

No. 621,365.

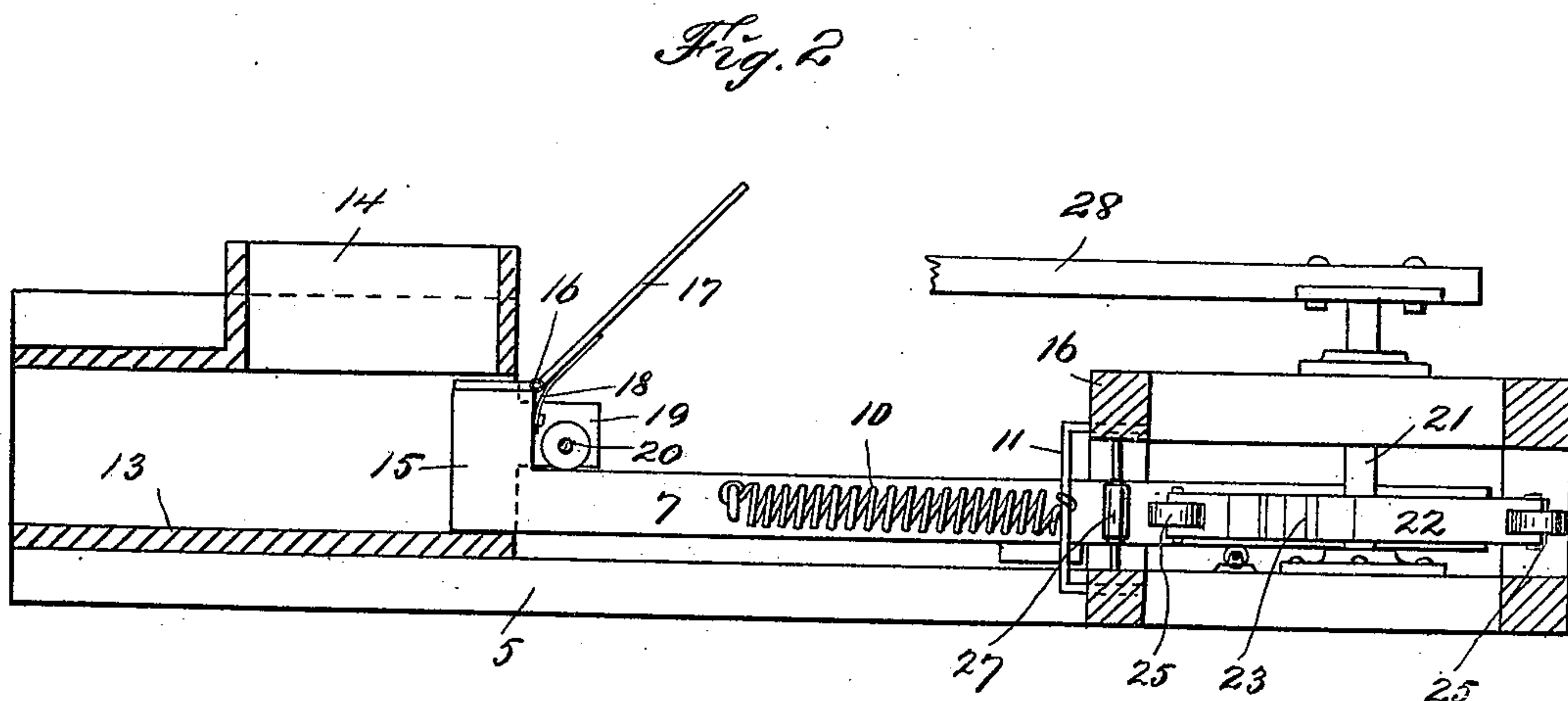
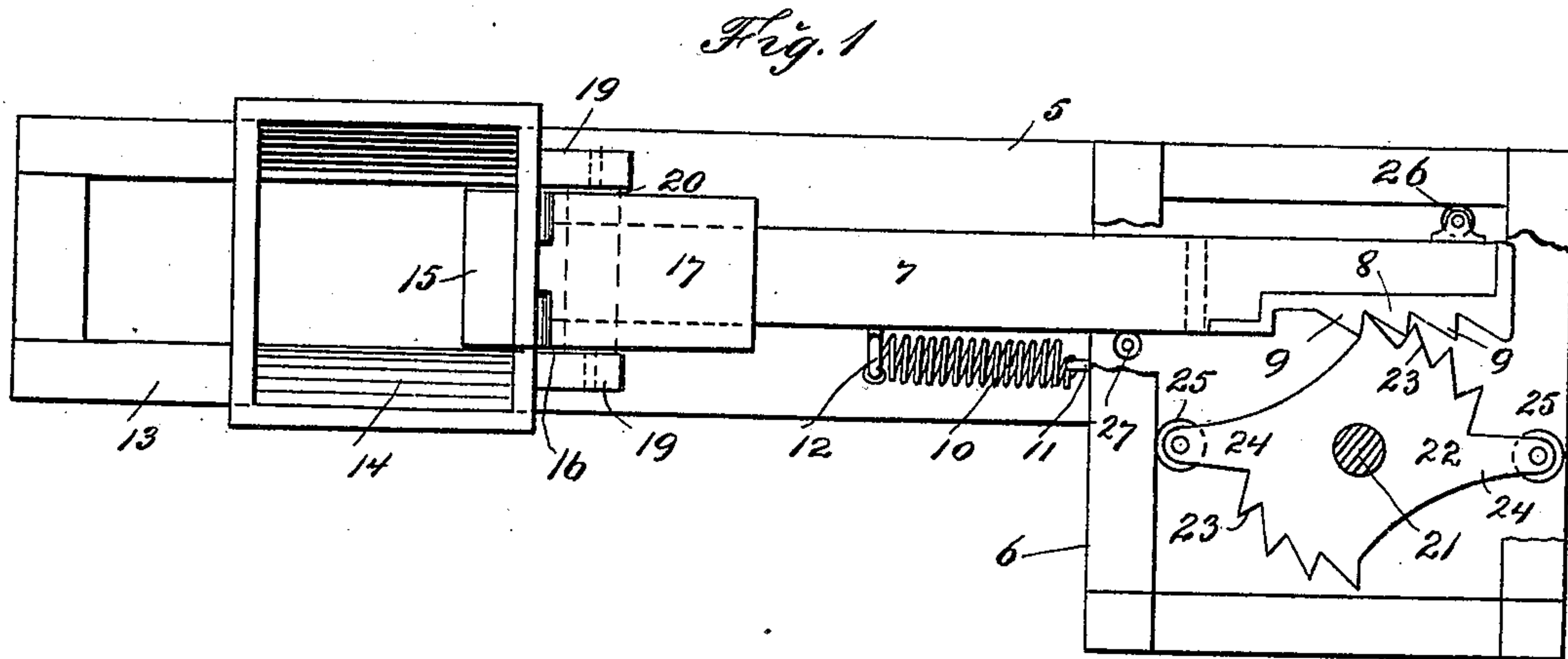
Patented Mar. 21, 1899.

M. O'CONNELL.

BALING PRESS.

(Application filed May 19, 1897.)

(No Model.)



WITNESSES:

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UNITED STATES PATENT OFFICE.

MARTIN O'CONNELL, OF WEST, TEXAS.

BALING-PRESS.

SPECIFICATION forming part of Letters Patent No. 621,365, dated March 21, 1899.

Application filed May 19, 1897. Serial No. 637,145. (No model.)

To all whom it may concern:

Be it known that I, MARTIN O'CONNELL, a citizen of the United States, residing at West, in the county of McLennan and State of Texas, have invented certain new and useful Improvements in Presses, of which the following is a full and complete specification, such as will enable those skilled in the art to which it appertains to make and use the same.

This invention relates to presses, and particularly to devices of this class which are employed for pressing hay; and the object of the invention is to provide an improved press for this purpose which is simple in construction and operation and by means of which a greater amount of hay may be baled in a given time than with any of the presses now in use, this result being also accomplished by a less amount of power than is necessary in hay-presses as usually constructed.

The invention is fully disclosed in the following specification, of which the accompanying drawings form a part, in which—

Figure 1 is a plan view of my improved press with part of the construction removed and part shown in section, and Fig. 2 a sectional side view thereof.

In the drawings forming part of this specification the separate parts of my improvement are designated by the same numerals of reference in each of the views, and in the practice of my invention as shown in the drawings I provide a base plate or support 5, which may be of any desired form, and connected with one end thereof is a rectangular frame 6, in one side of which is mounted a plunger 7, which is provided at the end thereof, within the frame 6, with a metal plate 8, which is secured thereto in any desired manner and which is provided with ratchet-teeth 9, which, as shown in the drawings, are four in number, but any desired number of which may be employed. The frame 6 is also provided with a spring 10, which is secured thereto at 11, and one end of said spring is secured to the plunger 7 at 12, and suitably supported in line with that side of the frame 6 in which the plunger 7 is mounted is a rectangular casing 13, the inner end of which is provided with a hopper 14, and the rectangular casing 13 is oblong in form and may be of any desired length, and the plunger 7 is provided

with a head or follower 15, which enters said casing and to the upper side of which is hinged at 16 a plate 17, and secured to the head or follower 15 is a spring 18, which bears on the under side of the plate 17 and holds it normally in the position shown in Fig. 2, and the casing 13 is provided with arms 19, which project in the direction of the frame 6 and in which is mounted a roller 20.

Mounted in the frame 6 is a vertical shaft 21, in which is mounted an oblong gear-head 22, the ends of which are segmental or circular in form and provided with ratchet-teeth 23, these ratchet-teeth being also four in number and adapted to operate in connection with the ratchet-teeth 9 on the end of the plunger 7, and the said gear-head 22 is provided at diagonally opposite corners with projecting arms 24, each of which is provided with a roller 25.

The end of the plunger 7, within the casing 6, is provided with a roller 26, which is secured to the side thereof opposite the ratchet-teeth 9 and which bears on one of the sides of the frame 6, and said frame 6 is provided with a roller 27, which bears on the opposite side of the plunger 7, and these rollers serve as antifriction-rollers and any desired number thereof may be employed, and the base plate or support 5 may be provided with rollers, on which the plunger 7 would rest.

The upper end of the shaft 21 is provided with a beam or sweep 28, by means of which the press is operated, and the said beam or sweep 28 may be operated by horse-power, hand-power, or in any desired manner, or said beam or sweep may be omitted and the shaft 21 may be turned by means of an electric motor or other device of this class.

The operation will be readily understood from the foregoing description when taken in connection with the accompanying drawings and the following statement thereof.

In the position of the plunger 7 shown in the drawings the head or follower 15 projects slightly beneath the hopper 14; but in the normal position of the parts when the hay is being placed in the hopper the plunger 7 is withdrawn, so that the head or follower 15 does not project to any considerable extent beneath the hopper 14. The hay to be pressed is inserted into the casing 13 through

the hopper 14 and the shaft 21 is revolved, as hereinbefore described, and the gear-head 22 is secured to said shaft, and at each revolution of said shaft and said head the plunger 7 is forced outwardly or into the casing 13 twice, and is twice withdrawn by the spring 10.

As the gear-head 22 revolves the ratchet-teeth 23, at the opposite ends thereof, operate, in connection with the ratchet-teeth 9, to force the plunger 7 forwardly, and the rollers 25 will alternately strike the end of said plunger and also serve to force it forwardly, and each time that the plunger 7 is forced forwardly to the limit of its forward movement by one of the rollers 25 it is withdrawn by the spring 10 as the said head 22 revolves, and the spring 10 returns the plunger 7 to the limit of its outwardly-directed movement into the frame 6, and as the head 22 revolves it is again forced forward by the opposite end thereof. In this operation of the plunger 7 the follower or head 15 is forced into and withdrawn from the casing 13, and each time that it is forced forwardly the hay is forced into the casing 13 beyond the hopper 14, in which operation the spring-supported plate 17 is depressed and passes beneath and closes said hopper, as will be readily understood.

The object of the roller 20 is to prevent the rising of the plunger 18 in the box 15. When heavy charges are fed into said box, the plunger 15 will rise and choke the machine; but the provision of the roller 20 obviates this diffi-

culty, and said roller also operates to reduce the friction of the plunger.

The bales of hay may be held in the casing 13 until formed, and may be discharged therefrom and bound or tied in any desired manner, and it will thus be seen that I accomplish the object of my invention by means of a device which is simple in construction and operation and comparatively inexpensive.

Having fully described my invention, I claim as new and desire to secure by Letters Patent—

A press, comprising a frame, a spring-operated plunger mounted therein, said plunger being provided within said frame with gear-teeth on one side thereof, a shaft mounted in said frame and provided with an oblong gear-head, the opposite ends of which are segmental in form and provided with teeth which are adapted to engage with those on the plunger, and means for operating said shaft, said gear-head being also provided at diagonally opposite corners with a projecting arm each of which is provided with a roller, substantially as shown and described.

In testimony that I claim the foregoing as my invention I have signed my name, in presence of the subscribing witnesses, this 14th day of May, 1897.

MARTIN O'CONNELL.

Witnesses:

J. T. HALL,

J. C. MCADAMS.