

No. 859,680.

PATENTED JULY 9, 1907.

N. N. MILLAGE.  
BALING PRESS.

APPLICATION FILED APR. 11, 1907.

Fig. 1.

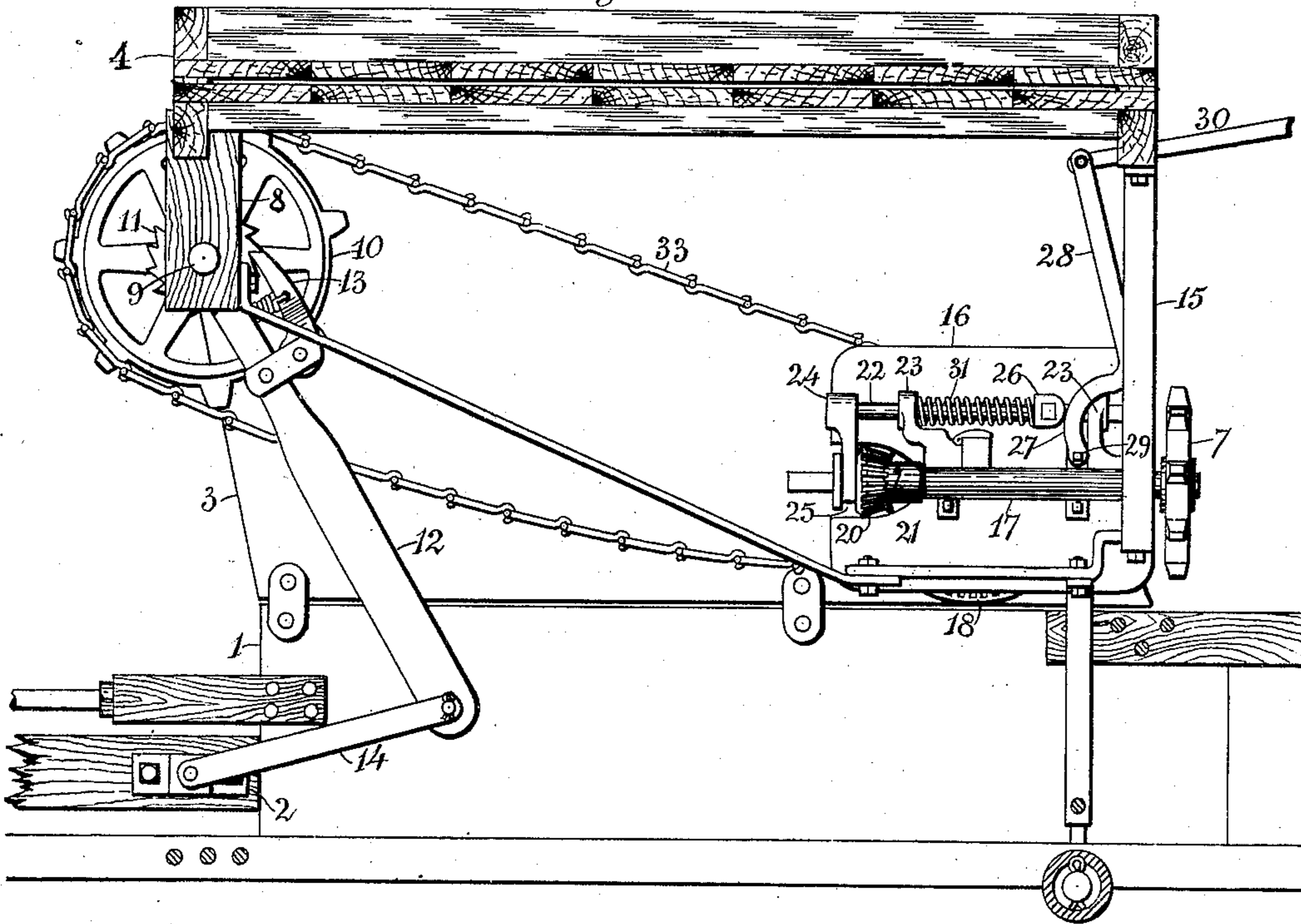
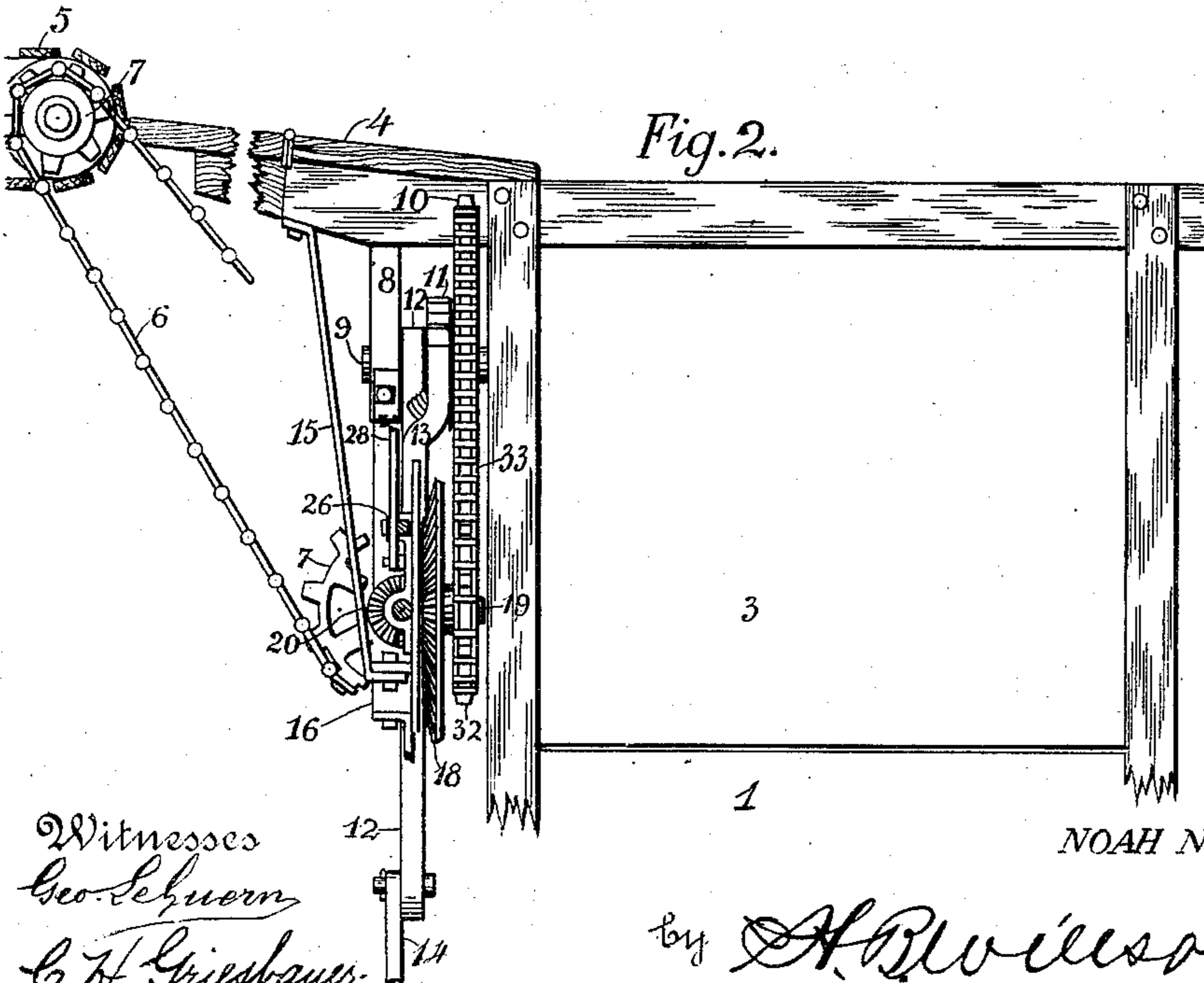


Fig. 2.



Witnesses  
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# UNITED STATES PATENT OFFICE.

NOAH N. MILLAGE, OF LERNA, ILLINOIS.

## BALING-PRESS.

No. 859,680.

Specification of Letters Patent.

Patented July 9, 1907.

Application filed April 11, 1907. Serial No. 367,607.

*To all whom it may concern:*

Be it known that I, NOAH N. MILLAGE, a citizen of the United States, residing at Lerna, in the county of Coles and State of Illinois, have invented certain new and useful Improvements in Baling-Presses; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to baling presses, and has for its object to provide a device which can be applied to any ordinary press, thereby automatically and intermittently actuating the feeding mechanism by the operation of the plunger of the press.

In the accompanying drawings, which illustrate the invention,; Figure 1 is a side elevation of a portion of a reciprocatory or plunger press, showing the application of my improved attachment thereto; Fig. 2 is a transverse sectional view taken at right angles to Fig. 1 and showing the feeding mechanism in side elevation.

Referring more particularly to the drawings, 1 indicates the feeding chamber of an ordinary baling press, within which a plunger 2 is reciprocated in any ordinary manner. The hopper 3 is secured upon the upper edge of the chamber 1, and a feed table 4 is arranged at one side or the other of the hopper in the usual manner, and is preferably constructed so as to be folded up, as shown in Fig. 1 of the drawings. Extended outward from the outer end of the feed table is a carrier 5, which may be of any desired construction and supported in any ordinary manner, and adapted to be driven by means of a sprocket chain 6 and sprocket wheels 7, as shown in Fig. 2.

Rotatably mounted beneath the feed table, as by means of hangers 8 and shaft 9, is a sprocket wheel 10, upon one side of which is formed or secured a ratchet wheel 11. An arm 12 is pivotally mounted upon the shaft 9 and provided with a pawl 13, which is adapted to engage with the ratchet wheel 11, and rotate the same and the sprocket wheel 10 as the free end of the arm or lever 12 is moved back and forth. The free end of the lever is connected with the pitman 2, or other suitable portion of the press mechanism, as by means of a rod or pitman 14. The pawl and ratchet mechanism are so constructed and arranged that the sprocket wheel 10 will only be actuated when the plunger is moved forward to compress a bale, and thereby leaving the feeding chamber 1 substantially empty.

Secured at the other side of the hopper and underneath the table, as by means of a bracket 15, is a suitable base or casting 16. A shaft 17 is journaled upon one side of the base 16, and a crown wheel 18 is mounted upon the other side of said base, preferably by means of a stub axle 19. One of the sprocket wheels 7 is secured to the outer end of the shaft 17, and an ordinary

pinion 20 is slidably mounted upon the other end of the shaft in position for being moved into and out of engagement with the teeth of the crown wheel 18. The inner end of the shaft may be angular in cross section to correspond with the angular perforation of the hub, whereby the shaft is rotated, or the hub of the pinion may be shouldered to form a clutch member, which is adapted to engage with the correspondingly shouldered clutch member 21, that is rigidly secured to the shaft in position for being engaged by said hub when the pinion is in engagement with the crown wheel.

The pinion is adapted to be moved back and forth upon the shaft in the above described manner by means of a reciprocatory rod 22, which is mounted in bearings or brackets 23, secured to the base 16. The inner end of the rod 22 is provided with a laterally extending fork or yoke 24, which has its free end adapted to engage with the hub of the pinion 20, which is grooved, as at 25 in the usual manner. A stop or shoulder 26 is secured to the rod 22 adjacent its outer end in position for being engaged by the curved portion 27 of a handle 28. The handle is adapted to be swung upon its pivot 29 in any desired manner, as by means of a push rod 30, which extends out into some convenient point for being grasped by the operator. A spring 31 is arranged upon the rod 22 between one of the brackets 23 and the shoulder 26, whereby the rod is moved longitudinally to move the pinion 20 into engagement with the crown wheel 18, after the handle 28 has been drawn forward by means of the rod 30.

Secured to or formed upon the crown wheel 18 is a sprocket wheel 32, which is adapted to stand in line with the sprocket wheel 10, so that a sprocket chain 33 may be placed over said two sprocket wheels and thereby transmit motion from the sprocket wheel 10 to the sprocket wheel 32 and crown wheel 18, whenever the sprocket wheel 10 is rotated, by means of the reciprocation of the plunger.

As above described, it will be seen that whenever the plunger is moved forward to compress the contents of the feeding chamber into the baling chamber, power will be transmitted to the carrier or feeding belt, which will cause it to move forward, and thereby deposit more material upon the feeding table, or if desired, feed it directly to the hopper so that it can be easily forced down into the feeding chamber of the press in condition for being engaged by the plunger at the next reciprocation and forced into the baling chamber in the usual manner. On the return movement of the plunger, the pawl 13 will ride over the teeth of the ratchet wheel 11 without transmitting motion to the wheel 10, and thus the carrier will not be actuated except upon the forward movement of the plunger. I prefer to construct the parts of such sizes and dimensions that whenever the plunger is given one reciprocation or moved

orward, the carrier or slatted belt will be moved forward with its load, substantially three feet, although it is evident that it could be moved a greater or less distance by varying the size of the parts. It is also evident that changes and alterations can be made in other parts of the device, and I reserve the right to make all such variations in the same as will come within the scope of the appended claims.

In using an attachment as above described, it can be connected with the ordinary baler without particular change or modification of the same, and it can be arranged upon either side. The slatted belt or carrier can be made of any desired length, and can be adapted to be moved or changed to place its free end in position for receiving the material from different points, thereby requiring but little labor to convey the material from the place where it is deposited to the baler, thereby avoiding the necessity of changing the position or location of the baler, as would be required without the carrier, and the means for actuating the same.

When it is desired to stop the operation of the carrier entirely, the handle 28 is swung upon its pivot, which will cause its curved portion 27 to move the rod 22 longitudinally, and thereby slide the pinion 20 out of engagement with the crown wheel 18, by means of the yoke 24.

Having described my invention, I claim:—

1. In a baler having a hopper and a baling plunger, a shaft sustained on the hopper and having a movable pinion, a stub-shaft arranged counter to said shaft and having a crown wheel with which said pinion may mesh, and a sprocket wheel, a second sprocket wheel journaled on the hopper and connected with the first-named sprocket, a

ratchet fixed for movement with the second sprocket, a pivoted arm having a pawl to engage said ratchet for moving the second sprocket, operative connections between the arm and baling plunger, a conveyer connected with and for operation from the shaft, and means for moving the pinion into and out of engagement with the crown wheel.

2. In a baler, a base, a shaft and a crown wheel mounted thereon, a pinion wheel for rotating said shaft and adapted to be moved into and out of engagement with said crown wheel, a sprocket wheel on said shaft, a carrier adapted to be actuated by said sprocket wheel, and means for actuating said crown wheel by the reciprocation of the plunger.

3. In a baler, a base, a shaft mounted on one side thereof and a crown wheel on the other, a sprocket wheel at one end of said shaft and shoulders at the other, a pinion slidably mounted upon said shouldered end of the shaft and adapted to be moved into and out of engagement with the crown wheel, means for moving said pinion, and a carrier adapted to be actuated by said sprocket wheel.

4. In a baler, a base, a shaft journaled thereon provided with a sprocket wheel at one end and a pinion at the other, a crown wheel for actuating said pinion, brackets on the base, a rod reciprocally mounted in said brackets and provided with a yoke at one end in position for engaging with and moving said pinion, a shoulder upon the intermediate portion of said rod, a spring between said shoulder and one of said brackets, a lever pivotally mounted on the base and provided with a curved portion for moving said rod against the tension of the spring, a rod for moving said lever, a carrier adapted to be actuated by said sprocket wheel, and means for actuating said crown wheel by the reciprocation of the plunger.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

NOAH N. MILLAGE.

Witnesses:

ALLIE HUGHES,  
JAMES W. LEITCH.