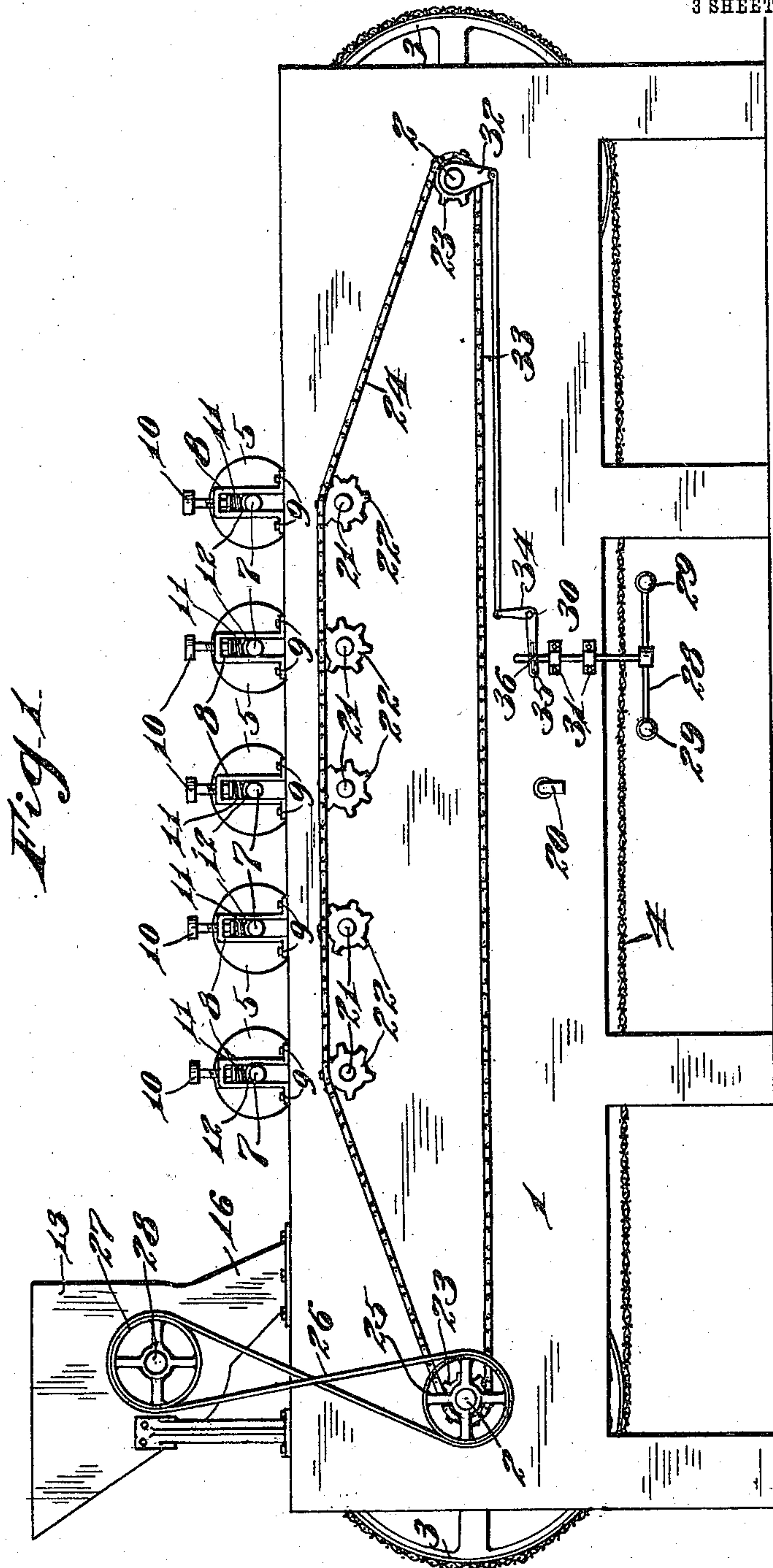


CIDER MILL.

965,486.

Patented July 26, 1910.

3 SHEETS—SHEET 1.



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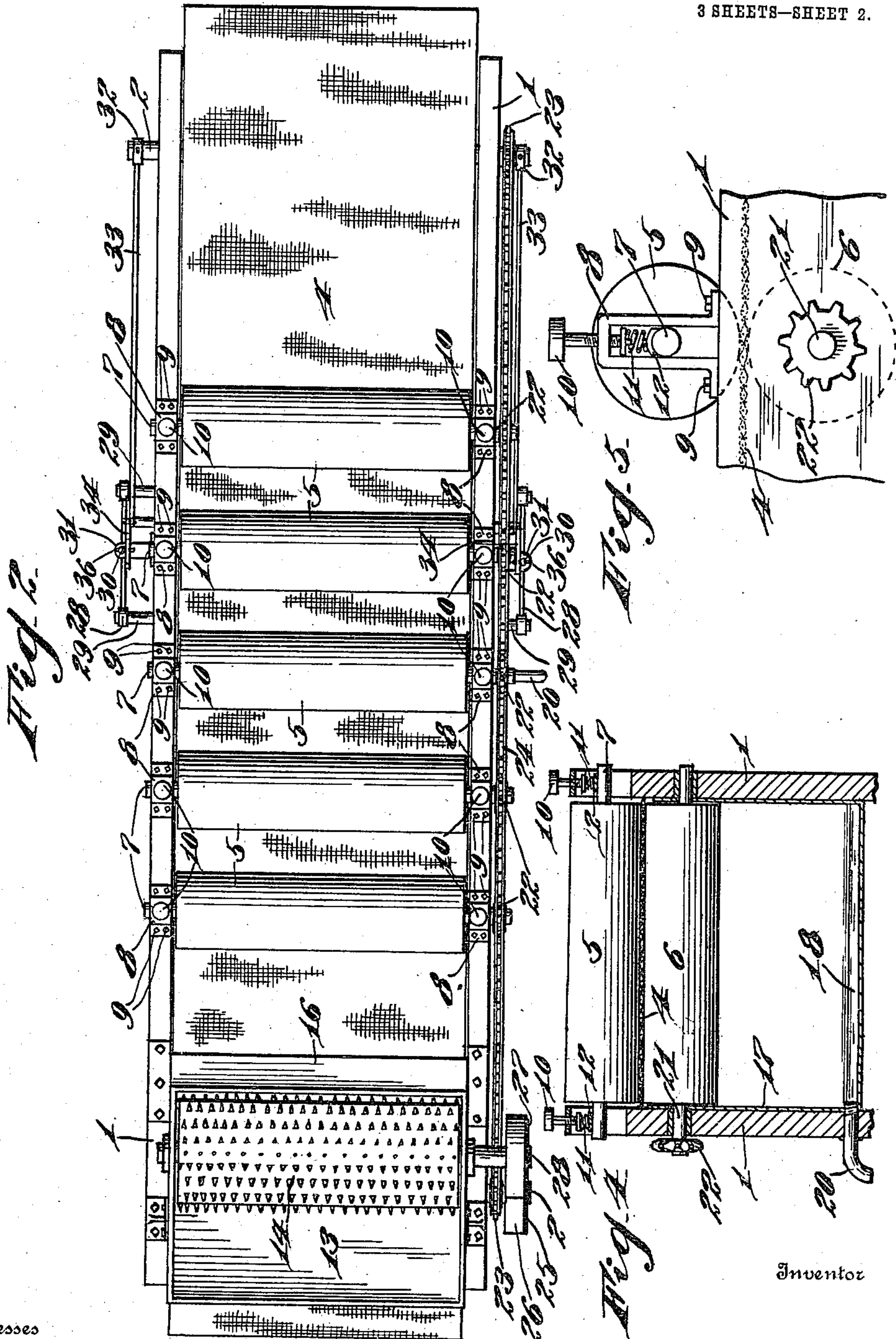
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CIDER MILL.

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3 SHEETS—SHEET 2.



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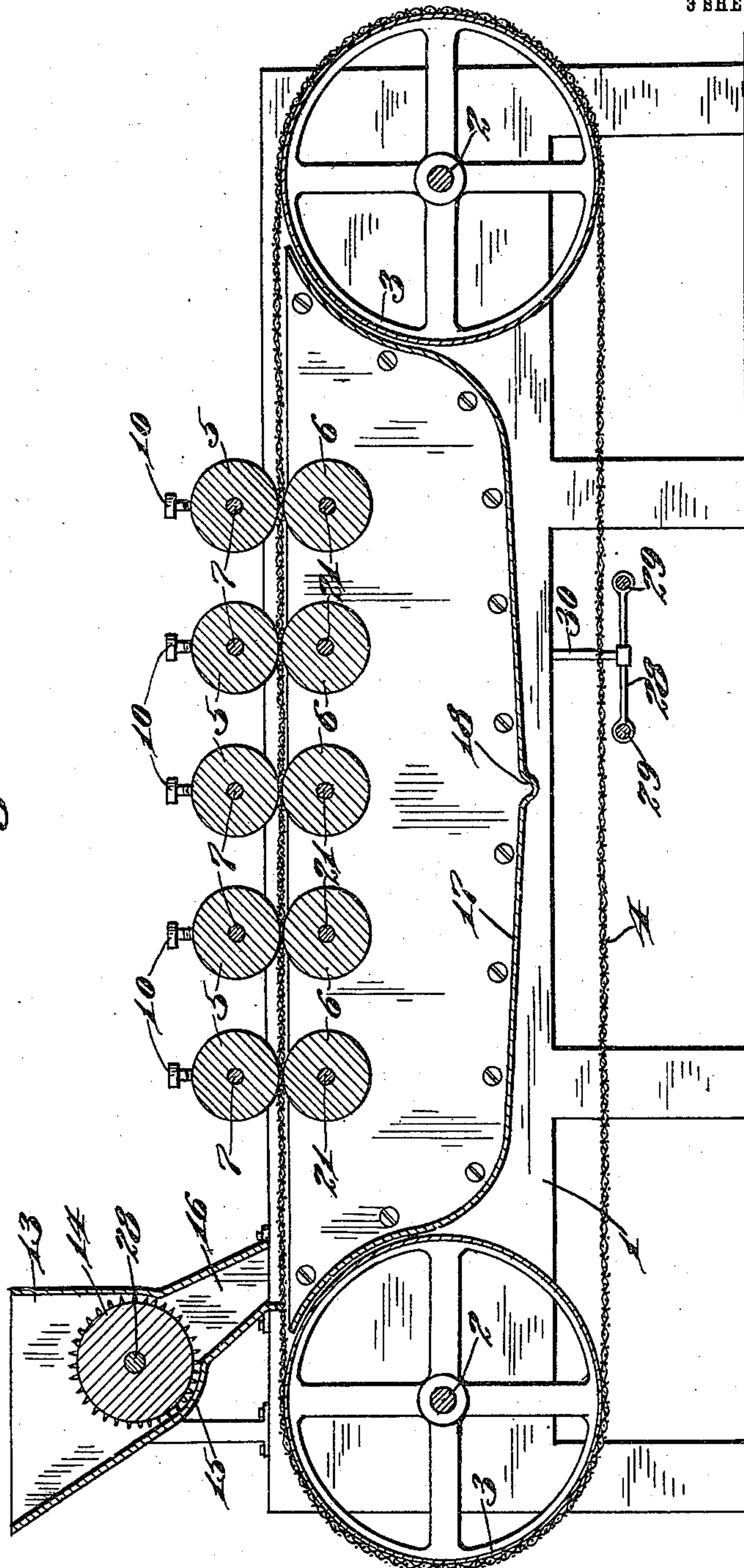
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3 SHEETS—SHEET 3.

Fig. 3.



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# UNITED STATES PATENT OFFICE.

GILFORD L. PUTT, OF INDIANA, PENNSYLVANIA.

CIDER-MILL.

965,486.

Specification of Letters Patent.

Patented July 26, 1910.

Application filed September 4, 1909. Serial No. 516,199.

*To all whom it may concern:*

Be it known that I, GILFORD L. PUTT, a citizen of the United States, residing at Indiana, in the county of Indiana and State of Pennsylvania, have invented certain new and useful Improvements in Cider-Mills, of which the following is a specification.

My invention relates to an improved cider mill, the object of the invention being to provide an improved cider mill with an improved endless belt or apron, composed of wire netting and burlap, which is adapted to receive crushed apples, and convey them to and between a series of pairs of presser rolls to squeeze all the moisture from the apples, and direct it through the apron into a receptacle below provided for its reception.

A further object is to provide an improved knocker or device, which is adapted to keep the apron free from pulp or pomace, and continuously and automatically operate by the mill itself.

A further object is to provide an improved spring mounting for the presser rolls, with improved adjusting mechanism therefor, so that the spring pressure on the rolls may be adjusted to exactly suit conditions.

With these and other objects in view, the invention consists in certain novel features of construction, and combinations and arrangements of parts as will be more fully hereinafter described and pointed out in the claim.

In the accompanying drawings, Figure 1, is a view in side elevation illustrating my improvements. Fig. 2, is a top plan view. Fig. 3, is a view in vertical longitudinal section. Fig. 4, is a fragmentary view in cross section, and Fig. 5, is an enlarged fragmentary side elevation illustrating the spring mounting of the presser rolls.

1 represents a frame, in which parallel horizontal shafts 2 are mounted near the ends of the frame, and cylindrical drums 3 are fixed to turn said shafts 2. An endless belt or apron 4 is passed around the drums 3, and comprises an inner sheet of wire netting, and an outer sheet of burlap or other similar material. This apron 4 passes between a series of pairs of presser rolls 5 and 6 respectively, the latter mounted to turn, but held against other movement in the frame, while the shafts 7 of the upper rolls

5 are mounted in fork like brackets 8 secured by bolts 9 to frame 1.

10 represents set screws, which are adjustable in the upper ends of the brackets 8, and bear at their lower ends against coil springs 11, the latter bearing downward upon bearing blocks 12 positioned upon the outer faces of shafts 7. By adjusting set screw 10, the downward pressure of springs 11 on shafts 7 can be varied to suit the pressure desired of the rolls 5 upon the apron and the pulp carried thereby. While I have shown five of these pairs of rolls, it is obvious of course that I am not limited to any particular number, but employ as many as desired.

13 represents a hopper into which the apples are supplied, and 14 is an ordinary toothed cylinder, and 15 a concave between which the apples are crushed, and directed through a spout 16 onto apron 4, and carried by the latter to the several presser rolls to squeeze out all the moisture in the apples, and said moisture will percolate through the apron and fall into a receptacle 17 provided for the purpose. This receptacle extends from a point in advance of the nozzle or spout 16 to a point beyond the last pair of presser rolls, and converges to a central point where a lateral trough 18 is provided, which communicates with a spout or nozzle 20 at one side of the frame, through which the apple juice flows into receptacles provided for the purpose.

The shafts 21 of all of the rolls 6, are provided with sprocket wheels 22, and sprocket wheels 23 are secured upon the shafts 2. An endless sprocket chain 24 passes around all of the sprocket wheels 22 and 23, and compels the presser rolls to turn uniformly, and with the revolutions of the shafts 2.

A pulley 25 on one shaft 2 is connected by a crossed belt 26 with a pulley 27 on shaft 19 of cylinder 14, and motion may be transmitted to either of these shafts to drive the machine.

In order to prevent accumulation of pomace or pulp upon the apron 4, I provide a knocker 28, which comprises parallel rods 29 held in a suitable frame work, and passed below the apron 4. This knocker 28 is provided with vertical rods 30 mounted to slide in guide brackets 31 on frame 1.

Crank arms 32 are provided on one shaft 2, and are connected by links 33 with one



member of bell crank levers 34, the latter fulcrumed between their ends as shown most clearly in Fig. 1. The other members of these bell-crank levers 34 are slotted as shown at 35, to receive lugs or pins 36 on the rods 30, so that as the crank arms 32 turn, they will transmit the reciprocating movement to the knocker, to give to the apron a rapid series of blows to shake and jar the latter free from pomace, pulp, etc.

Various slight changes might be made in the general form and arrangements of parts described without departing from my invention, and hence I do not restrict myself to the precise details set forth, but consider myself at liberty to make such changes and alterations as fairly fall within the spirit and scope of the claim.

Having thus described my invention what I claim as new and desire to secure by Letters Patent is:

In a cider mill, the combination with a frame, shafts in the ends of the frame, drums on said shafts, an endless apron around said drum, presser roll shafts,

presser rolls on said shafts, and between which the upper horizontal run of said apron is constructed to move, a receptacle below the presser rolls and inclosed between the drums and the upper and lower horizontal runs of the apron, sprocket wheels on said presser roll shafts and said drum shafts, a sprocket chain around said sprocket wheel, a knocker below the apron, and vertical rods connected to said knocker, and mounted to move vertically on the frame, crank arms on a drum shaft, bell crank levers connected at one end to said vertical rods, and links connecting the other of said bell crank levers with said crank arms, whereby a vertical reciprocating movement is transmitted to said knocker.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

GILFORD L. PUTT.

Witnesses:

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CHAS. D. HELDER.