P. A. FRESK.

BARKING MACHINE.

APPLICATION FILED AUG. 26, 1919.

1,375,374.

Patented Apr. 19, 1921.

2 SHEETS—SHEET 1.

Fig. 1.

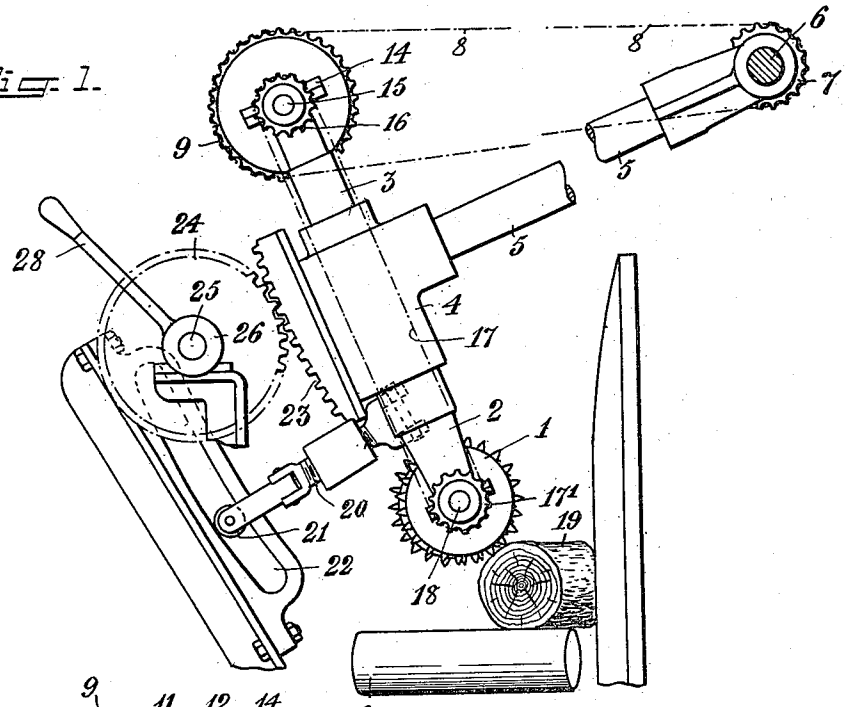
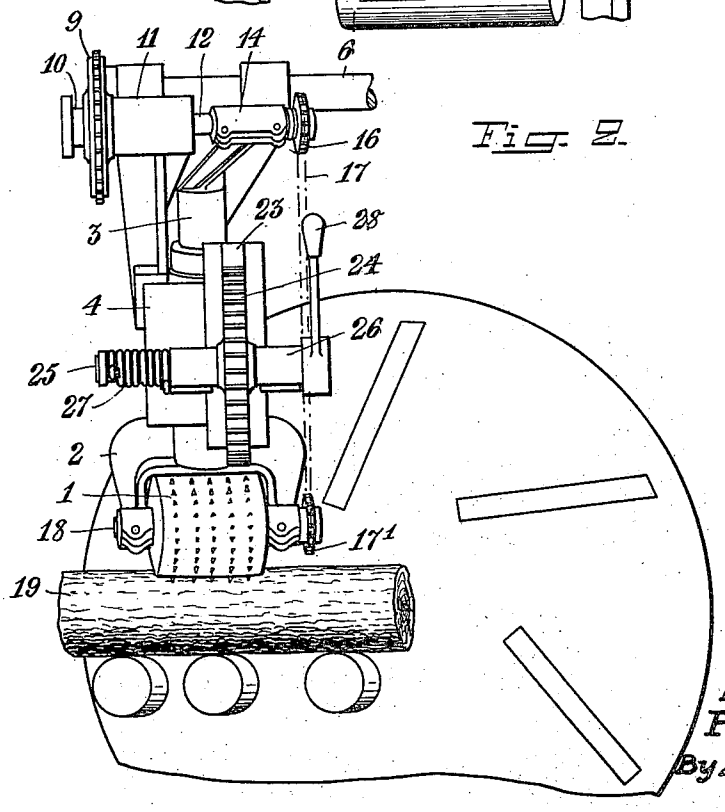


Fig. 2.



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2 SHEETS—SHEET 2.

Fig. 3.

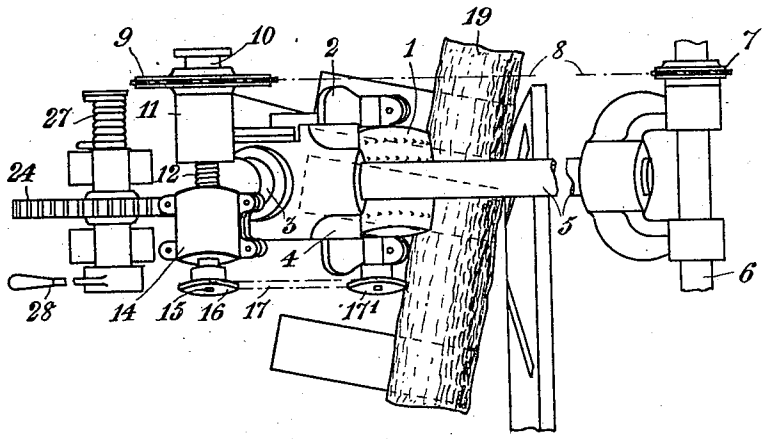
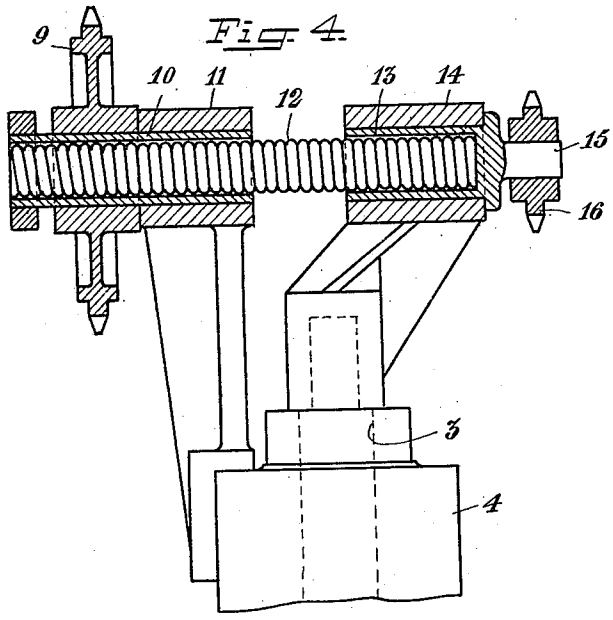


Fig. 4.



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UNITED STATES PATENT OFFICE.

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BARKING-MACHINE.

1,375,374. Specification of Letters Patent. Patented Apr. 19, 1921.

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To all whom it may concern:

Be it known that I, PER ALBERT FRESK, engineer, subject of the King of Sweden, residing at Robertsfors, in the Kingdom of Sweden, have invented certain new and useful Improvements in Barking-Machines, of which the following is a specification.

The present invention relates to an arrangement in barking machines, in which a toothed roller rests on the log to be barked, the said roller not only turning the log but also feeding it in the longitudinal direction, for which purpose the roller may be adjusted obliquely with respect to the log. The magnitude of this obliquity, that is to say the greater or smaller angle between the longitudinal axis of the roller and that of the log determines the speed at which the feeding is taking place, and the angle, that is to say the speed of feeding, must be greater the smaller the diameter of the log is.

To obtain full coincidence between the oblique position of the roller and the diameter of the log, endeavors have been made to obtain such an arrangement of the feed roller in machines of the said kind that the roller, when being lowered on to the log, will be automatically adjusted so as to assume the oblique position which corresponds to the diameter of the log. However, the arrangements for this purpose as herebefore known are very complicated owing to the difficulty of producing a suitable device for simultaneously raising, lowering and turning the log, that is to say placing it in its due oblique position. This complicated arrangement not only affects working of the mechanism, but also renders the machines expensive to manufacture and unnecessarily bulky.

The present invention has for its object to provide a simple and at the same time fully reliable device for automatically adjusting the feed roller.

In the present invention the shaft transmitting motion to the roller is yieldingly disposed with respect to the axis of the roller spindle, which disposition is required for the oblique adjustment of the roller. The arrangement includes a flexible shaft having one of its ends attached to a bushing mounted in a bearing which is fixed relatively to the rotatable roller spindle, the opposite end of the shaft being attached to a sleeve journaled in a bearing carried by the rotatable roller spindle. The oscillation of the roller shaft supporting spindle effected by means of a link which has one of its ends pivotally connected with the spindle and its other end provided with a roller which engages a fixed guide in such manner, that the link turns the roller spindle with the roller to a position, the obliquity of which is greater the lower the log is situated, when resting on the log, that is to say, the smaller the diameter of the log is.

The accompanying drawing illustrates by way of example an embodiment of the invention. Referring to the drawing, Figure 1 is a side view of the machine. Fig. 2 is a front view of the machine, the same being placed in an angular position relatively to the log. Fig. 3 is a top plan view of the machine, and Fig. 4 is a detail view showing the flexible shaft in longitudinal section.

The toothed feed roller 1 is journaled in the fork-like member 2 forming the lower end of the spindle 3. The latter is rotatably mounted in the bracket 4 attached to the arm 5 which is adapted to be swung around the shaft 6. Attached to the shaft 6 is a sprocket wheel 7 transmitting motion by means of the sprocket 8 to the chain wheel 9 which is fixed to the shaft bushing 10. The latter rotates in the bearing 11 which is attached to and carried by the bracket 4. One end of a flexible shaft 12 is attached to the bushing 10 and the opposite end of said shaft is attached to a bushing 13 journaled in the bearing 14. The bearing 14 is fixed to and carried by the spindle 3 of the feed roller 1. Attached to an extension 15 of the bushing 13 is the sprocket wheel 16 transmitting motion by means of the sprocket 17, to the sprocket wheel 17^1, which is attached to the shaft 18 of the feed roller 1.

By reason of the flexibility of the shaft 12, the feed roller 1 may turn freely to and fro with the spindle 3 thereof, that is to say its axis may assume an oblique position with respect to the axis of the log, without causing any disturbance in the transmission by means of which the feed roller is rotated.

Pivotally connected to the fork-like member 2, in which the feed roller is journaled, is a link 20, the length of which may be adjusted, the said link 20 having on its outer end a roller 21 moving in a fixed guide slot 22. The latter is so formed, that the link 20 is actuated by the slot 22 proportionally

to the extent of lowering the feed roller, that is to say, inversely as the diameter of the log 19 varies so that the angle that is to say the oblique position, between the axis of the feed roller and the axis of the log 19 is increased as the diameter of the log decreases and vice versa. Attached to the bracket 4 is a toothed segment 23 meshing with a gear wheel 24, which is attached to a sleeve 26 rotatably mounted on a fixed shaft 25. Inserted between one end of the said shaft 25 and the end of the sleeve 26 is a helical spring 27, by which the gear wheel 24 is turned so that it will hold the arm 5 and thus the feed roller 1 swung downward to bear against the log through the medium of the toothed segment. To facilitate the lifting of the roller 1 from the log by hand when required the sleeve 26 is provided with a hand lever 28.

What I claim as new and desire to secure by Letters Patent of the United States is:

1. In barking machines wherein a toothed roller is resting on the log to be barked the said roller not only turning the log, but feeding it also in the longitudinal direction, the roller permitting of being positioned obliquely with respect to the log, an arrangement involving that the shaft transmitting motion to the roller is yieldingly disposed to the turning movement of the roller spindle which is required to enable the roller to assume an oblique position.

2. In an arrangement in accordance with claim 1, an arrangement involving that a flexible shaft (12) is attached with the one end thereof in a bushing (10) journaled in a bearing (11), which is rigid relatively to the rotating roller spindle (3), whereas the opposite end of the shaft (12) is attached to a bushing (13) journaled in a bearing (14) carried by the rotating roller spindle (3).

3. In barking machines according to claim 1, an arrangement involving that the part of the roller spindle (3) carrying the feed roller (1) is of a fork-like shape and with the one leg of the fork pivotally connected with the one end of a link (20), the opposite end of which is slidably connected with a rigid guide (22) arranged in such manner that the angle between the roller (1) and the longitudinal axis of the log is increased as the roller (1) is lowered, that is to say as the diameter of the barked log decreases, and vice versa.

4. In barking machines according to claim 1, an arrangement involving that the part serving as a bearing for the rotating roller spindle (3) is provided with a toothed segment (23) meshing with a gear wheel (24) which is connected with a spring (27) in such manner that it holds the feed roller (1) bearing against the log by a turning action on the gear wheel (24).

5. In a barking machine, in combination a log turning and feeding roller, a spindle arranged perpendicularly to the axis of said roller and provided with supporting means for said roller, a flexible shaft carried by said spindle, power transmitting means connecting said shaft and said roller, means for driving said shaft, and means for causing said spindle to be turned as the same moves downwardly whereby the axis of said roller will be turned from a position substantially parallel to the axis of said log to a position substantially at right angles to the axis of said log.

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

PER ALBERT FRESK.

Witnesses:
KNUT DAHLQUIST,
GUSTAF ALSON.