined with a traveling splitting-blade and cushion-roll, a series of indented ring-rolls and an indented gage-roll, arranged near the traveling blade and adapted to feed the rawhide thereto, the indentations being each separate and apart from the others and extending but partly through the roll and thereby forming an air-chamber adapted to be closed by the rawhide as it engages the indented portion of the roll, substantially as set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 2d day of September, 1902.

CHARLES H. PELL.

Witnesses:

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WILLIAM W. HOLDEN.