

(No Model.)

F. J. FISCHER.
MACHINE FOR CUTTING GLUE STOCK.

No. 414,766.

Patented Nov. 12, 1889.

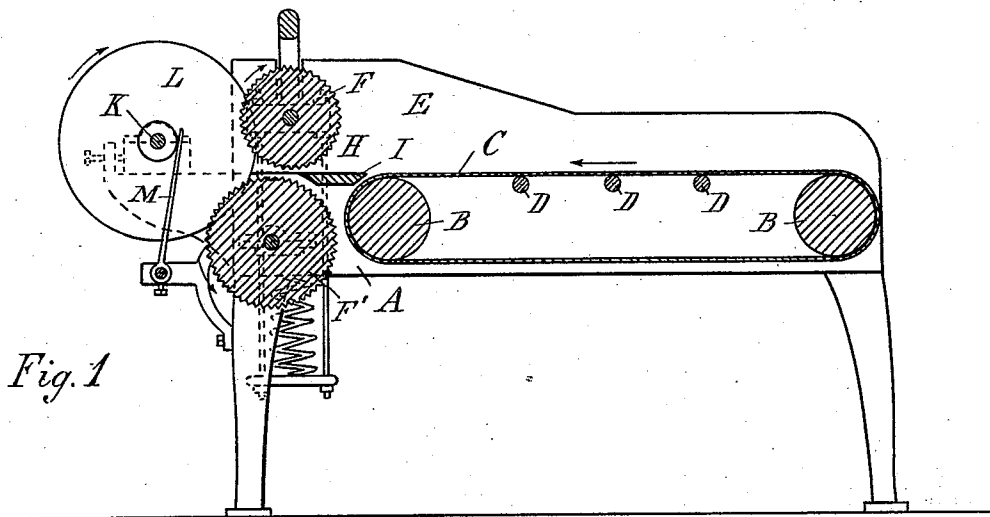


Fig. 1

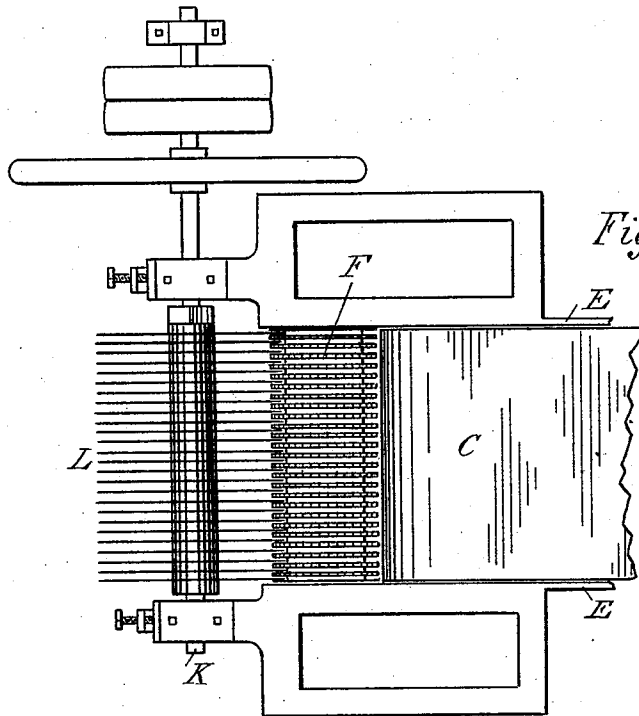


Fig. 2

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by Thos. L. Sprague & Son, Attys.

UNITED STATES PATENT OFFICE.

FREDERICK J. FISCHER, OF DETROIT, MICHIGAN.

MACHINE FOR CUTTING GLUE-STOCK.

SPECIFICATION forming part of Letters Patent No. 414,766, dated November 12, 1889.

Application filed January 7, 1889. Serial No. 295,618. (No model.)

To all whom it may concern:

Be it known that I, FREDERICK J. FISCHER, a citizen of the United States, residing at Detroit, in the county of Wayne and State of Michigan, have invented certain new and useful Improvements in Machines for Cutting Glue-Stock, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to new and useful improvements in machines for cutting glue-stock; and the invention consists, primarily, in the peculiar construction and arrangement of the feeding devices by means of which the stock is carried into the knives, and, further, in the peculiar construction, arrangement, and combination of the different parts, all as more fully hereinafter described, and specifically set forth in the claims.

In the drawings which accompany this specification, Figure 1 is a vertical central longitudinal section of my improved machine, and Fig. 2 is a plan view thereof.

A represents the frame supporting the operating parts of the machine.

B B are transverse rollers suitably journaled in the sides of the frame. C is an endless carrier-belt passing over these rollers in the longitudinal direction of the machine, and preferably consisting of impervious belting.

D are intermediate rollers supporting the upper portion of the carrier-belt between the rollers B B.

E are the sides of the frame, projecting above the carrier-belt.

F and F' are a pair of feed-rollers at the rear end of the machine, and journaled in suitable bearings in the sides of the machine.

H is a bridge between the lower feed-roller and the adjoining roller B, and forming with its edge I a scraper for the carrier-belt C.

K is a transverse shaft journaled in suitable bearings at the rear end of the frame, and L are a series of rotary disk-cutters secured at equal distances apart upon the shaft K.

M is a scraper-comb projecting from below into the interstices between the cutter-disks.

The feed-rollers F and F' are studded all over their cylindrical surface by being corrugated in their longitudinal direction, and

provided with annular grooves at right angles to their axis. These grooves correspond with the number and position of the rotary cutter-disks, the cutting-edges of which enter these grooves. The upper feed-roller is secured in yielding bearings in any suitable manner, while the lower feed-roller revolves in stationary bearings, and it is preferably larger than the upper feed-roller.

The shaft K of the rotary cutter-disks is secured in longitudinally-adjustable bearings to adjust the knives closer or farther away from the feed-rollers, both of which are entered by the cutting-edges of said disk to the depth of the annular grooves, or nearly so. Motion is communicated to the operating parts in any suitable manner.

The shaft K of the rotary disk serves, preferably, as a main drive-shaft, from which the motion is carried to the other parts by suitable intermediate gear.

In practice the machine is designed to cut up glue-stock, such as, consisting of irregular pieces of hide, forms a slimy mass. This stock is fed by the attendants under the carrier-belt at the front end of the machine. This belt, traveling in the direction indicated by the arrows, carries the stock onto the bridge, from which it is gradually drawn into the feed-rollers, which distribute it evenly. By the feed-rollers the stock is impacted into the interstices between the studs, and thereby carried by the rollers into the path of the cutting-edges of the rotary cutter-disks, a portion of the stock being carried by the upper roller and a portion being carried by the lower roller. By thus becoming wedged into the interstices between the sides of the rollers the cutting-edges are enabled to cut the stock into small pieces without any liability of the knives becoming choked up or of any pieces escaping the action of the knives. The cut-up stock readily drops into suitable receptacles placed below or onto another carrier, which carries them away from the machine. The scraper-comb entering the interstices between the disks is arranged to remove all the cut-up material from between said disks and to scrape it below into the receptacle or onto the floor. The upper feed-roller is journaled in yielding bearings to allow chunks of material to pass readily through

the machine without disturbing the operation.

The sides of the frame are made of suitable height to keep the material upon the carrier-belt. Suitable adjustments are provided to tighten the carrier-belt whenever it becomes necessary.

On account of the slippery and slimy condition of the glue-stock and of the tough nature of the material it is difficult to devise a machine of this kind which will work satisfactorily; but by the peculiar action of the feed-roller in my device I have found a positive means to feed the stock into the knives with the most satisfactory results. I make the lower roller F' preferably larger than the upper roller to make the angle at which the rotary cutter-disks' cutting-edges meet the material upon the lower feed-roller as small as possible to obtain a drawing cut, which gradually severs the material with the least resistance.

It is obvious that a satisfactorily-operating machine may be constructed with one of the feed-rollers studded only and the other plain. This would be, however, at the expense of the capacity of the machine, as less stock would be carried into the cutters.

As the knives are ground down, they may be adjusted to the feed-rollers by means of sliding bearings, in which the shaft of the cutter-disk is journaled.

What I claim as my invention is—

1. In a machine for the purpose described, the combination, with the rotary cutter-disks and conveyer-belt, of the feed-rollers arranged one above the other between the belt and the disks, with their axes parallel with that of the disks and studded, and the bridge H, arranged between the belt and the rollers and serving as a scraper for said belt, substantially as shown and described, and for the purpose specified.

2. In a machine for the purpose described, the combination, with the rotary cutter-disks and conveyer-belt, of the bridge H, and the feed-rollers arranged one above the other between the belt and the disks, with their axes parallel with that of the disks and studded, said rollers being of unequal diameters with the lower one the larger, substantially as shown and described, and for the purpose specified.

In testimony whereof I affix my signature, in presence of two witnesses, this 23d day of November, 1888.

FREDERICK J. FISCHER.

Witnesses:

J. PAUL MAYER,
W. A. ROSS.