(No Model.)

J. DICK.

FODDER CUTTER.

No. 591,591. Patented Oct. 12, 1897.

Fig. 1

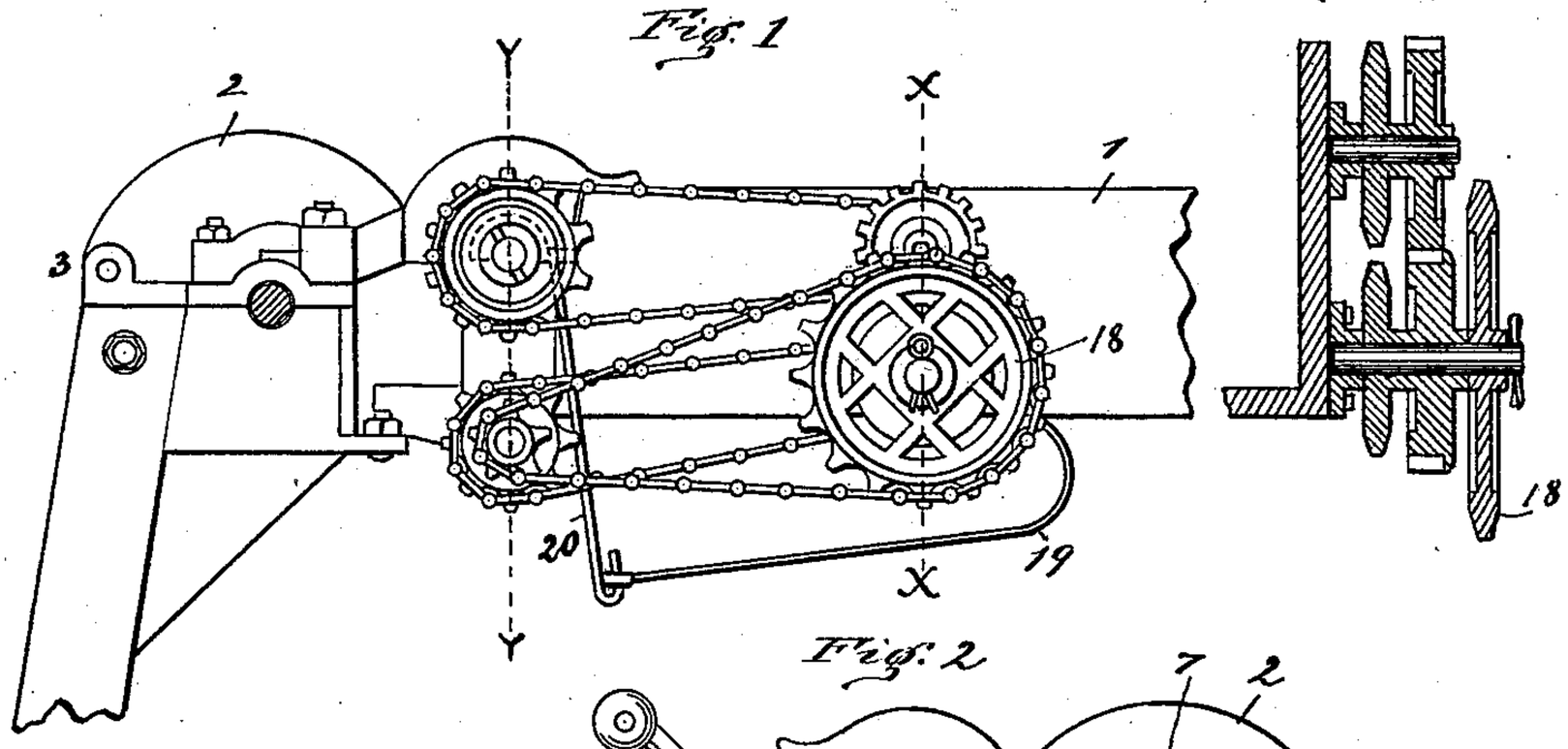
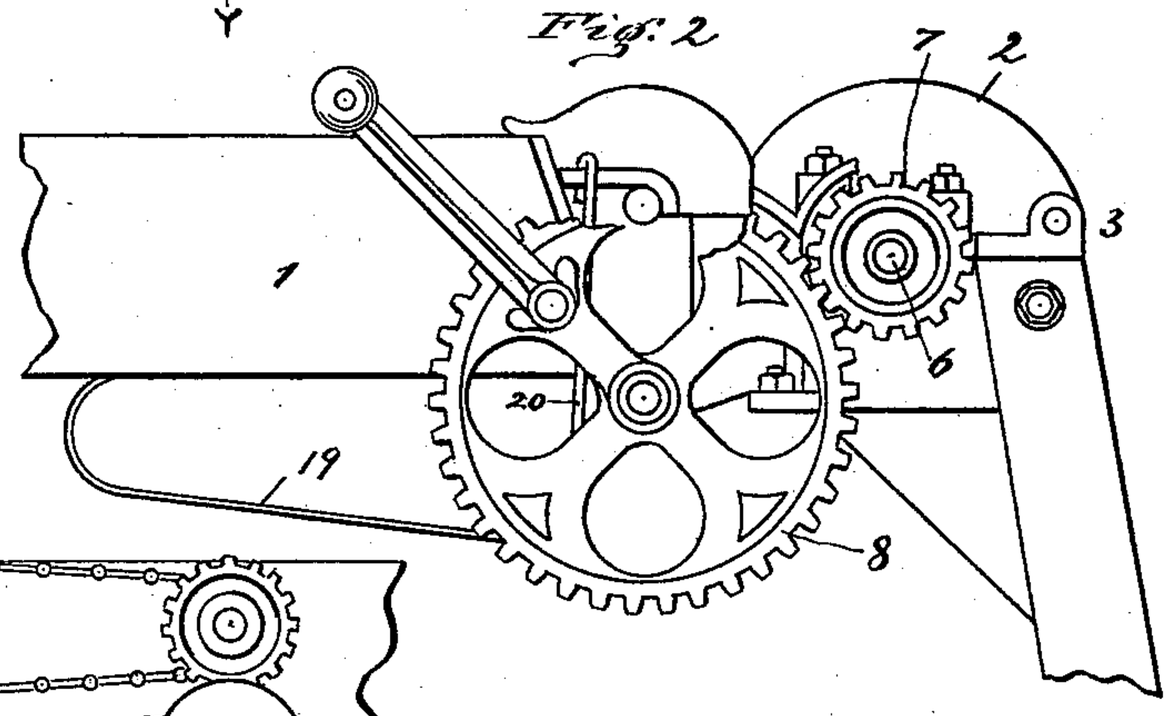


Fig. 4

Fig. 2



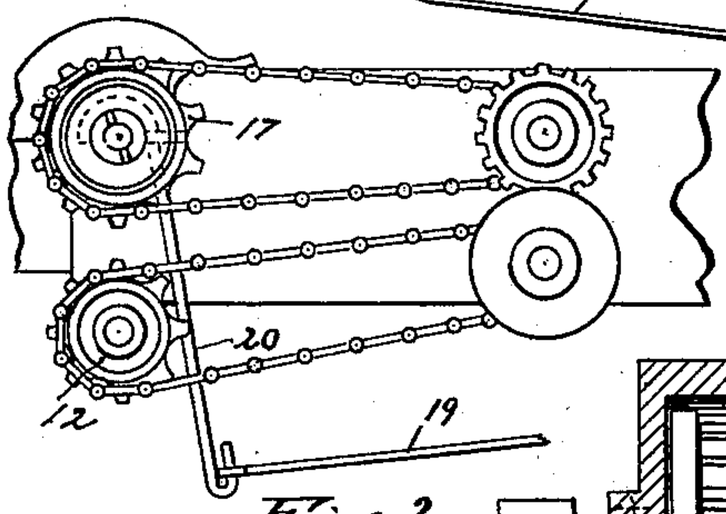


Fig. 3

Fig. 5

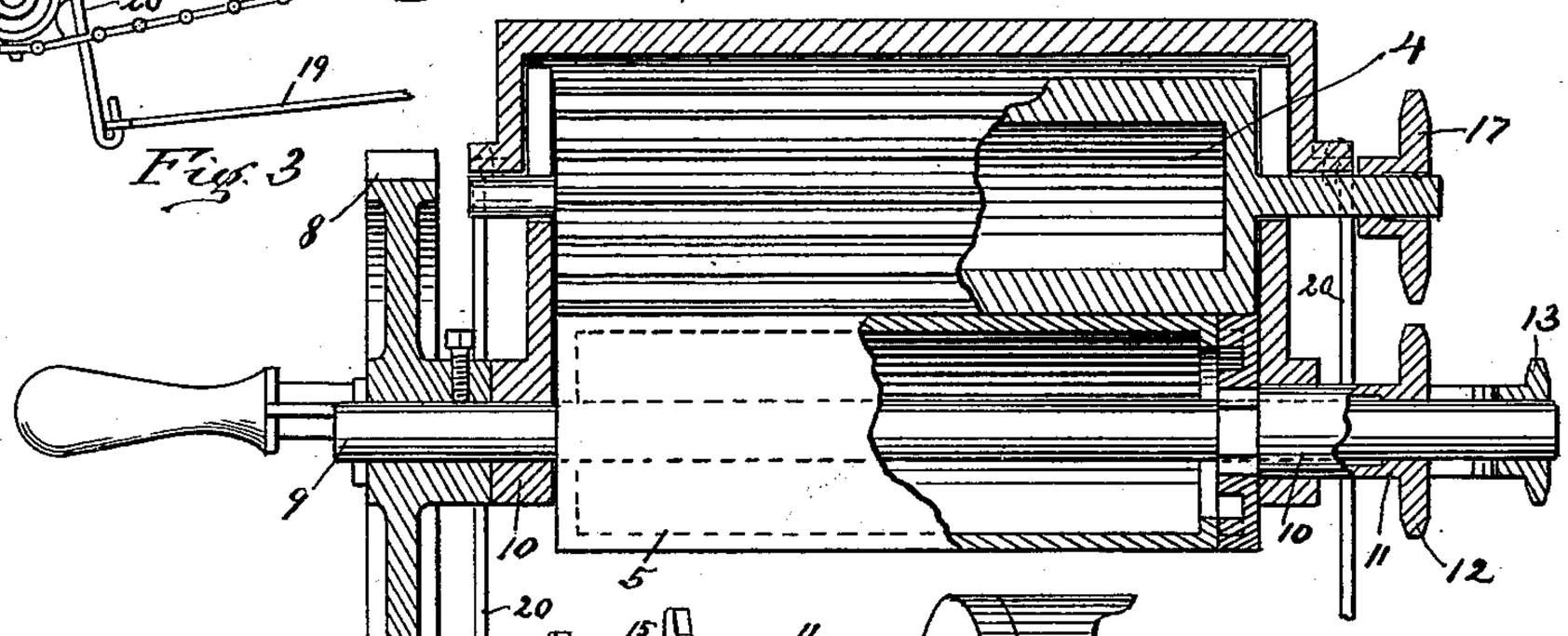


Fig. 6

WITNESSES
Theo. Hiller.
Chas. A. Miller.

INVENTOR
Joseph Dick
by Chas. A. Miller
Attorney

UNITED STATES PATENT OFFICE.

JOSEPH DICK, OF CANTON, OHIO.

FODDER-CUTTER.

SPECIFICATION forming part of Letters Patent No. 591,591, dated October 12, 1897.

Application filed November 9, 1896. Serial No. 611,498. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH DICK, a citizen of the United States, and a resident of Canton, county of Stark, State of Ohio, have invented a new and useful Improvement in Fodder-Cutters, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, making part of this specification.

My invention relates to improvements in fodder-cutters; and it consists of certain features of construction and combination of parts by which a hinged housing is provided for the cutter and upper feed-roller capable of vertical adjustment to adapt it to the varying quantity of material passed through the roller and mechanism by which the lower feed-roller is loosely journaled on the driving-shaft and driven by means of chain-gear at substantially the same speed and in unison with the upper feed-roller, thereby producing a uniform feed to the revolving cutter, as will be hereinafter more fully described and claimed.

Figure 1 is a side view of a portion of the fodder-cutter representing my invention. Fig. 2 is a similar view of the opposite side of Fig. 1. Fig. 3 is a similar view of a fragment of the body of the machine with the driving-chain removed and showing the chain-gear by means of which the feed-rollers are operated. Fig. 4 is a section through the frame side and front group of sprocket-wheels from X to X, Fig. 1. Fig. 5 is a longitudinal section from Y to Y, Fig. 1; and Fig. 6 is a perspective view showing the end of lower feed-roller and sprocket-wheels, which will be hereinafter explained.

Numeral 1 denotes the side of the feed-box, which may consist of any desired form and is supported in the usual way by legs at its front and rear, said feed-box having at its rear end a housing which is hinged at its rear end and extends over the cutter, which may be of any of the usual forms of rotary cutters, and over the upper feed-roller and the ends of the shaft thereof, so as to form the upper part of the boxing for the shaft carrying the upper feed-roller 4. On the right-hand end of the cutter-shaft 6 is mounted gear-wheel 7, that engages the driving-wheel 8, mounted on the right-hand end of the driving-shaft 9, which is supported in journal-boxes 10.

On shaft 9 is journaled a roller 5, one end being provided with a journal-box in the right-hand end of the roller. The other end, supported by a journal in sleeve 11, is cast integral with the sprocket-wheel 12. Upon this sleeve is formed a five-sided projection which is slipped into a similar-shaped opening in the lower feed-roller 5. The sprocket-wheel 13 is cast integral with sleeve 14, having therein a bayonet-slot 15, which is passed over and engages with a pin 16, which is permanently fixed upon the driving-shaft 9. Upon the left-hand side of the upper feed-roller there is attached a sprocket-wheel 17.

The driving-shaft carrying the lower feed-roller is then placed in its journals, and the upper feed-roller 4 is then placed in its journals, which consist of a metal box attached to either side of the machine, said box having therein a vertical slot open at the top, and the housing 2 is then hinged to the rear end of the feed-box at 3 and dropped down over the cutter and feed-rollers, forming the upper part of the vertically-adjustable housing of the feed-roller. On the left-hand side of the feed-box, but forward of the feed-rollers, there is journaled a series of sprocket and gear wheels, as shown in Fig. 4, which are driven by means of a driving-chain passing over and around the sprocket-wheel 13 on the left-hand end of the driving-shaft 9, which in turn communicates the motion to the sprocket-wheel 18 and operates the chain of gear-wheels and sprocket-wheels which, by means of driving-chains passing over the sprocket-wheels 12 and 17 on the shafts of the feed-rollers, communicate the motion thereto.

To the bottom of the feed-box there is fastened a spring 19, carrying a connecting-bar, to which there are attached on both sides links 20, the upper ends of which extend up to and over the housing 2 of the upper feed-roller.

In operation the crank attached to the gear-wheel on the right side of the driving-shaft is turned, which in turn communicates the motion to and revolves the cutter, and at the same time communicates the motion to and drives the feed-rollers by means of the train of sprocket and gear wheels on the left-hand side of the feed-box and their driving-chain connection therewith. The fodder or other

material to be cut being passed into the machine, the upper feed-roller, being capable of vertical adjustment, adapts itself to the quantity thereof and at the same time moves in unison with the lower feed-roller, and all portions of the fodder or other material to be cut are fed to the rotary knife with the same speed, and as the quantity fed to the machine decreases the spring on the left-hand side of the machine causes the upper roller and its housing to adapt itself thereto.

Having thus fully described my invention, what I claim, and desire to secure by Letters Patent, is—

1. The combination in a fodder-cutter of the driving-shaft having loosely journaled thereon, the lower feed-roller, and a coupling-sleeve with sprocket-wheel mounted thereon, and revoluble on the shaft, with a driving train of gear and sprocket wheels and a chain connection therewith, substantially as and for the purpose set forth.

2. The combination in a fodder-cutter, of the driving-shaft, having loosely journaled thereon, the lower feed-roller and coupling-sleeve, adapted to engage therewith, and having a sprocket-wheel mounted thereon, and revoluble on the shaft, with a train of gear and sprocket wheels mounted on the side of the feed-box, and driving-chains connected therewith, and with a sprocket-wheel attached to the outer end of the driving-shaft, and an upper feed-roller journaled in a vertically-slotted box having a hinged housing, and a spring connection with the feed-box, substantially as and for the purpose set forth.

3. A feed-roller for a fodder-cutter, adapted to be loosely journaled on the driving-shaft thereof, having a coupling-sleeve adapted to engage therewith, and a sprocket-wheel mounted thereon and revoluble on the shaft, substantially as and for the purpose set forth.

In testimony whereof I have hereunto set my hand this 3d day of November, A. D. 1896.

JOSEPH DICK.

Witnesses:

CHAS. R. MILLER,

BURT A. MILLER.