

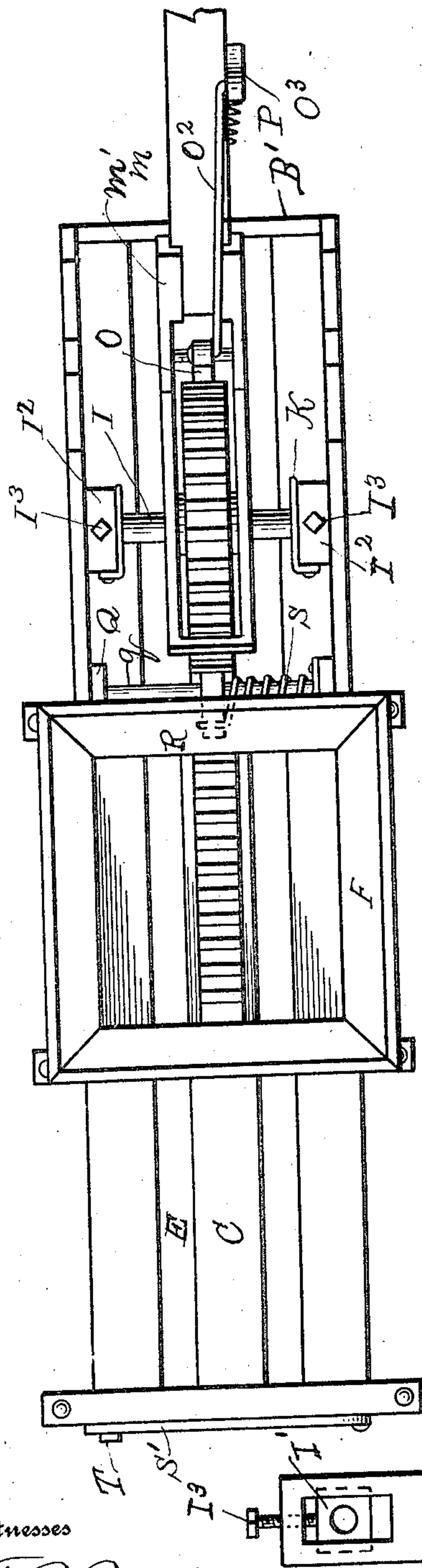
A. F. W. DIAMOND.
HAY PRESS.

APPLICATION FILED NOV. 12, 1908.

Patented May 18, 1909.

921,961.

Fig. 1.



Witnesses

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Geo. B. Wood

Fig. 2.

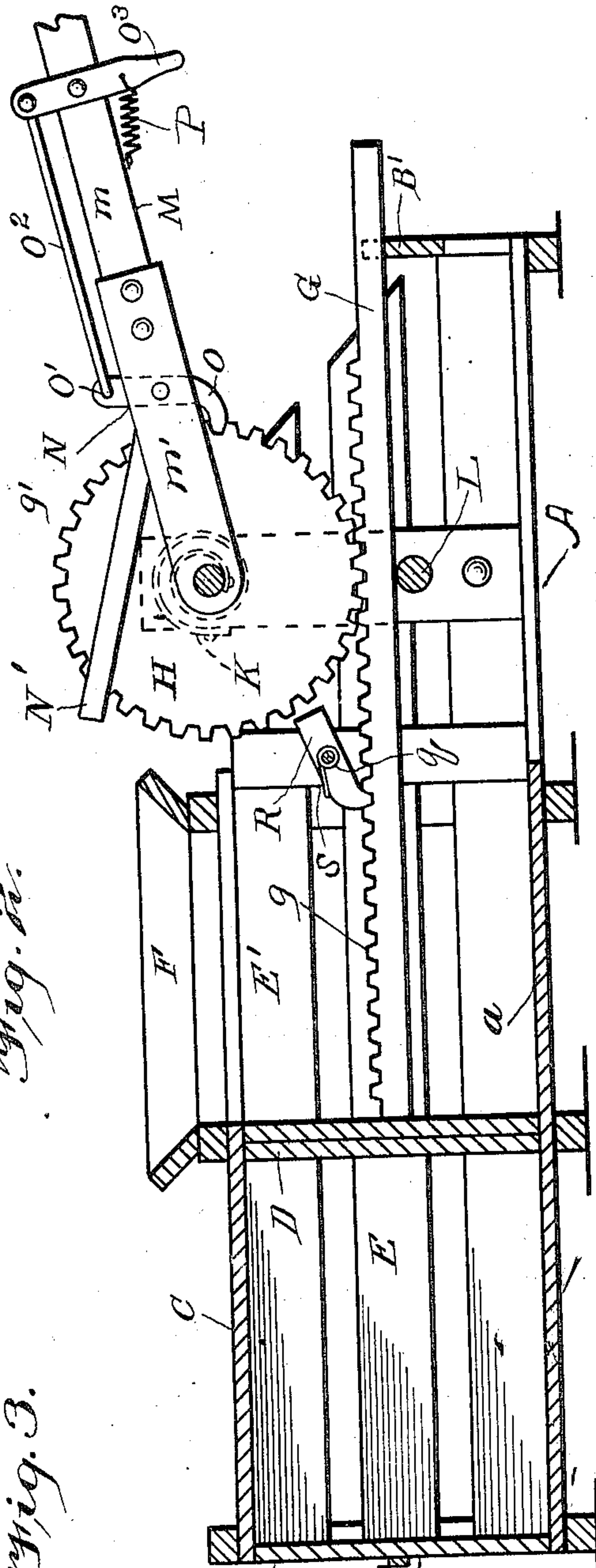


Fig. 3.

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UNITED STATES PATENT OFFICE.

ALFRED F. WHITE DIAMOND, OF SLOCOMB, ALABAMA.

HAY-PRESS.

No. 921,961.

Specification of Letters Patent.

Patented May 18, 1909.

Application filed November 12, 1908. Serial No. 462,292.

To all whom it may concern:

Be it known that I, ALFRED F. WHITE DIAMOND, a citizen of the United States, residing at Slocomb, in the county of Geneva and State of Alabama, have invented certain new and useful Improvements in Hay-Presses, of which the following is a specification.

My invention relates to improvements in presses for baling hay, and the object of the invention is to provide a press for the purposes intended which will be simple in construction, easily and conveniently operated, and economically manufactured.

With these ends in view the invention consists in the novel construction, combination and arrangement of parts as will be hereinafter more in detail described and the asserted novelty specifically claimed.

I have fully and clearly illustrated my invention in the accompanying drawings in which—

Figure 1 represents a top or plan view of my press. Fig. 2 a longitudinal sectional view thereof, and Fig. 3 is a detached view of one of the uprights provided with the bearing boxes.

A designates the frame-work of a baling press composed of a base piece *a*, end pieces B and B', and a top piece C, the frame-work having a baling chamber E and receptacle E' for the hay as it is fed from a hopper.

F designates a hopper secured to the frame-work directly above and in alinement with the hay receptacle from which the hay is fed and which is gradually passed from the hopper downwardly into the chamber E'.

G designates a plunger having a rack-bar formed upon its upper surface and provided with a suitable number of teeth *g* which mesh with teeth *g'* formed upon the periphery of a cog wheel or pinion H centrally secured upon a transverse axle I which is adjustably journaled in bearing boxes I' formed in the upper portions of uprights I², said boxes being adjusted by means of set screws I³ operatively and adjustably secured in said bearing boxes.

K designates flat coiled springs located around the axle I each having one end secured to the upper portions of the uprights I' and their opposite ends secured to the under side of the axle, the bodies of the springs lying against the inner surfaces of the uprights I'.

L designates a roller having its ends loosely

journaled in bearings near the lower portion of the uprights I' and in alinement with the axle I upon which the racked plunger operatively moves when operated through the medium of the operating mechanism.

M designates an operating lever formed in two sections, an upper detachable section *m* and a lower stationary section *m'*, the lower section of which constitutes a yoke, the lower section of said lever M also being secured to the axle I upon each side of the cog wheel or pinion, the cog wheel or pinion being in turn secured to the axle by means of a set screw (not shown in the drawing). The upper part of the lower section of the lever is notched out as at N for the reception of a centrally pivoted pawl O, the lower end of which engages teeth upon the cog wheel or pinion.

N designates a tripping lever having one end secured to the yoke *m'*, its opposite end being free, and by means of which the pawl R, is disengaged from the plunger rack. The upper end of said pawl is provided with a perforation O' in which engages one end of a rod O², the opposite end of said rod engaging one end of a hand-lever O³, pivotally secured to the lever M, the opposite end of the hand-lever O³ being provided upon its under surface with a coiled spring P, the ends of said coiled spring being secured to the levers M and O³ respectively for holding the pawl O in engagement with the cog wheel or pinion secured to the axle I.

Q designates two uprights secured to the inner side of the frame-work in which the ends of a transverse shaft *q* are secured, and centrally and pivotally secured to this shaft *q* is a pawl R one end of which engages the toothed rack of the plunger. One end of the shaft *q* is provided with a coiled spring S having one of its ends secured to the inner side of one of the uprights Q, the other or opposite end of said spring being free and bearing against the pawl R.

The rear end of the frame-work of the press is provided with a door for the exit of the hay when formed into bales and is closed or opened by means of a latch S' pivoted at one end and side to the frame-work, the opposite end of said latch being free to drop into a catch T rigidly secured to the opposite side and end of said frame-work.

The operation of my press is as follows: The operator by pulling down upon the sectional lever rotates the pinion which in turn forces the plunger rack forward, the pawl

which engages the rack teeth of the plunger prevents the plunger rack and cog wheel from returning. For returning the plunger rack to its normal position the operator
5 simply releases the pawl secured to the sectional lever then raises the sectional lever until the yoke engages the pawl R which is then thrown out of engagement with the plunger rack, the coiled springs operate to
10 return the plunger bar to its normal position, this operation being repeated until all of the hay is baled.

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

15 1. In a baling press the combination with the frame-work, forming a hay receptacle and baling chamber, of a hopper supported upon the frame-work, a plunger provided with a toothed rack, a cog wheel meshing
20 with said rack, a lever formed in two sections, a detachable upper section, and a stationary lower section, an axle, uprights provided with journal boxes for the reception of the ends of the axle, set screws for adjusting said boxes;
25 coiled springs having their ends secured to the uprights and axle, a pawl engaging the

rack bar of the plunger, a pawl centrally and pivotally secured to the lower section of the lever, a rod connecting the upper portion of the pawl with the upper portion of a hand-
30 lever, a hand-lever centrally and pivotally secured to the upper section of the sectional lever, a spiral spring having its ends secured to the upper section of the sectional lever and to the hand-lever.
35

2. In a baling press the combination of a plunger having a rack, a locking pawl for engaging the rack, a gear wheel in engagement with the rack, a lever provided with means
40 for disengaging the locking pawl from the rack, a pawl on the lever for operating the gear wheel to advance the plunger and means for returning the plunger to its initial position when the locking pawl is disengaged
45 from the rack.

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

ALFRED F. WHITE DIAMOND.

Witnesses:

WM. D. LUSSLY, Jr.,
F. A. MILLIGAN.