

No. 776,704.

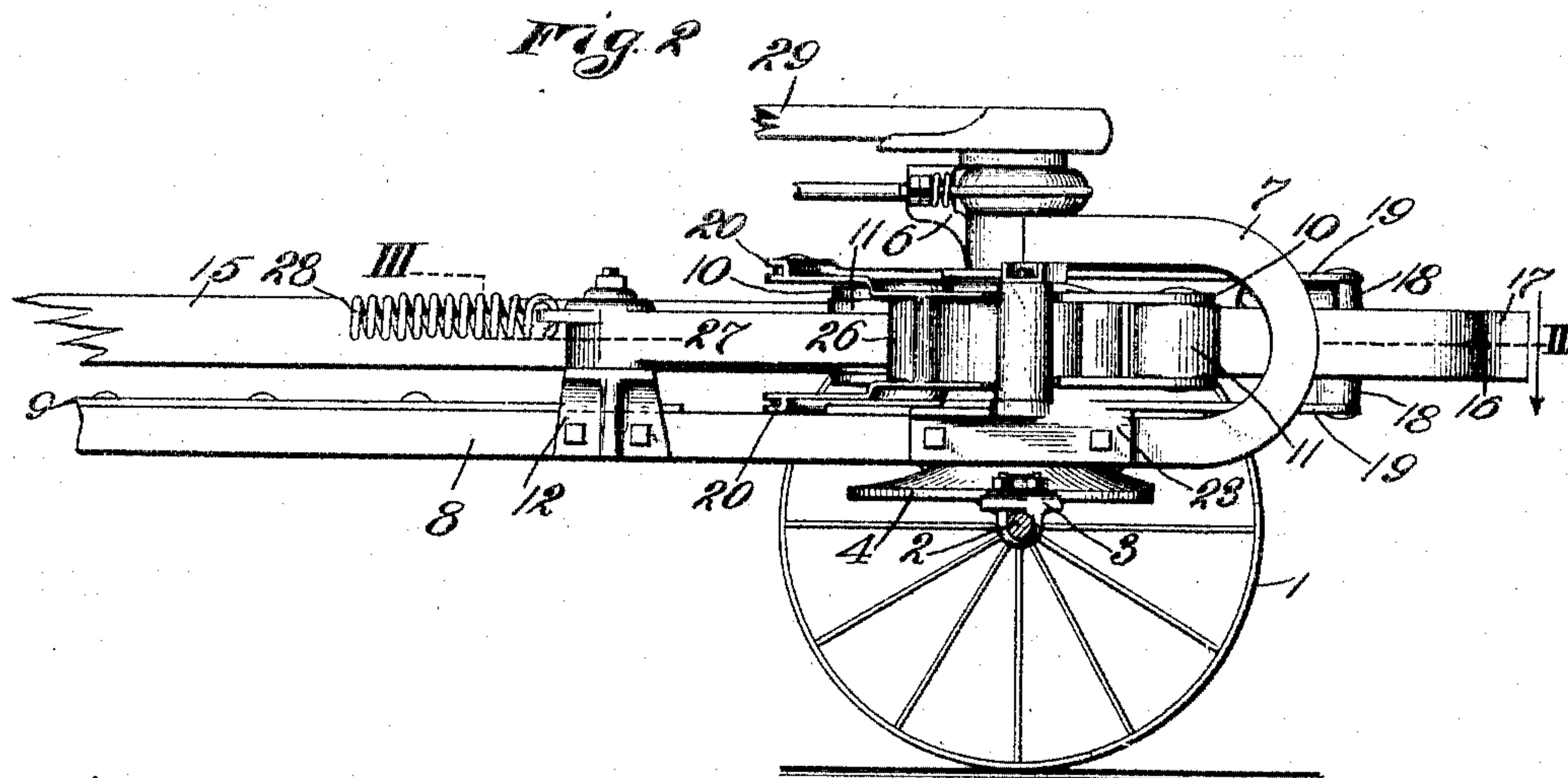
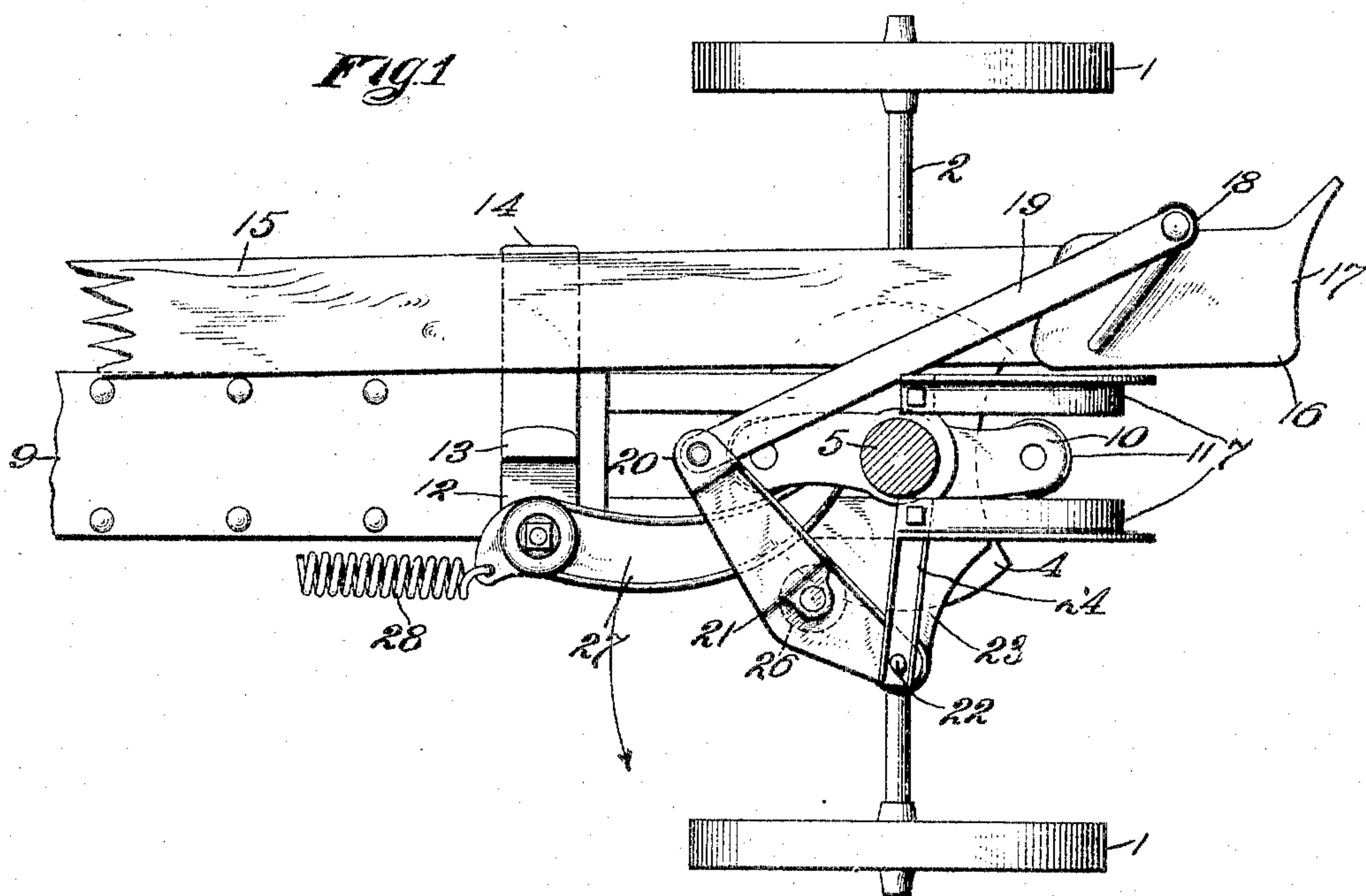
PATENTED DEC. 6, 1904.

J. S. TUTTLE.  
BALING PRESS.

APPLICATION FILED MAR. 14, 1904.

NO MODEL.

2 SHEETS—SHEET 1.



Witnesses  
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H. C. Rodgers

*Inventor*  
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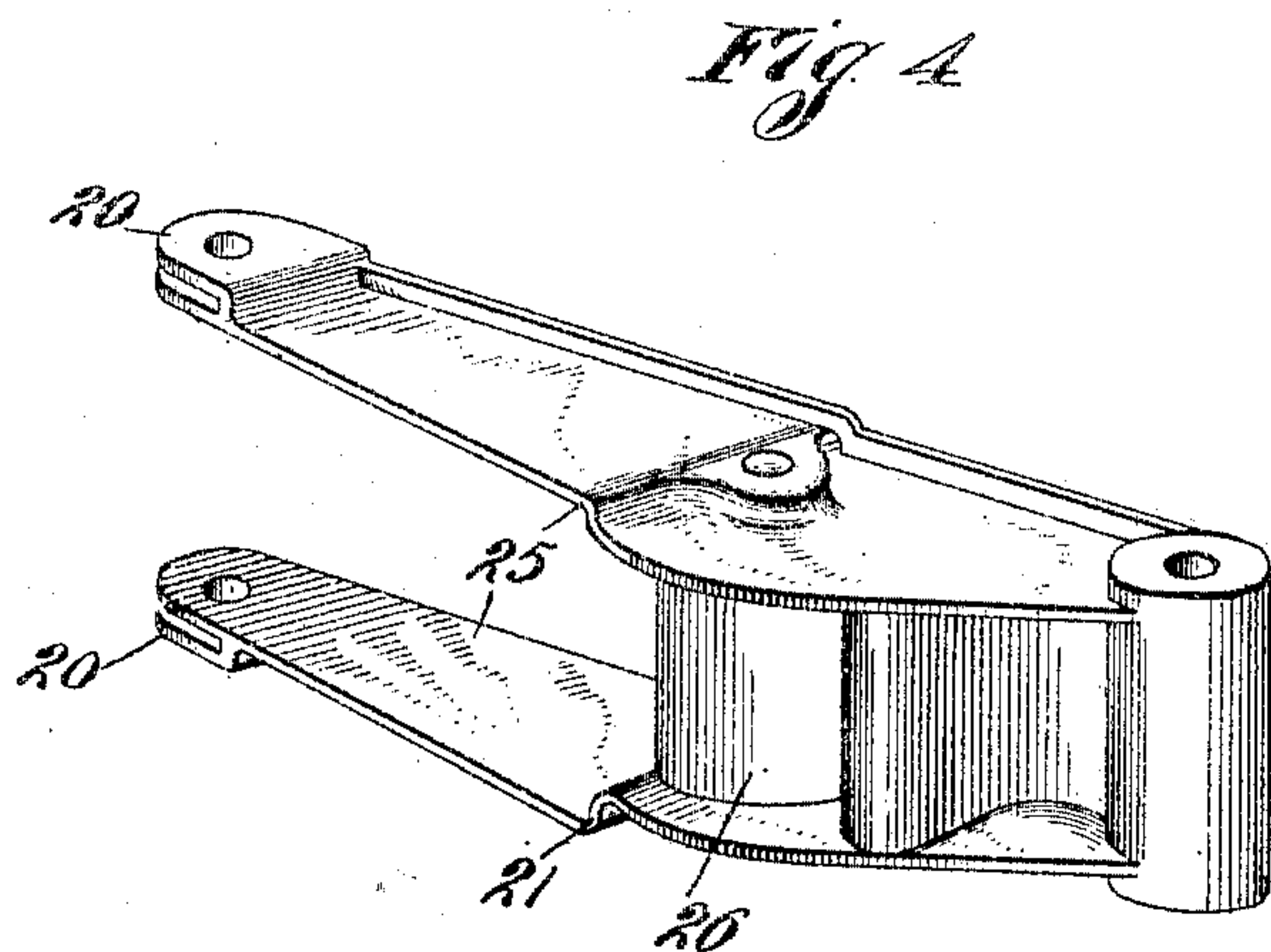
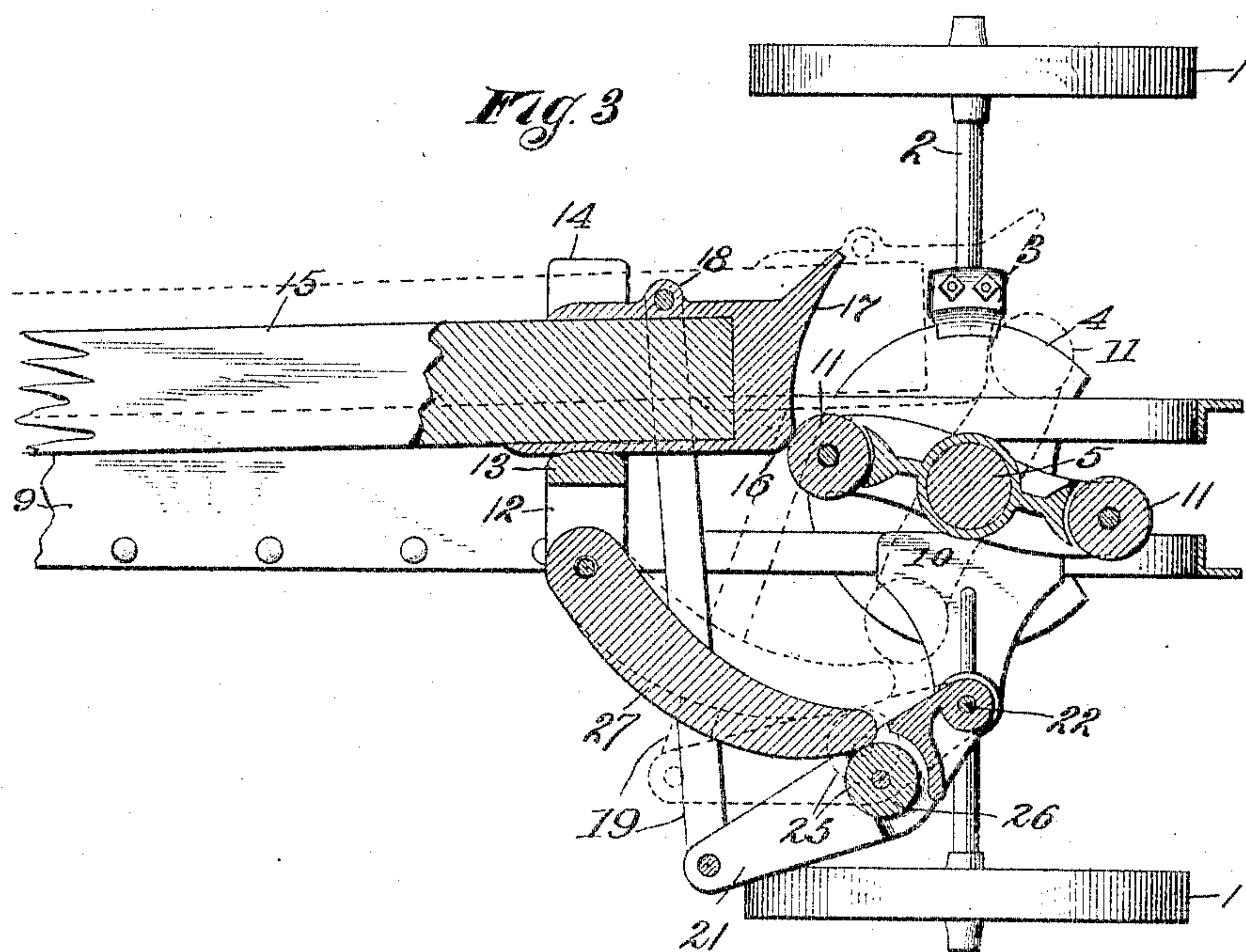
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2 SHEETS—SHEET 2.



Witnesses  
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# UNITED STATES PATENT OFFICE.

JOSIAH S. TUTTLE, OF KANSAS CITY, MISSOURI, ASSIGNOR TO PANAMA HAY PRESS COMPANY, OF KANSAS CITY, MISSOURI, A CORPORATION OF MISSOURI.

## BALING-PRESS.

**SPECIFICATION** forming part of Letters Patent No. 776,704, dated December 6, 1904.

Application filed March 14, 1904. Serial No. 197,970. (No model.)

*To all whom it may concern:*

Be it known that I, JOSIAH S. TUTTLE, a citizen of the United States, residing at Kansas City, in the county of Jackson and State of Missouri, have invented certain new and useful Improvements in Baling-Presses, of which the following is a specification.

This invention relates to baling-presses, and more especially to power mechanism therefor, my object being to produce a mechanism which is of simple and compact construction and which, with trip-lever arms of the usual length, impart a longer stroke to the plunger than with any other press of which I have knowledge which employs trip-lever arms of no greater length, a longer plunger-stroke permitting of a proportionately larger feed-opening and enabling the feeder to deposit larger charges of hay in the baling-case, the incidental advantage being that the bale is completed with fewer strokes of the plunger, and therefore in less time.

To this end the invention consists in certain novel and peculiar features of construction and organization, as hereinafter described and claimed, and in order that it may be fully understood reference is to be had to the accompanying drawings, in which—

Figure 1 represents a horizontal section taken below the sweep, said figure showing the plunger-beam in its most advanced position. Fig. 2 is a side elevation of the same. Fig. 3 is a horizontal section taken on the line III III of Fig. 2. Fig. 4 is an enlarged detail perspective view of a roll-carrying arm, forming a part of the mechanism.

In the said drawings, 1 designates the wheels, and 2 the axle at the power end of the baling-press.

3 designates guide-blocks secured to the axle and engaging the base-plate 4, in which the lower end of the power-shaft 5 is mounted in any suitable or preferred manner, the upper end of the power-shaft being journaled in a bearing 6, secured to the goose-neck ends 7 of longitudinal angle-irons 8, said angle-irons, in connection with the con-

necting-plate 9, bolted or riveted thereto, forming the reach which connects the power mechanism with the baling-chamber end (not shown) of the press.

10 designates the usual trip-lever arms projecting radially from the power-shaft and equipped with the customary antifriction-rollers 11, the trip-lever shown being of the two-stroke type—that is, composed of two arms disposed diametrically opposite each other and adapted to operate in a horizontal plane and successively through the goose-neck end of the frame.

12 is a casting secured to the reach and provided with a trip-off lug 13 and an arm 14, said arm being adapted to support the plunger-beam 15 at the power end of the press, the beam being equipped, as usual, by preference, with a metallic sleeve or head 16, formed with a pocket 17 at its front end. It is also provided with vertical bosses 18, to which are pivoted the front ends of links 19, one above and the other below the plunger-beam and also occupying a horizontal plane above and below the trip-lever, so that there shall be no conflict therewith.

The rear ends of links 19 are pivoted in the bifurcated ends 20 of a swing-arm 21, pivoted on bolt 22, connecting the laterally-projecting casting 23, secured to the reach at the opposite side of the power-shaft from the plunger-beam, and the brace 24, secured to the contiguous angle-iron of the gooseneck, as shown clearly in Fig. 1. The swing-arm between said bifurcated ends 20 is bifurcated, as at 25, and at the base of said bifurcation 25 is equipped with an antifriction-roll 26, adapted to be engaged at times by the curved lever 27, pivoted on casting 12 and adapted to be connected by retractile spring 28 to the plunger-beam in the usual manner, so as to withdraw the latter after the compressing stroke of the plunger is ended and said beam has been tripped from engagement with the trip-lever.

When the plunger is withdrawn its full distance, the parts occupy substantially the posi-



tion shown in Fig. 1, so that as the trip-lever is rotated the roller on its rearwardly-projecting arm swings lever 27 outward until it engages the antifriction-roll on arm 21 and in turn by said engagement swings the last-named arm in the direction indicated by the arrow, Fig. 1, which action immediately starts the plunger-beam on its forward movement through the medium of the connecting-links 19. By the time the plunger-beam has made about one-fifth of its stroke the roller of the front trip-lever arm engages the side of the plunger-beam and coöperates with the first-named arm and the parts operated thereby in continuing the compression-stroke of the plunger. By the time the trip-lever roller engaging the plunger-beam enters its pocket 17 the other arm has cleared the end of the lever 27, and the continued movement of the plunger-beam is enforced by the pressure of the roller engaging the same, this continued movement, through the tensioning of spring 28, tending to swing the lever 27 inoperatively outward from the point indicated by dotted lines, Fig. 3, where it was left by the trip-lever roller which engaged it, to the position shown in full lines, same figure, by which time the plunger-beam has completed its compression-stroke and has come into contact with the trip-off lug 13, which prevents it from moving farther in a lateral direction with the trip-lever, and therefore trips it off the same, the contraction of spring 28 effecting the rebound of the plunger and through such rebound the restoration of the arm 21 and lever 27 to their original positions, as shown in Fig. 1, where they are immediately engaged by the trip-lever roller just released from engagement with the plunger-beam, this compression-stroke being made, of course, with half a revolution of the usual sweep 29, mounted upon the upper end of the power-shaft in a well-known manner. The completion of the revolution of the sweep, as will be readily understood, effects a second compression-stroke, in which stroke and all subsequent strokes the operations described are repeated. It will thus be seen that through the instrumentality of the trip-lever, lever 27, the links, and swing-arm 21 the initial part of the plunger-stroke—namely, that part to which the hay loose in the baling-chamber offers the least resistance—is made and is about one-fifth of the total stroke longer than the real compression portion of the stroke—namely, that portion of the stroke imparted to the plunger-beam when the trip-lever is bearing against the front end of the same, this long stroke giving opportunity for the feeder to deposit larger charges of hay in the baling-chamber, as hereinbefore stated.

From the above description it will be apparent that I have produced a baling-press

embodying the features of advantage enumerated as desirable and which is obviously susceptible of modification without departing from the principle of construction involved, 65

Having thus described the invention, what I claim as new, and desire to secure by Letters Patent, is— 70

1. A baling-press, comprising a power-shaft provided with a plurality of trip-lever arms, a plunger-beam, a swing-arm suitably pivoted, a link pivotally connecting said arm with the plunger-beam, and a lever suitably pivoted and adapted to be caused by the trip-lever to operate the arm and through the medium of said link to impart movement to said beam. 75

2. A baling-press, comprising a power-shaft provided with a plurality of trip-lever arms, a plunger-beam, a swing-arm suitably pivoted and provided with a roll in the horizontal plane of the trip-lever, a link pivotally connecting said arm with the plunger-beam, and a lever suitably pivoted and adapted to be caused by the trip-lever to engage said roll and thereby swing said arm and through the medium of said link to impart movement to said beam. 80 85

3. A baling-press, comprising a power-shaft provided with a plurality of trip-lever arms, a plunger-beam, a bifurcated arm pivoted to a fixed point of the frame, links pivotally connecting the bifurcated end of said arm with the plunger-beam in planes above and below said beam and the trip-lever, and a lever pivoted to a fixed point of the machine and normally extending through the bifurcation of said arm and interposed between the latter and the trip-lever. 90 95

4. A baling-press, comprising a power-shaft provided with a plurality of trip-lever arms, a plunger-beam, a bifurcated arm pivoted to a fixed point of the frame and provided with an antifriction-roll at the base of the bifurcation, links pivotally connecting the bifurcated end of said arm with the plunger-beam in planes above and below said beam and the trip-lever, and a lever pivoted to a fixed point on the frame and normally extending through the bifurcation of said arm and interposed between the trip-lever and the roll of said arm. 100 105 110

5. A baling-press, comprising a reach terminating in a gooseneck provided with a bearing, a base-casting, a vertical power-shaft journaled in the gooseneck-bearing and said casting, and provided with a plurality of trip-lever arms to successively pass through the gooseneck, a casting and a superposed brace projecting laterally from one side of the reach and gooseneck respectively, a bifurcated arm pivoted to and between said casting and brace, an antifriction-roll carried by said arm at the base of its bifurcation, a casting secured to the reach and provided with a trip-off lug and with a supporting-arm, a plunger-beam upon said supporting-arm, links connecting the 115 120 125

plunger-beam with said roll-carrying arm in  
planes above and below the trip-lever and  
plunger-beam, and a lever pivoted on the  
last-named casting and normally projecting  
5 through the bifurcation of the roll-carrying  
arm and interposed between said roll and the  
trip-lever.

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

JOSIAH S. TUTTLE.

Witnesses:

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G. Y. THORPE.