J. STANISZEWSKI.

LEATHER WORKING MACHINE.

APPLICATION FILED APR. 23, 1910.

1,002,879. Patented Sept. 12, 1911.

2 SHEETS—SHEET 1.

Fig. 1.

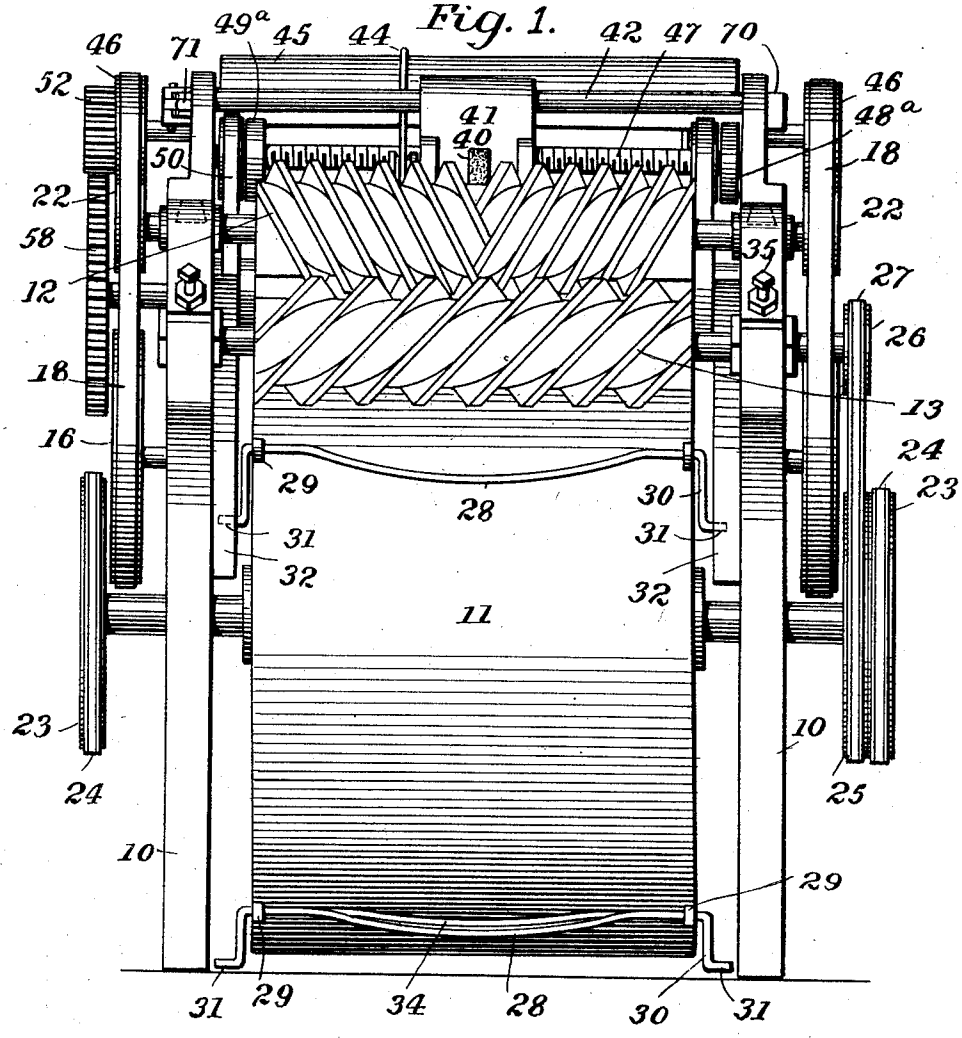
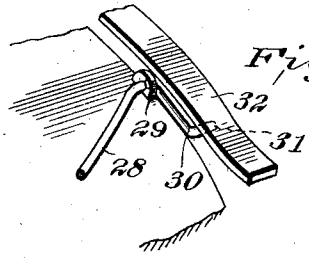


Fig. 3.



Witnesses

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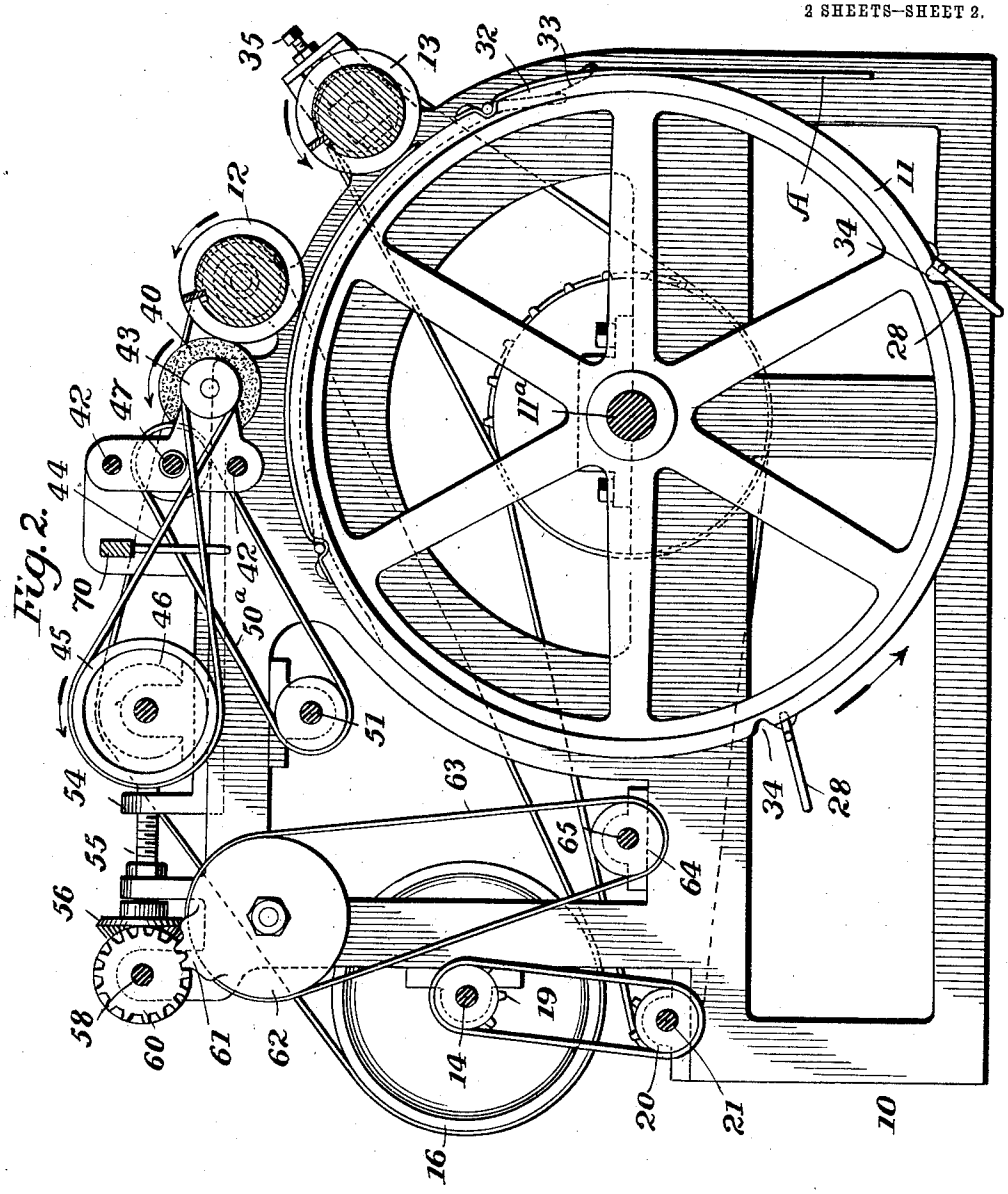
2 SHEETS—SHEET 2.

Fig. 2.



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UNITED STATES PATENT OFFICE.

JOSEPH STANISZEWSKI, OF WILMINGTON, DELAWARE, ASSIGNOR OF ONE-HALF TO HARRY EMMONS, OF BRANDYWINE, DELAWARE.

LEATHER-WORKING MACHINE.

1,002,879. Specification of Letters Patent. **Patented Sept. 12, 1911.**

Application filed April 23, 1910. Serial No. 557,297.

To all whom it may concern:

Be it known that I, JOSEPH STANISZEWSKI, a subject of the Czar of Russia, and resident of Wilmington, in the State of Delaware, have invented certain new and useful Improvements in Leather-Working Machines, of which the following is a specification.

This invention relates to machines for working on hides, skins, and leather in general, and one of the objects is to construct a machine which will be simple and effective in operation.

Another object is to improve the work holding and work feeding means.

Further objects will appear from the detail description.

The invention will be described in connection with the accompanying drawings, in which—

Figure 1 is a front elevation; Fig. 2 is a section. Fig. 3 is a fragmentary perspective of the drum and also of the mechanism for automatically clamping the hides to the drum.

Referring to the accompanying drawings, 10 designates side members or supports which are arranged to support the operating mechanism. A work support 11, comprising a rotary drum, is secured to a shaft 11^a which is journaled in bearings in the side members. A working tool 12 is arranged to coöperate with the work support, and the work is fed underneath a presser feed roll 13. The working tool may be of various forms. In this case, it is shown of common helical form, although it is not necessarily limited to this particular construction.

The main drive shaft 14 provided with a suitable pulley 15, is journaled in the side members. This drive shaft has mounted upon it a pair of pulleys 16, and the tool shaft has mounted upon it a pair of pulleys 17, which are arranged to be driven from the pulleys 16 by means of belts 18. The drive shaft 14 has also mounted upon it a chain wheel 19, which is arranged to transmit power through chain wheel 20 to the shaft 21. This shaft has mounted upon it a pair of chain wheels 22, which are operatively connected by means of chains 24 to chain wheels 23, mounted upon the work support shaft. The work support shaft has mounted upon it a chain wheel 25, which is operatively connected to a chain wheel 26 on the presser roll shaft by means of a chain 27.

The work support has mounted thereon a series of clamping members which are arranged to clamp the work thereon. The clamping member comprises a bar 28 journaled in bearing lugs 29 on the work support. This bar is of curved form as shown, and has mounted thereon a pair arms 30 provided with cam lugs 31. The side members are provided with curved ribs 32, the curvature being substantially an arc of a circle with the work support shaft as the center. These ribs are arranged to engage the lugs 31, so as to clamp and lock the clamps in closed position, and the ends of the ribs are provided with inclined or flaring portions 33, so as to permit the easy engagement of the lugs 31. The work support is provided with curved grooves 34 which receive the clamps. The tension of the presser roll may be adjusted by means of adjusting screws 35.

In the operation of the machine, the working tool 12 will be driven at a high speed while the work support and the presser and feed roll 13 will be driven at a comparatively low speed. The driving connections for the work support and the presser feed roll 13 are preferably so proportioned that their surface speeds will be the same. The operator standing in front of the machine will place the work underneath the clamps as they rise with the work support, and will move these clamps into clamping engagement with the work support. As the work support moves on, the cam lugs 31 will be engaged by the inclined portion 33 of the cam ribs 32, and the clamps will be firmly closed and locked so as to securely clamp the work in position. The work now passes underneath the presser feed roll 13, and then underneath the working tool where the material is operated upon. The material will be evenly spread out by the presser feed roll, due to the helical construction of the engaging surface of the roll, and it is thus insured that the hide or material which is operated upon will be worked down to a uniform thickness. After the work has passed the working tool, the cam lugs 31 will move out of engagement with the cam 32, and thus the work will be automatically released, since the clamps will au-

tomatically open due to gravity, as shown in Fig. 3, but in order to facilitate this opening of the clamps, the journals may be provided with any suitable helical springs so as to open the clamps. The clamping bars press the material into the recesses 34. These bars will be located below the surface of the work support and the work, so that no damage will be done to the tool 12. These bars are given a curved form, so as to conform to the shape of an ordinary hide or skin, which is to be operated upon. By giving them this shape, it is insured that the material will be securely clamped in place, and in addition, the hide or skin will be operated upon substantially throughout its surface, thereby preventing waste of material.

By providing the work support with a plurality of clamps, the operation is continuous so that it is not necessary to stop the machine to insert and take out the work. The drum will be ordinarily driven at a slow speed, and the hides will be inserted and clamped in position while the machine is running. While one hide is operated upon the next hide is being inserted in place and the preceding hide is being released. It is thus seen that the operation is substantially automatic.

In the specific machine described, the work support is shown in the form of a rotating drum. It is obvious however, that this work support is not necessarily limited to this specific construction. The working tool in this case, is also shown in the form of a helical tool which is arranged to work down or shave the hide or skin. It is obvious however that this working tool may be of any other form, for instance, it may be a skiving or splitting tool. It is therefore to be understood that this invention is not to be limited to any specific form of working tool. It is further obvious that various changes may be made in the details of construction without departing from this invention, and it is, therefore, to be understood that this invention is not to be limited to the specific construction shown and described.

Having thus described the invention, what is claimed is:

1. In a leather working machine, the combination with a working tool, of a movable work support coöperating therewith and comprising a drum having a continuous inner surface, a plurality of work-holding clamps on said drum, and means whereby said clamps may be moved automatically to operative and inoperative positions.

2. In a leather working machine, the combination with a working tool, of a movable work support coöperating therewith and comprising a drum having a continuous inner surface, a plurality of work-holding clamps on said support, and means for automatically and successively closing said clamps.

3. In a leather working machine, the combination with a working tool, of a movable work support coöperating therewith and including a drum, a plurality of work-holding clamps on said support for initially engaging the work while the drum is moving, and means for automatically and successively closing said clamps as they approach the tool.

4. In a leather working machine, the combination with a working tool, of a movable work support coöperating therewith, a plurality of work-holding clamps on said support for initially engaging the work and clamping the same to the support while the latter is moving, and means for automatically and successively locking said clamps as they approach the tool, and for unlocking said clamps after they have passed the tool.

5. In a leather working machine, the combination with a working tool, of a movable work support coöperating therewith and comprising a drum, a work clamping member arranged to coöperate with the outside surface of said drum to initially engage the work and clamp the same while the drum is moving, and means for automatically clamping and unclamping said member.

6. In a leather working machine, the combination with a working tool, of a movable work support coöperating therewith and comprising a drum, a work clamping member arranged to coöperate with the outside surface of said drum to initially engage the work and clamp the same while the drum is moving, and a stationary cam coöperating with said member for automatically clamping the same as it approaches the tool.

7. In a leather working machine, the combination with a working tool, of a movable work support coöperating therewith and comprising a drum, a bar journaled on said drum and arranged to initially engage the work and clamp the same on said drum while the latter is moving, and means for locking said bar in clamped position.

8. In a leather working machine, the combination with a working tool, of a movable work support coöperating therewith and comprising a drum, a bar journaled on said drum and having a medially offset portion arranged to engage and clamp the work on the drum while the latter is moving, and means for locking said bar in clamped position.

9. In a leather working machine, the combination with a working tool, of a movable work support coöperating therewith and comprising a drum, a bar journaled on said drum and arranged to initially engage and clamp the work on said drum while the lat-

ter is moving, an arm on said bar, and means engaging said arm to automatically lock said bar in clamped position.

10. In a leather working machine, the combination with a working tool, of a movable work support coöperating therewith and comprising a drum, a bar journaled on said drum and arranged to engage and clamp the work on said drum while the latter is moving, an arm on said bar, and means engaging said arm to automatically lock said bar in clamped position, said arm forming a handle whereby said bar may be manually operated.

11. In a leather working machine, the combination with a working tool, of a movable work support coöperating therewith and comprising a drum having a continuous inner surface, a bar journaled on said drum and arranged to engage and clamp the work on said drum while the latter is moving, an arm on said bar, and a stationary cam in the path of the arm and constructed to lock the bar in clamped position.

12. In a leather working machine, the combination with a working tool, of a work support coöperating with said tool and comprising a drum having a continuous inner surface, a plurality of clamping bars constructed to engage and clamp the work on the drum while the latter is moving, and means whereby said bars may be clamped and unclamped and locked in clamped position.

13. In a leather working machine, the combination with a working tool, of a work support coöperating with said tool and comprising a drum having a continuous inner surface, a plurality of clamping bars constructed to initially engage and clamp the work on the drum while the latter is moving, and a cam constructed to automatically and successively lock the bars in clamped position.

14. In a leather working machine, the combination with a working tool, of a work support coöperating with said tool and comprising a drum having a continuous inner surface and an interrupted outer surface, a plurality of clamping members constructed to clamp pieces of work in the interrupted portions of the outer surface of the drum, means for continuously rotating the drum, and means whereby said clamping members may be automatically clamped and unclamped.

15. In a leather working machine, the combination with a working tool, of a work support coöperating with said tool and comprising a drum having a curved groove therein, a clamping bar journaled on said drum, arms on said clamping bar, side members for supporting said drum, and annular cam ribs projecting from said side members and cooperating with said arms to move the clamping bar into the groove.

16. In a leather working machine, the combination with a working tool, of a movable work support coöperating therewith, a clamping member on said support, comprising a curved bar, and means for moving said member to clamping and unclamping positions.

In testimony whereof I affix my signature in presence of two witnesses.

JOSEPH STANISZEWSKI.

Witnesses:

HENRY SCHILKE,

CHARLES M. TOWNSEND.