

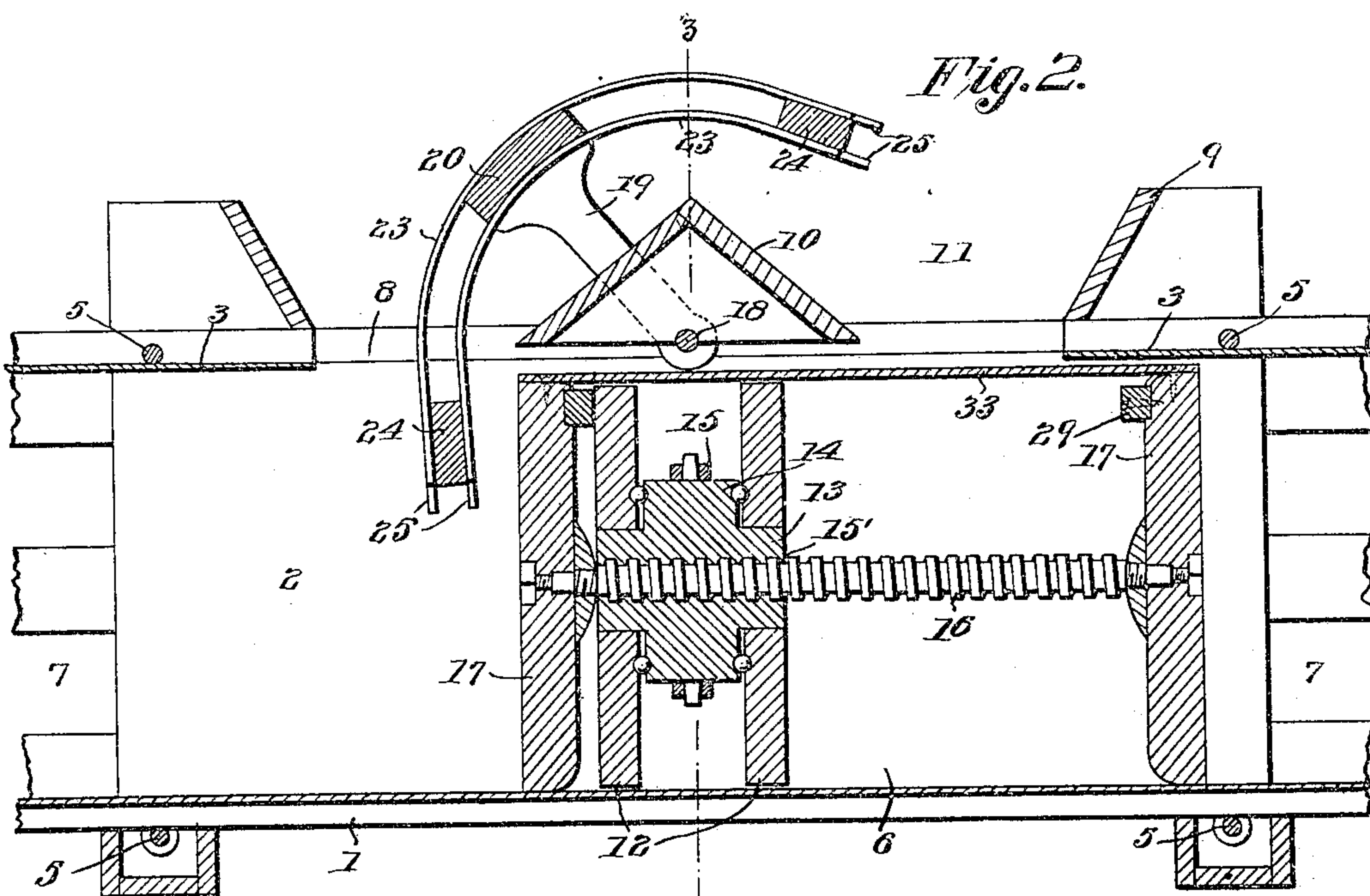
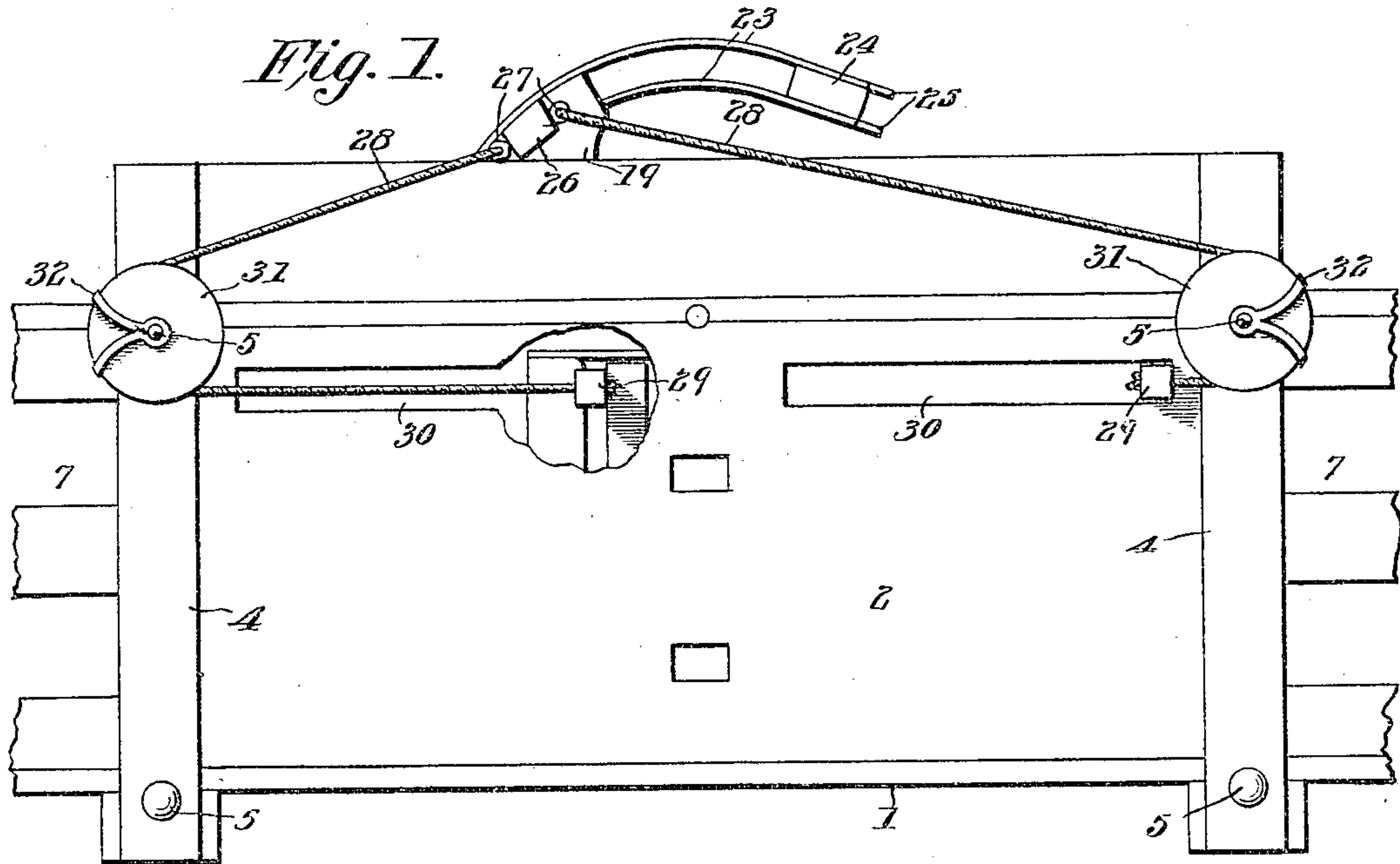
No. 819,949.

PATENTED MAY 8, 1906.

W. E. TATE.
PRESS FEEDER.

APPLICATION FILED JUNE 16, 1905.

2 SHEETS—SHEET 1.



Witnesses

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Wm. Bagger

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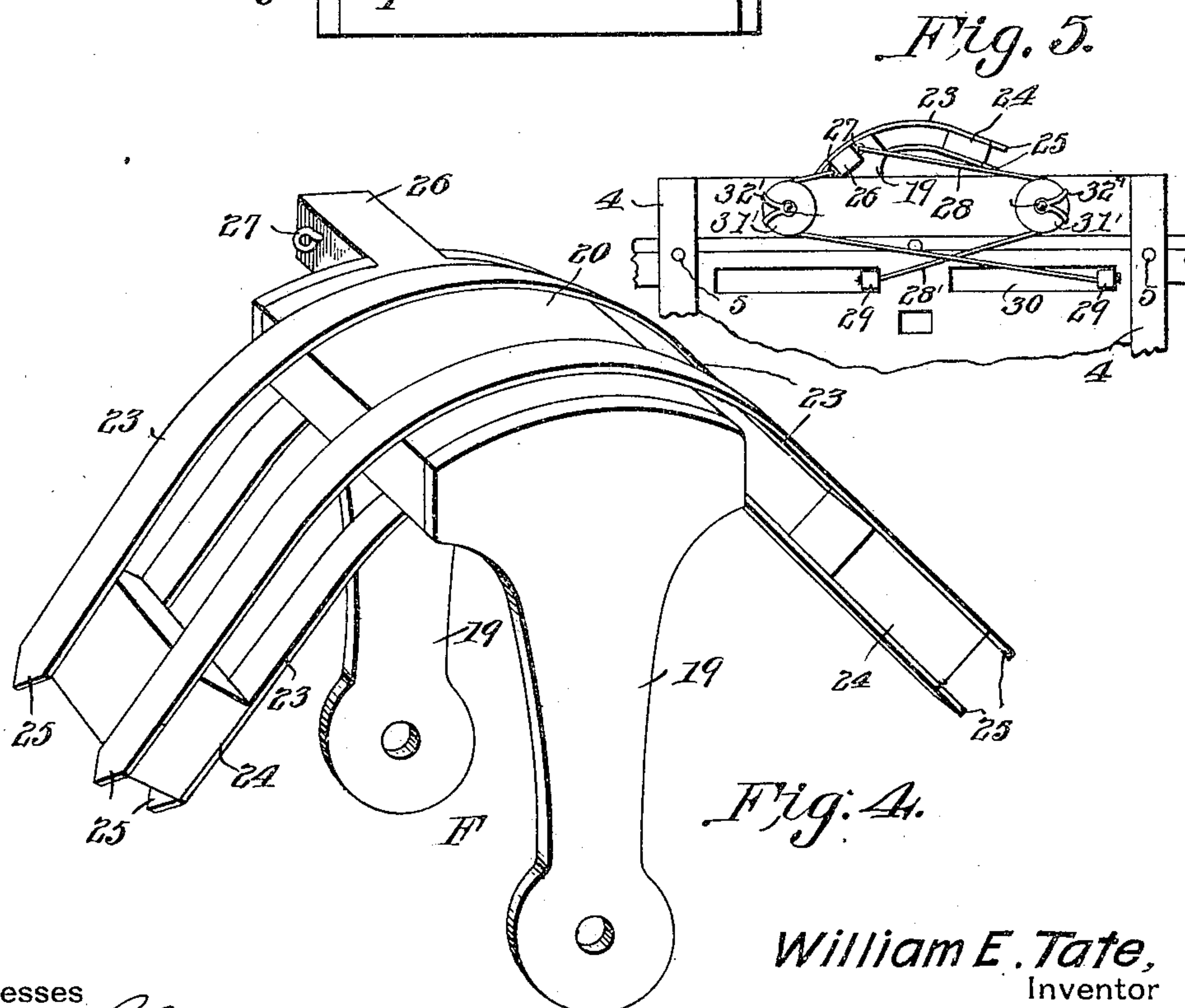
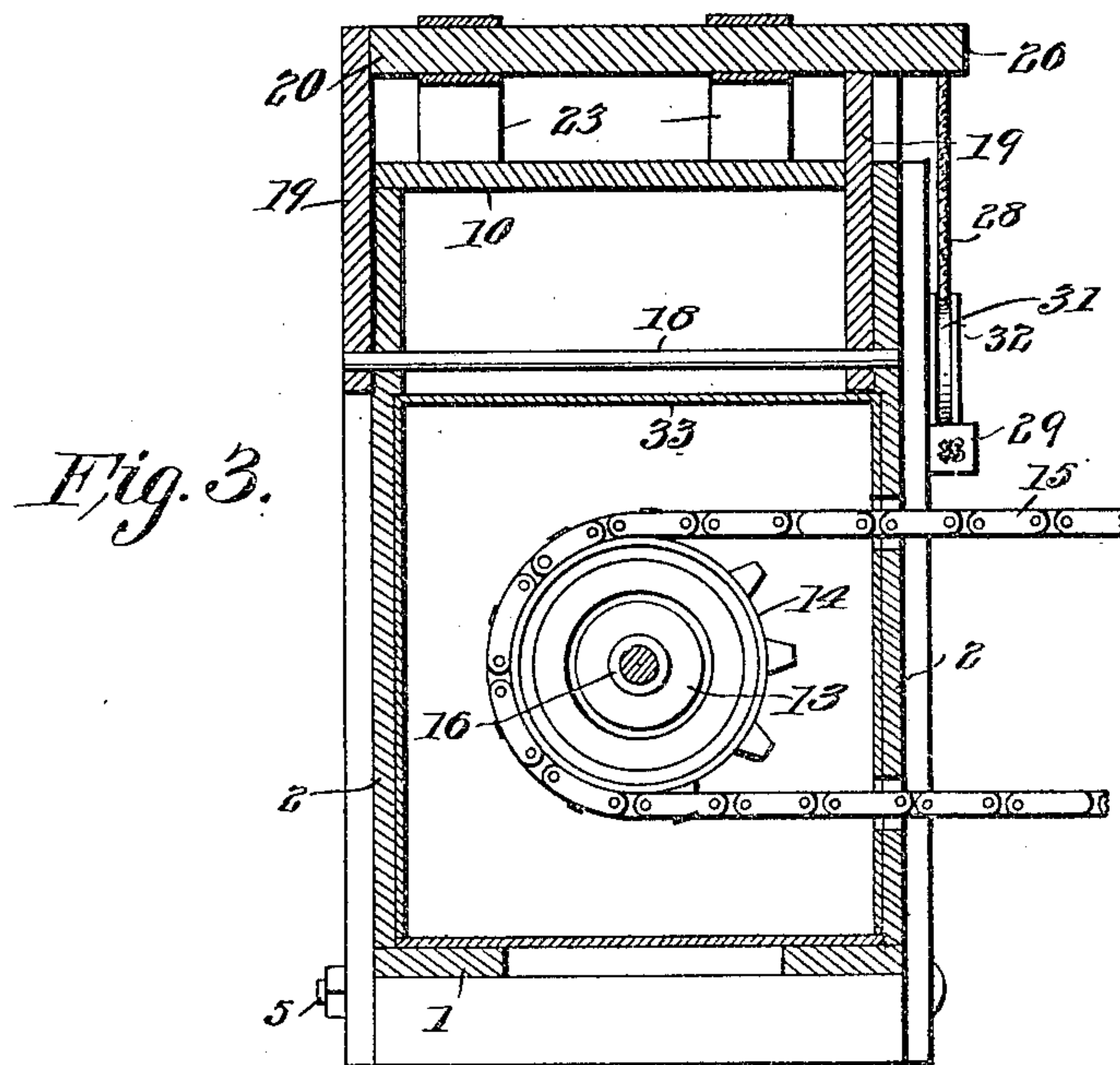
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UNITED STATES PATENT OFFICE.

WILLIAM ELBERT TATE, OF WEATHERFORD, TEXAS.

PRESS-FEEDER.

No. 819,949.

Specification of Letters Patent.

Patented May 8, 1906.

Application filed June 16, 1905. Serial No. 265,613.

To all whom it may concern:

Be it known that I, WILLIAM ELBERT TATE, a citizen of the United States, residing at Weatherford, in the county of Parker and State of Texas, have invented a new and useful Press-Feeder, of which the following is a specification.

This invention relates to feeding devices for baling-presses, and more particularly to that class of feeders which are used in connection with double presses—that is to say, presses which are provided with two compression-chambers disposed at the ends of an intermediate compartment into which the material that is to be compressed is fed and in which reciprocates a plunger having two heads or followers operating in the respective compression-chambers and compressing material in the latter alternately.

The present invention is applicable to various forms of presses; but it has been elected in the present application to illustrate it in connection with the type of press for which Letters Patent No. 738,957 were granted to me on the 15th day of September, 1903.

The object of the present invention is to provide means for forcing the material which is to be compressed alternately in the two ends of the intermediate compartment in advance of the followers, so that the latter shall be enabled to operate steadily and uninterruptedly and without the manual attention which is usually required to pack the material in advance of the followers.

Other objects are to improve and to simplify the construction of the mechanism whereby this operation is effected.

With these and other ends in view, which will readily appear as the nature of the invention is better understood, the same consists in the improved construction and novel arrangement and combination of parts, which will be hereinafter fully described, and particularly pointed out in the claims.

In the accompanying drawings has been illustrated a simple and preferred form of the invention, it being, however, understood that no limitation is necessarily made to the precise structural details therein exhibited, but that the right is reserved to any changes, alterations, and modifications to which recourse may be had within the scope of the invention and without departing from the spirit or sacrificing the efficiency of the same.

In said drawings, Figure 1 is a side elevation of a portion of a press embodying the invention. Fig. 2 is a longitudinal vertical sectional view of the same. Fig. 3 is a transverse sectional view taken on the plane indicated by the line 3 3 in Fig. 2. Fig. 4 is a perspective detail view of the feeder detached. Fig. 5 is a side elevation, on a reduced scale, illustrating a slight modification.

Corresponding parts in the several figures are indicated throughout by similar characters of reference.

The press includes a frame, which has been shown as comprising a base or bottom plate 1, side members 2, top members 3, and uprights 4, connected by cross-bolts 5 for the purpose of securing the parts of the frame together. From the central compartment 6 extend the compression-chambers 7, only the inner ends of which have been shown and which may be of any suitable well-known construction. The top member 3 has a central opening 8, which is in communication with the compartment 6 and which is provided with flanges 9, constituting a hopper. The side members of said hopper are connected by an inverted-V-shaped deflector 10, disposed midway above the compartment 6 and dividing the main hopper into two smaller hoppers 11.

Midway in the compartment 6, beneath the deflector 10, have been shown a pair of bulkheads 12, having bearings for the hub 13 of a driven wheel, such as a sprocket-wheel 14, which is connected, by means of a link belt 15, with operating mechanism, (not shown,) whereby said sprocket-wheel may be rotated in either direction. The hub 13 has a central axial perforation, (shown at 15',) which is threaded for the passage of an operating-screw 16, the ends of which are firmly connected with the followers 17. It will be seen that by rotating the sprocket-wheel upon the screw the latter will be moved to advance one of the followers into one of the compression-chambers, while the other follower recedes from the other compression-chamber, and that by reversing the direction of rotation of the sprocket-wheel the movement of the screw and of the followers connected therewith will be reversed.

A shaft 18, supported for rotation transversely upon the frame above and intermediate the bulkheads 12 and beneath the deflec-

tor 10, carries the feeder, which comprises a pair of sectors 19, connected by a segmental plate 20, to the outer and inner sides of which are attached pairs of metallic strips 23, connected near their outer ends by spacing-blocks 24, the outer extremities of said strips being pointed, as shown at 25. Extending laterally from the feeder is a lug 26, having eyes 27, to which are attached the inner ends of flexible members 28—such as wire cables, chains, or the like—the outer ends of said flexible members being connected with lugs 29, connected with the followers 17 and extending through slots 30 in the sides of the compartment 6 of the press-frame. The flexible members 28 are guided over pulleys 31, which may be supported for rotation upon two of the connecting-bolts 5, said pulleys being protected by means of guards 32. The feeder, which generally is designated F, will thus be oscillated by the reciprocatory movement of the followers 17 in the press. The flexible members 28, pulleys 31, and related parts have been illustrated as applied upon one side of the press-box only; but it is to be understood that they may be advantageously applied upon both sides of the press-box and that the right to do so is reserved as being entirely within the scope of the invention. The upper edges of the follower 17 are connected by means of a plate 33, extending over and partially resting upon the upper edges of the bulkheads 12.

In operation the material which is to be compressed is fed to the subhopper 11, communicating with that end of the compartment 6 the follower of which is temporarily advanced into its compression-chamber, said material being deposited upon the plate 33. One end of the approximately segmental feeder at this time extends into the opposite end of the compartment 6 in advance of the follower, as will be clearly seen in Fig. 2 of the drawings. As the latter follower advances the material in advance thereof will be pushed into the compression-chamber, while as the opposite follower recedes the position of the feeder is shifted and the material supported upon one end of the plate 33 is compacted and forced into the compartment 6 in advance of the receding follower. As the movement of the followers is reversed the position of the feeder is shifted and material in front of the advancing follower is pushed into the compression-chamber, while material is moved by the action of the feeder from the top plate 33 into the space in front of the receding follower.

Within the scope of this invention the general construction of the press and the means for actuating the followers may be changed or modified to any extent, the invention, which consists, essentially, in the feeding mechanism, being applicable to many forms and constructions of presses besides the one

herein shown. Such modifications as may be necessary to adapt the improved feeder to various presses are to be considered to be within the scope of the invention.

Under the modification illustrated in Fig. 5 of the drawings the guide-pulleys (here designated 31' and which are protected by guides 32') are not mounted upon the bolts 5, but are placed more closely together and nearer the upper edge of the press-box. The flexible members 28' are made to cross each other and are suitably connected with the followers to cause the heating device to be moved in the proper direction.

Having thus described the invention, what is claimed is—

1. A baling-press having two spaced compression-chambers; in combination with a feeding device supported for oscillation above and between said chambers and including an arm and members connected with said arm and extending laterally therefrom in opposite directions.

2. A baling-press having a plurality of compression-chambers and followers movable therein, in combination with an oscillatory feeding member provided at its free end with a cross-head adapted for alternate entrance into oppositely-disposed compression-chambers.

3. An oscillatory feeder for baling-presses comprising a pair of arms, a segment connecting said arms, and barbed strips connected with and extending from said segment.

4. An oscillatory feeder for baling-presses comprising a pair of arms, a connecting member, barbed strips connected with and extending from said connecting member, and spacing-blocks connecting said strips.

5. An oscillatory feeder for baling-presses having approximately segmental pushing members, and spacing-blocks connecting said pushing members.

6. A baling-press having a pair of compression-chambers and an intermediate compartment, a pair of hoppers communicating with said intermediate compartment, a deflector separating said hoppers, compression mechanism including a pair of suitably-connected reciprocatory followers within said chamber, a supporting-plate connecting the upper edges of said followers, an oscillatory feeder having arms or sectors supported upon a rock-shaft beneath the deflector separating the hoppers, and suitably-guided flexible members connecting the followers with said feeder.

7. A press-box having a pair of compression-chambers and an intermediate compartment, compression mechanism including a pair of connected reciprocatory followers within said compartment, a supporting-plate connecting the upper edges of said followers, lugs extending from said followers through

slots in the side of the press-box, an oscillatory feeder having a laterally-extending lug, and flexible members connecting the lug of the feeder with the lugs of the followers, said
5 flexible members being suitably guided to transmit motion from the followers to the feeder.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

WILLIAM ELBERT TATE.

Witnesses:

JAS. GARRETT,
W. H. ARNETT.