C. J. ANDERSON.

DUMP FOR BRICK YARDS.

APPLICATION FILED MAR. 16, 1908.

905,043.

Patented Nov. 24, 1908.

3 SHEETS—SHEET 1.

FIG. 1.

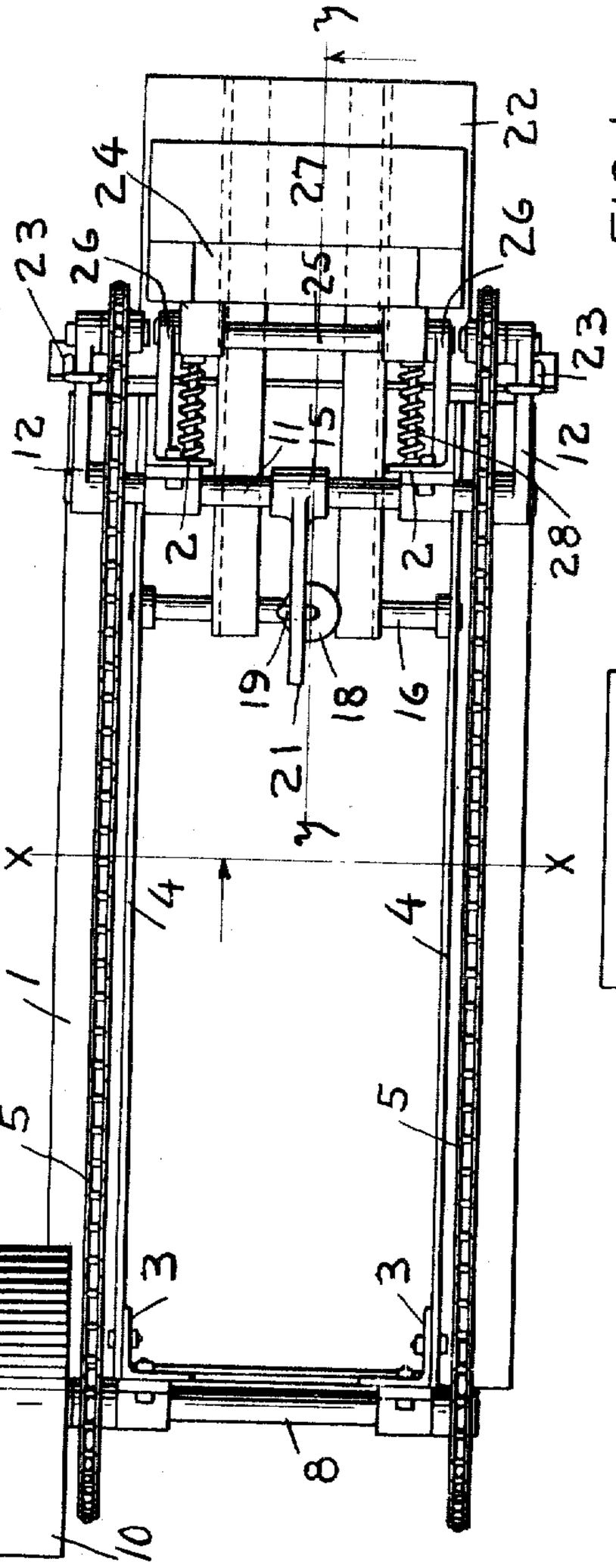
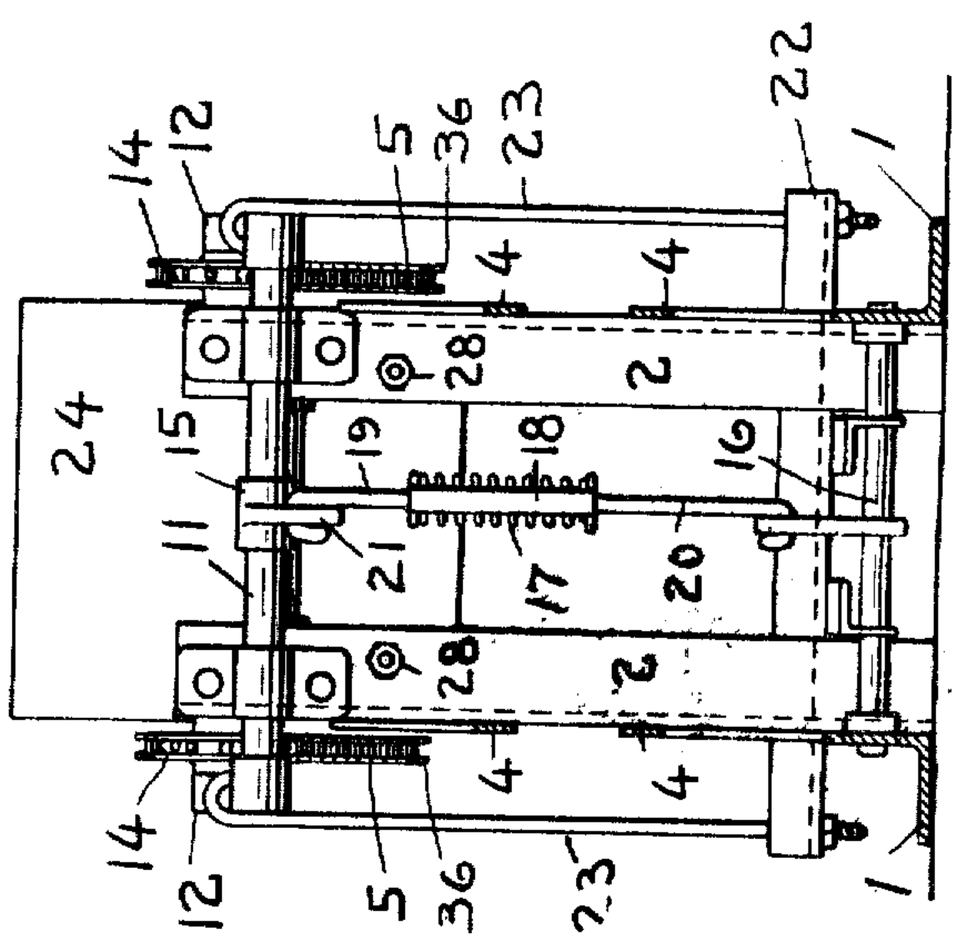


FIG. 2.



WITNESSES

J. Jessen

H. Buck.

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3 SHEETS—SHEET 2.

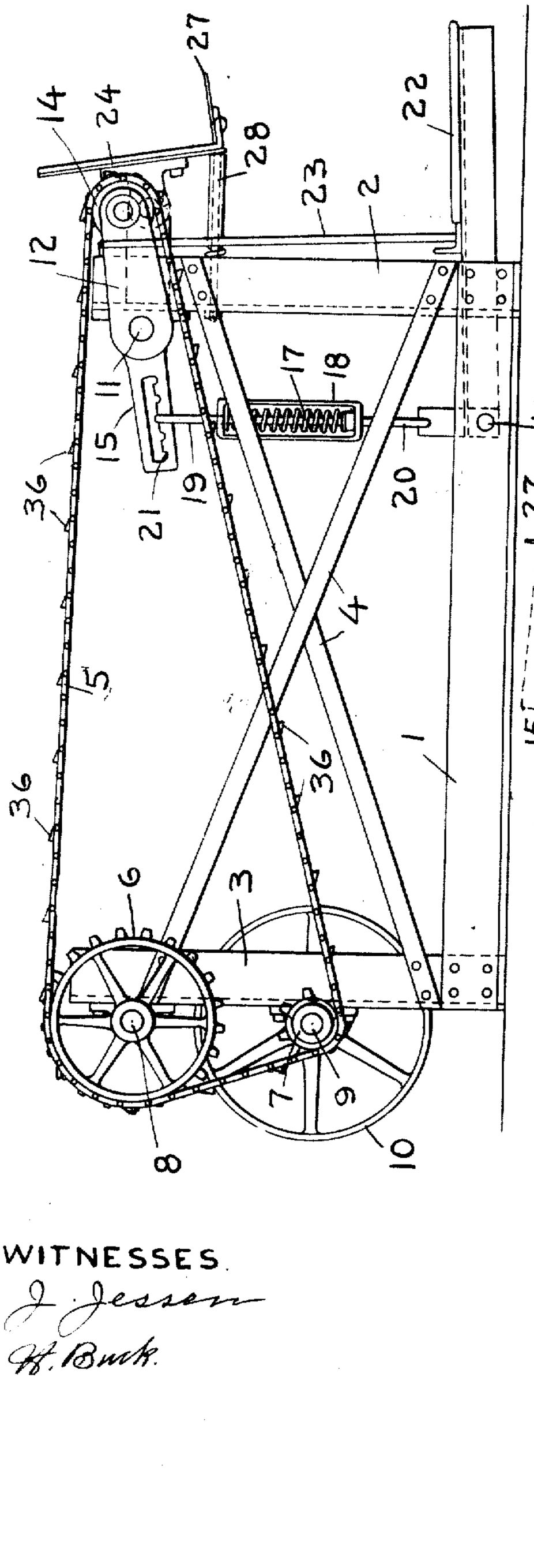

FIG. 3.

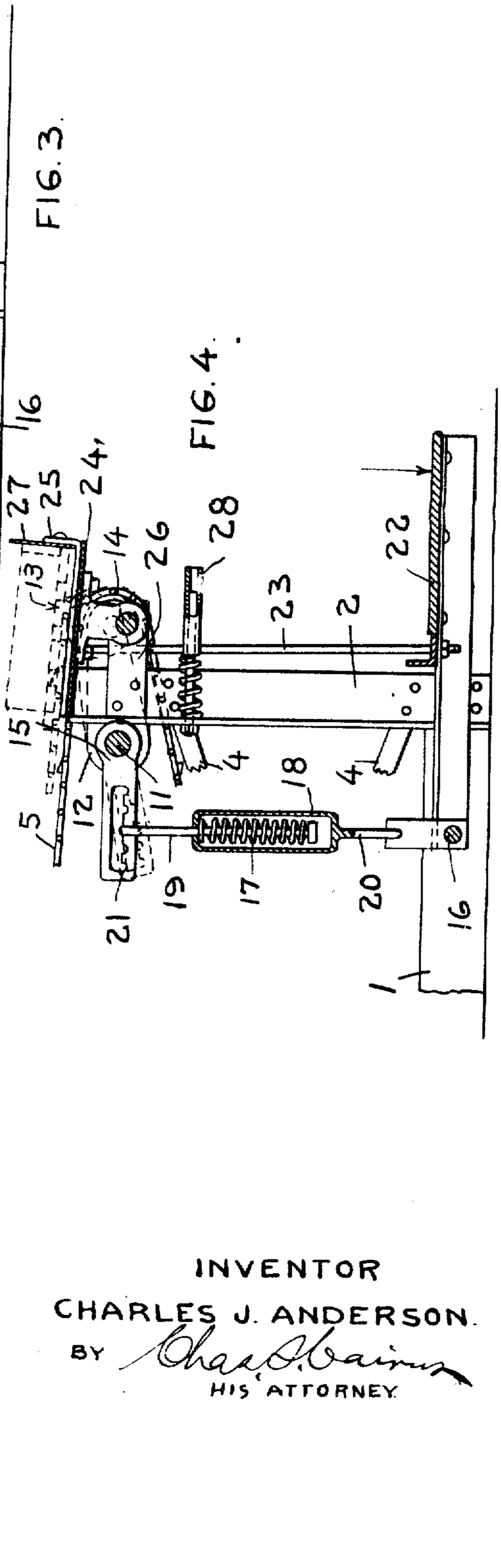

FIG. 4.

WITNESSES.

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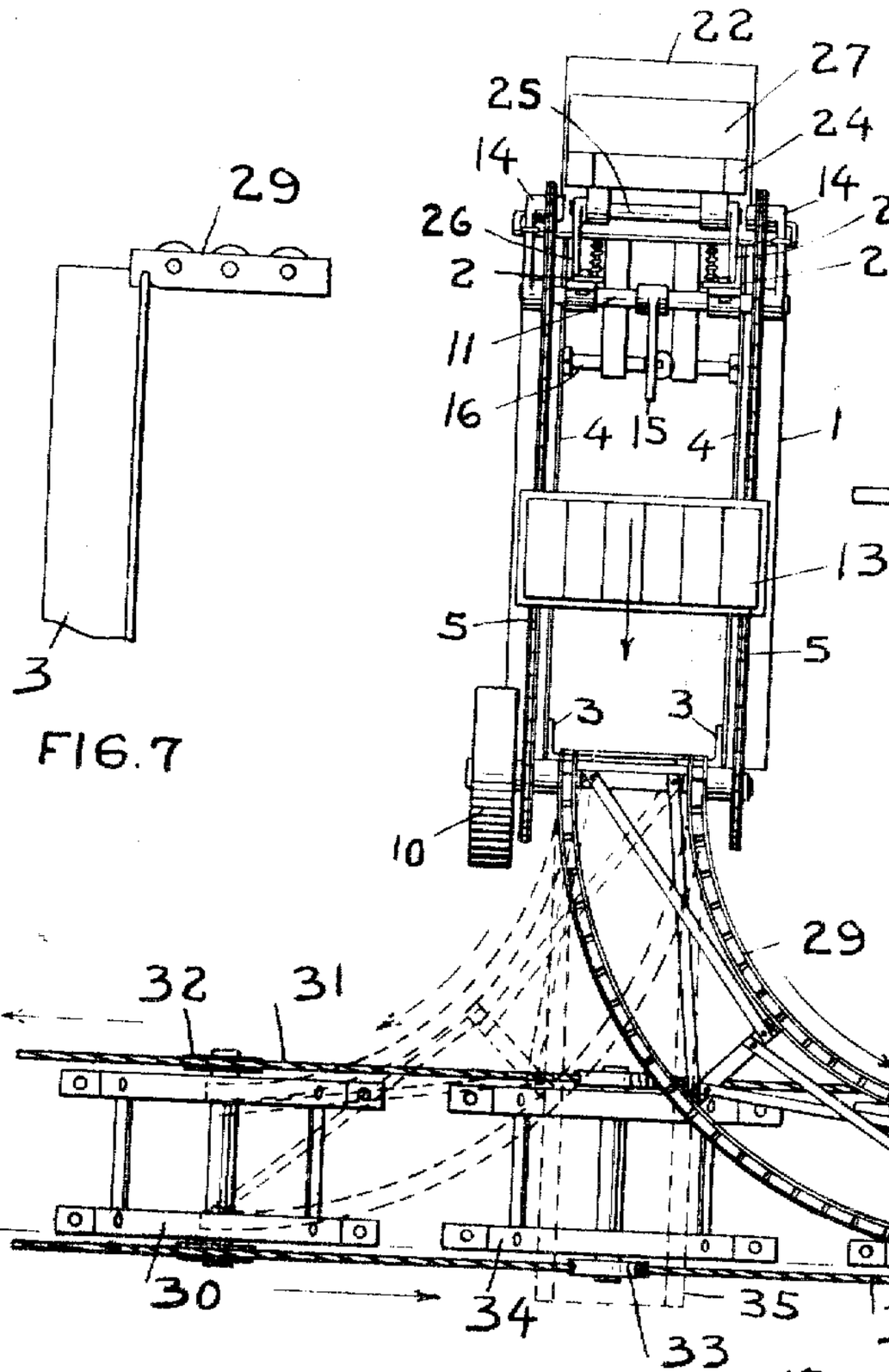
3 SHEETS—SHEET 3.

BRICK MACHINE



F16.7

F16. 8.

F16. 5.

F16. 6.

WITNESSES.

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UNITED STATES PATENT OFFICE.

CHARLES J. ANDERSON, OF MENOMONIE, WISCONSIN.

DUMP FOR BRICK-YARDS.

No. 905,043. Specification of Letters Patent. Patented Nov. 24, 1908.

Application filed March 16, 1908. Serial No. 421,469.

To all whom it may concern:

Be it known that I, CHARLES J. ANDERSON, a citizen of the United States, residing at Menomonie, in the county of Dunn and State of Wisconsin, have invented a new and useful Improvement in Dumps for Brick-Yards, of which the following is a specification.

My invention relates to dumps whereby loaded trays of freshly molded brick are dumped upon a shelf and delivered to carriers to be transported to the drying racks; and the purpose of my invention is to provide convenient and improved means accomplishing such result and for performing the operation when trays so loaded are to be delivered to a carrier line which extends at an angle to, and not in line with, the dumping apparatus.

It consists, in general, of a frame carrying a power driven endless belt carrier, means for giving a reciprocating movement or up and down swing to the receiving end of said carrier, a swinging shelf and a gravity carrier section.

It also consists of the elements hereinafter set forth and claimed.

My dump devices are represented in the accompanying drawings in which

Figure 1 is a plan view; of my dump including the initial carrier; Fig. 2 is a sectional elevation through the line *x x;* Fig. 1, looking towards the head or receiving end; Fig. 3 is a side elevation; Fig. 4 is a sectional elevation through the line *y y* Fig. 1; Fig. 5 is a plan of my dump apparatus showing its connection with main or through carrier lines; Fig. 6 is an elevation of the same; Fig. 7 is a detail illustrating a manner of connecting the gravity carrier section to the frame of the dump apparatus and Fig. 8 is a detail showing the spurs upon the endless chain carrier.

Similar numerals refer to similar parts throughout the several views.

The frame of my dump is preferably portable and made of angle iron, consisting of the horizontal bars 1, the front standards 2, the rear standards 3, and the braces 4. This frame supports an endless belt carrier 5, preferably composed of metal links, said carrier being mounted at the rear upon sheaves or sprockets 6, and 7, which are carried respectively by the shafts 8, and 9, loosely secured to standards 3. A band pulley 10, may also be attached to the shaft 9, through which power may be applied to drive the endless belts 5.

A shaft 11, is loosely secured to standards 2, while to shaft 11, is rigidly secured a pair of swinging arms 12, to the outer or front ends of which arms are loosely mounted, the sheaves or sprockets 14, for carrying the receiving ends of the endless belts 5. For the purpose of holding the delivery end of the endless belts 5, at the sprockets 14, in an elevated position, I provide a rearwardly extending arm 15, rigidly secured to the shaft 11. Between the outer end of the arm 15, and the cross bar 16, I hang a spiral spring 17, which is received within a loop 18, and is connected above to the arm 15, and below to the bar 16, by the hooked bars 19, and 20 respectively. The bar 16, is secured to the bars 1, of the frame. The tension of the spring 17, draws the arm 15, downwards and elevates the sprocket 14, and the receiving end of the carrier belt 5, carried thereby. Suitable means for securing and adjusting the spring 17, upon the arm 15, may be provided, as by the notched loop 21.

For the purpose of depressing the receiving end of the carrier chains 5, I provide a treadle 22, hinged upon the cross bar 16, while hooked bars 23, engage the outer ends of the arms 12, these bars being secured below to the treadle 22. By stepping upon the treadle 22, the receiving end of the carrier belts 5, will be lowered, and by removing the foot from said treadle, said receiving end will swing upwards and be held there by the tension of the spring 17, thereby providing for an alternating movement or reciprocating swing of the receiving end of said belts 5.

For dumping the bricks from the molds, I provide a swinging shelf 24, loosely secured to a bar 25, which bar is held by and secured to the outer ends of a pair of arms 26, which arms are in turn, secured to the standards 2, as shown in Figs. 1 and 4. The shelf 24, is provided with a flange or projection 27, at right angles to the shelf body. When the shelf 24, is in the position shown in Fig. 3, it rests against the spring stops 28, which are secured to the standards 2.

In order that a dump shall meet the conditions found in brick yards, it must be adapted to deliver the green bricks to car-

rier lines running at an angle to the initial carrier line. I, therefore, provide a gravity curve carrier section, 29, which may be secured at one end to the standards 3, and which section, at the other end, rests upon the support or horse 30, of the cables 31, of a main or through carrier line, as shown in Figs. 5, 6, and 7.

The gravity section 29, is so placed that its end at the cables 31, is slightly lower than the end secured to the standards 3. In order to hold the cables 31, out of the way of the gravity section, the upper sections of cables 31, are made to pass over the sheaves 32, of the supports 30, and under the sheaves 33, of the intermediate support 34, as shown in Fig. 6. If it is desired to deliver the trays of brick to be transported on the cables 31, in the direction of the dotted arrow, Figs. 5, and 6, the curve section 29, is simply turned end-for-end and placed as shown in the dotted lines. If it is desired to transport said trays over and above said cables 31, to a carrier line directly opposite the initial carrier line and in line with the belts 5, a straight gravity section 35, may be used, as shown in dotted lines Fig. 5. In order that the belts 5, may properly engage the trays when coming in contact with them, and to prevent slipping at one side or the other at the moment of such contact, whereby the tray 13, may be thrown off the carrier, I prefer to use spurs 36, upon the belts 5, as shown in Fig. 8.

The operation of my devices is as follows:—The shelf 24, being in the position shown in Fig. 3, and a tray 13, being placed thereon with one edge of the tray resting upon the flange 27, the workman proceeds to dump a mold of bricks on the tray as follows: He places the open face of said mold against said tray. At the same time, he steps upon the treadle 22, to depress the receiving ends of the chains 5, and by hand turns the swinging shelf to the horizontal position as shown in Fig. 4, and lifts the mold from the bricks. He then releases the treadle 22, and the receiving end of the belts 5, swing against the tray 13, and lift it from the shelf 25. The spurs 36, engage the bottom of the tray which, with its load of bricks, is carried towards the delivery end of said initial carrier upon the belts 5. As soon as the tray has passed beyond the edge of the swinging shelf 24, that shelf being heavier on the flange side (with reference to its hinge on bar 25,) swings down of its own weight at an angle and strikes against the spring stops 28, ready to receive the next tray of bricks. When the tray of bricks has reached the gravity carrier section 29, or 35, it will be automatically delivered by gravity to the connecting carrier line for transportation to the drying racks, which may be over such a system as is shown in my application for carriers filed January 25th, 1907, Serial No. 354131.

My dump is portable and may be removed to any part of the yards where its use is desired. The weight required upon the treadle to depress the receiving end of the belts 5, is slight. It will be understood that if other forms of belts than the link belts 5, shown in the drawings, are used, that ordinary sheaves may be substituted for the sprockets shown, without departing from my invention or claims.

What I claim as new and desire to secure by Letters Patent is:—

1. In dumps for brick yards, the combination of an endless belt carrier supported upon a suitable frame, means adapted to impart an alternating up and down swing to the receiving end of said carrier, and a swinging shelf mounted upon said frame at said receiving end, substantially as set forth.

2. In dumps for brick yards, the combination of a suitable frame, an endless belt carrier mounted therein, swinging arms adapted to support the receiving end of said carrier, a spring so adjusted as to be adapted to raise the outer ends of said arms and thereby to raise and to hold said receiving end in an elevated position, a swinging shelf, and means adapted to act against said spring for the purpose of depressing said receiving end as desired, substantially as shown and described.

3. In dumps for brick yards, the combination of a frame, an endless belt carrier mounted therein, spurs upon said carrier, means adapted for elevating the receiving end of said carrier, a swinging shelf, and means adapted to operate against said elevating means for the purpose of depressing said receiving end as desired, substantially as set forth and described.

4. In dumps for brick yards, the combination of a frame, an endless belt carrier mounted therein, swinging arms hinged to said frame, means carried by said arms adapted to carry the receiving end of said carrier, means adapted to operate through said arms and to elevate said receiving end, a treadle so connected as to be adapted to overcome said elevating means and to depress said receiving end when the treadle is stepped upon, and a swinging shelf, substantially as specified.

5. In dumps for brick yards, the combination, of a frame, an endless belt initial carrier mounted therein, means adapted for imparting an alternating up and down swing to the receiving end of said carrier as desired, a swinging shelf mounted upon said frame at said receiving end, a main carrier line extending at an angle to said initial carrier line, a gravity curve section so placed as to be adapted to connect said two carrier lines, and means for depressing the upper sections

of the endless cables of said main carrier line at the point of junction of said two lines, as herein set forth.

6. In dumps for brick yards, the combination of a frame, an endless belt initial carrier mounted therein, swinging arms hinged to said frame and adapted to support at their outer ends the receiving end of said initial carrier, means adapted to elevate the outer ends of said arms and thereby to elevate the receiving end of said carrier, a treadle so connected as to be adapted to overcome said elevating means and to depress said receiving end when the treadle is stepped upon, a swinging shelf mounted at said receiving end, a second carrier line, and a gravity carrier section adapted to connect said initial line and said second line, for the purpose and substantially as specified.

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

CHARLES J. ANDERSON.

Witnesses:
F. E. CRARY,
IDEM HORSEREID.