

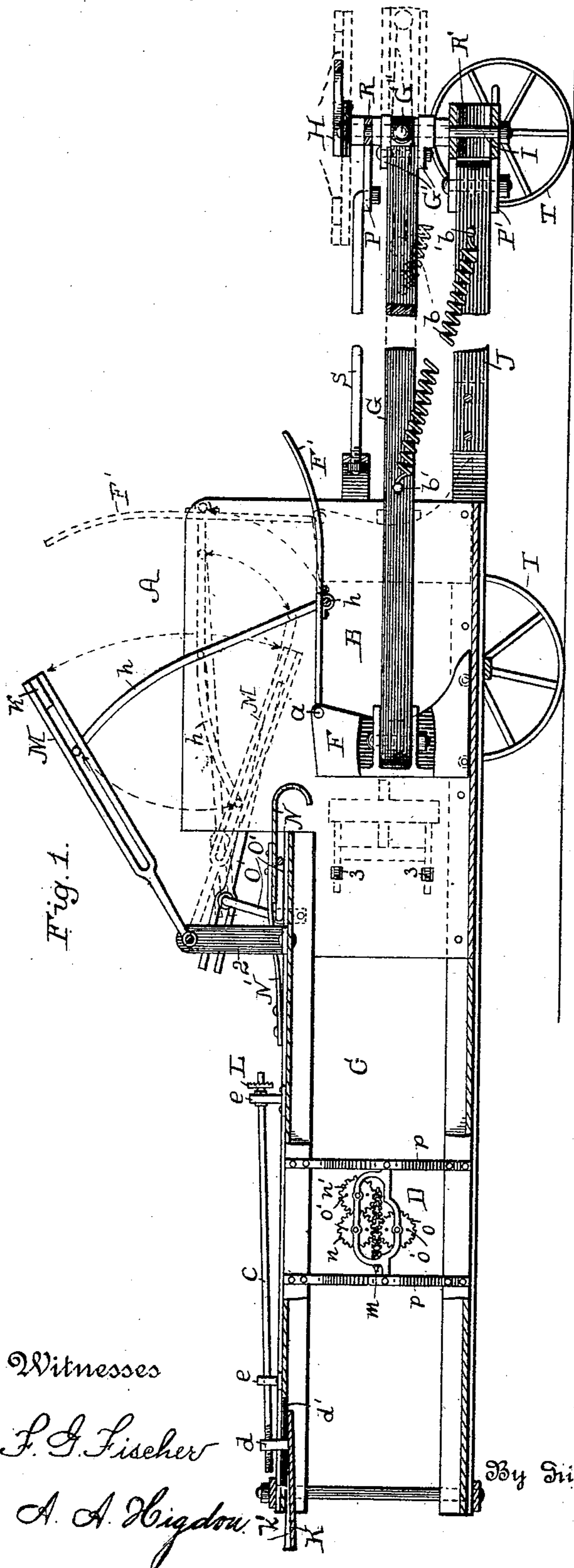
(No Model.)

2 Sheets—Sheet 1.

J. A. HAMPTON.
BALING PRESS.

No. 459,630.

Patented Sept. 15, 1891.



Witnesses

L. G. Fischer

A. A. Higdon.

By His

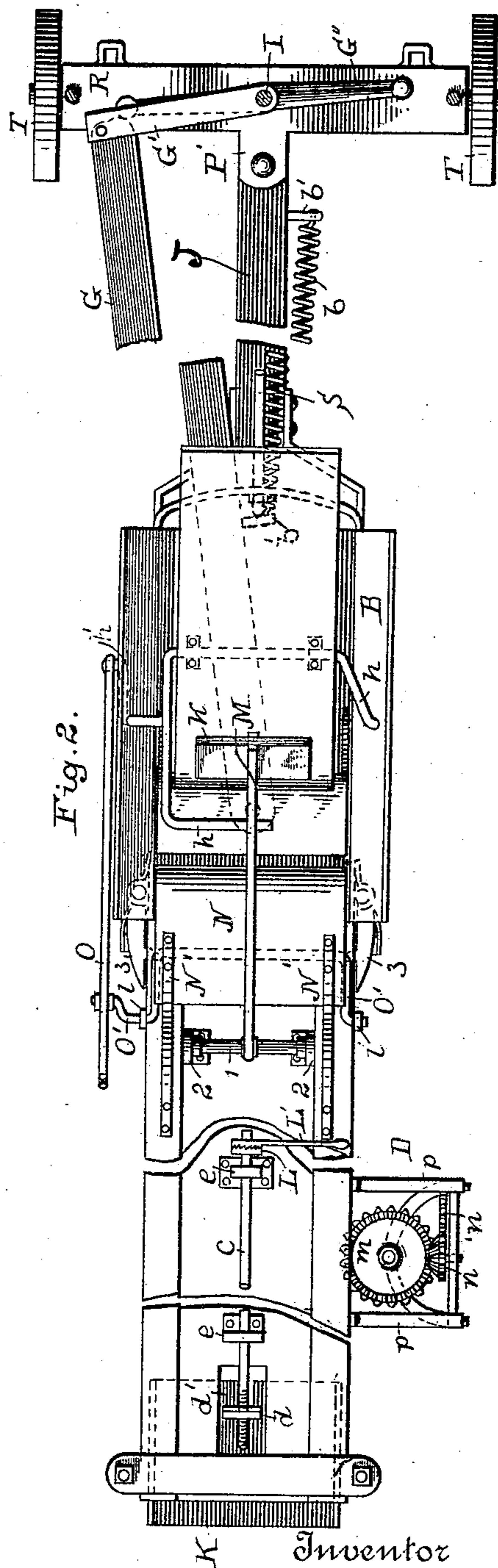


Fig. 2.

Inventor

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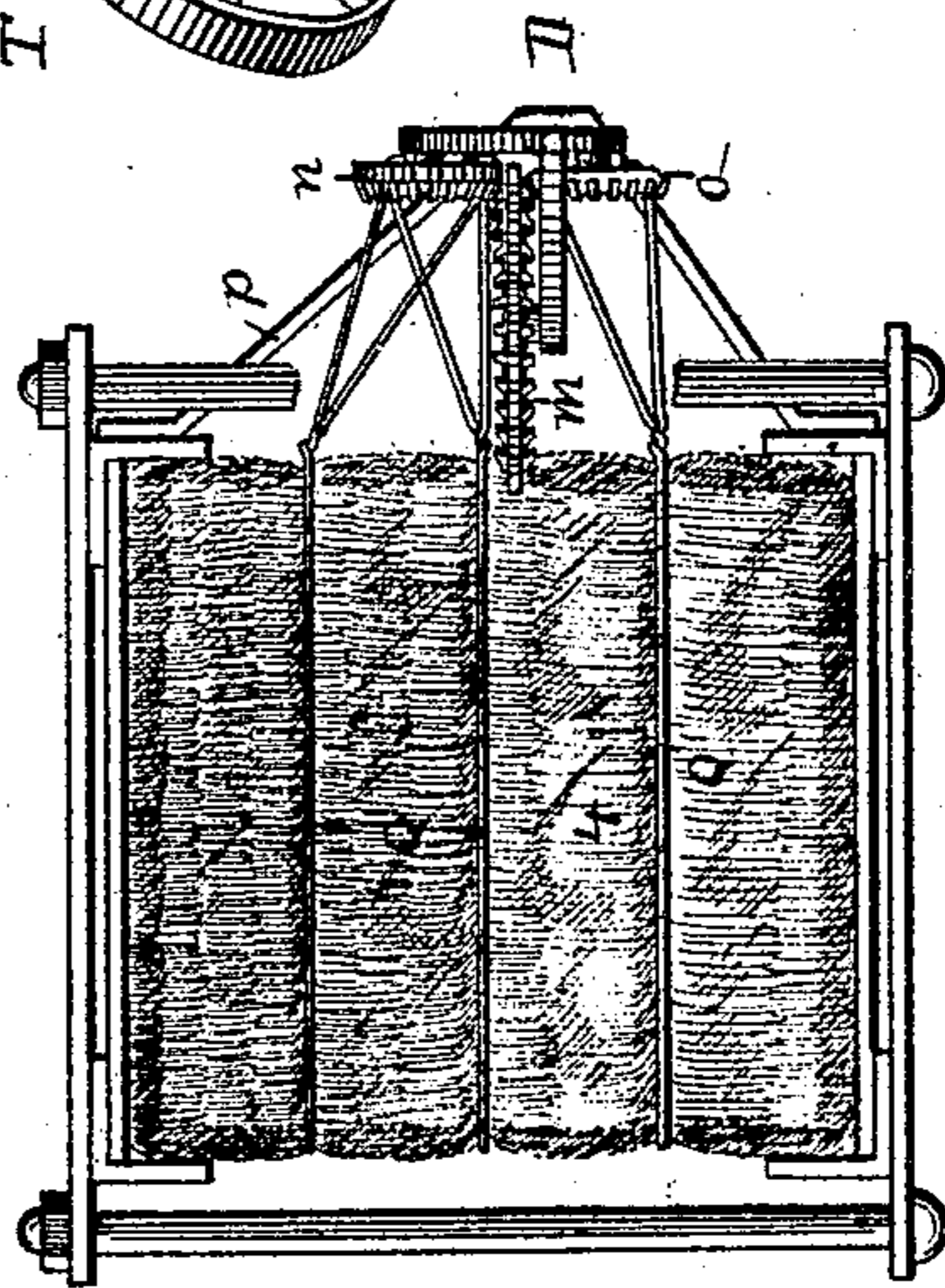
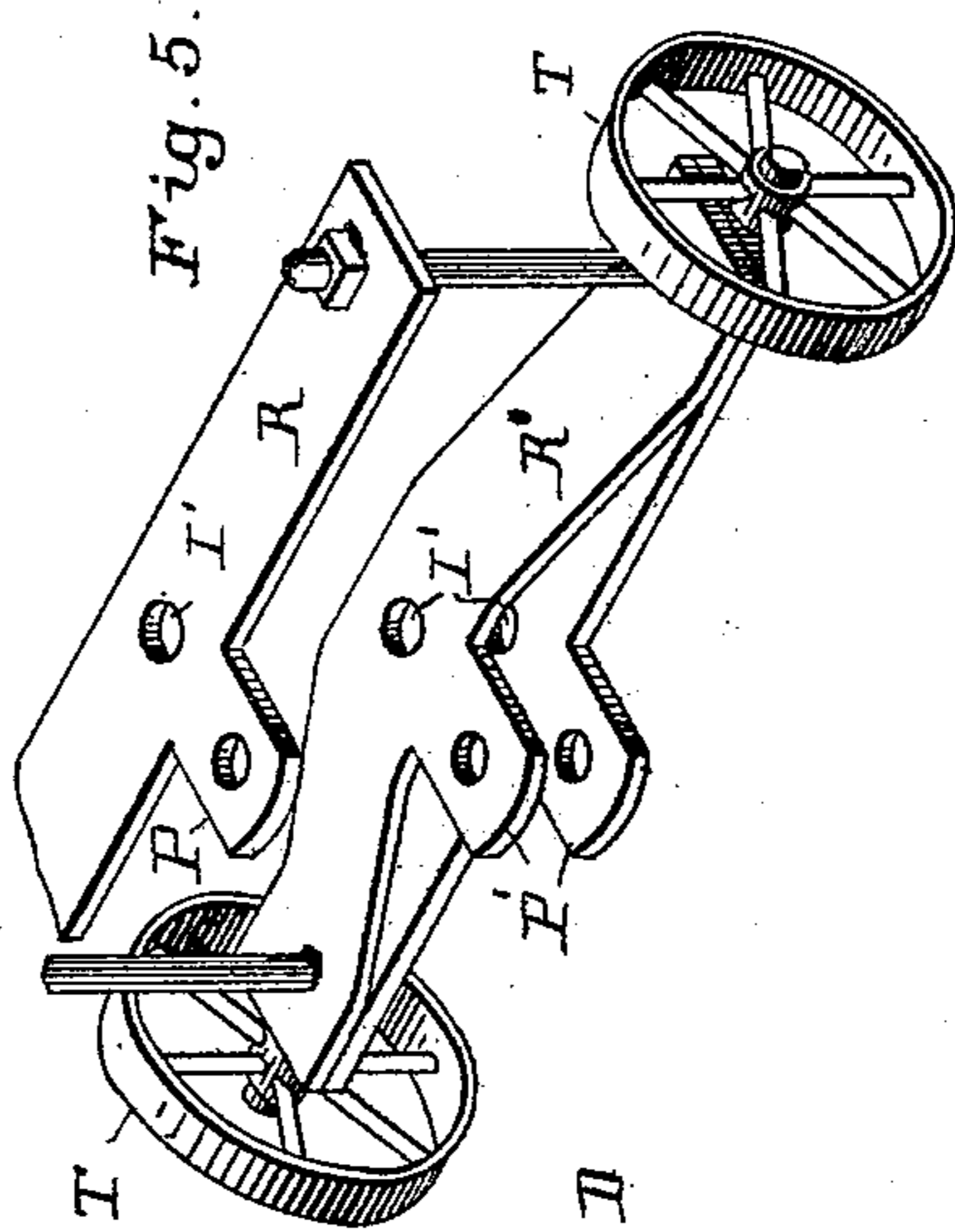
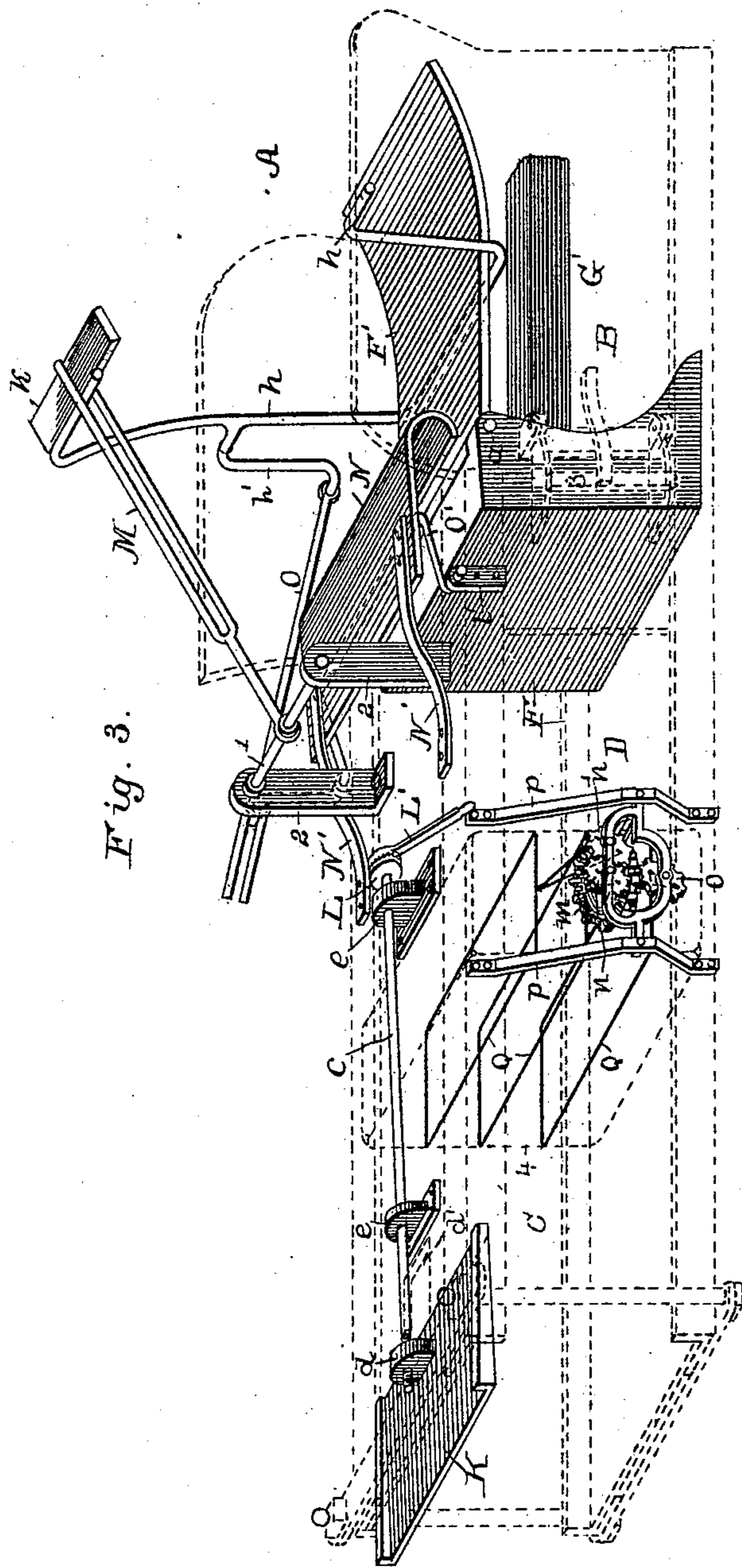
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UNITED STATES PATENT OFFICE.

JOHN A. HAMPTON, OF ROSEDALE, KANSAS, ASSIGNOR TO THE KANSAS CITY
HAY PRESS COMPANY, OF KANSAS CITY, MISSOURI.

BALING-PRESS.

SPECIFICATION forming part of Letters Patent No. 459,630, dated September 15, 1891.

Application filed January 14, 1889. Renewed July 25, 1891. Serial No. 400,669. (No model.)

To all whom it may concern:

Be it known that I, JOHN A. HAMPTON, of
Rosedale, Wyandotte county, Kansas, have in-
vented certain new and useful Improvements
5 in Baling-Presses, of which the following is a
full, clear, and exact description, reference
being had to the accompanying drawings,
forming a part hereof.

My invention relates particularly to that
10 class of presses known as "rebounding-plun-
ger;" and it consists in the devices and the
novel combination and arrangement of parts
hereinafter described, and pointed out in the
claims.

15 In the accompanying drawings, Figure 1
shows a longitudinal sectional view of the
press. Fig. 2 is a plan view of the press.
Fig. 3 is a detail view in perspective, the bal-
ing-chamber being shown in dotted lines.
20 Fig. 4 is a transverse section of the baling-
chamber, showing the tying attachment; and
Fig. 5 is a detail in perspective showing the
front supporting cross-pieces.

Referring to the drawings, in which simi-
25 lar letters and figures of reference indicate
corresponding parts in all the views, A indi-
cates a hopper adapted to receive the hay, and
it is properly arranged over one end B of the
baling-chamber C, said hopper and baling-
30 chamber being secured to a frame which is
suitably mounted upon wheels.

In the present instance I provide the front
axle with the cross-pieces R R', which are
35 formed with apertured projections P' P, to
which are secured, respectively, reach J and
connecting-rod S, said reach and rod being
connected with the baling-chamber and serv-
ing to rigidly hold it in place. Within the
front end B of the baling-chamber C is car-
40 ried a plunger F, which is pivotally connected
to the rear end of a pitman G.

The sweep H for operating the press is se-
cured to the upper end of the upright shaft
I, which passes through holes I' in the cross-
45 pieces R R'.

Loosely mounted on the shaft I are the arms
G', between the free ends of which the pit-
man G is secured. The trip-lever G'' is rig-
idly secured to the vertical shaft I between
50 the arms G', whereby when the sweep is op-
erated and said vertical shaft is rotated the
trip-lever swings between the parallel arms

G', and one end thereof impinges against
the end of the pitman, (which is pivoted ec-
centrically to form a rounded shoulder g, as 55
shown in Fig. 2,) thereby forcing the plunger
forward. The pitman is thrown back by the
spring b, secured to the reach J and pitman
G by pins b'.

To the rear upper edge of the plunger F is 60
pivoted the feeding-apron F', and passing un-
der the apron is a U-shaped bar or stirrup h,
one arm of which is extended and bent in-
ward, as shown.

Upon the outside of the upper wall of the 65
baling-chamber C are secured the upright
standards 2 2, in which is journaled the shaft
or rod 1, and rigidly secured to this rod is the
feed arm or rake M, slotted longitudinally to
receive the upwardly-extended and bent arm 70
of the stirrup h. Upon the free end of the
feed arm M is the cross-piece k, the purpose
of which will appear hereinafter. A short
distance to the rear of the uprights 2 2 are
fastened the springs N', which carry the 75
tucker or shield N. Said shield extends a
short distance into the hopper and is curved
downward at its end, as shown. Beneath the
tucker N a lifting-bar O' is journaled in lugs
or ears 1' 1', and one end of such bar is ex- 80
tended upward and bent outward, thus form-
ing a crank-arm. About midway of the ex-
tended arm h is an arm h', to which is loosely
connected the rod O, said rod being slotted at
its free end and engaging with the crank-arm 85
of the lifting-bar O'.

D indicates the bale-tying attachment,
which is secured upon one side of the deliver-
ing-chamber by means of the brackets p, and
said attachment consists of a main double 90
beveled gear m, which meshes with the small
bevel-gears o n, and the latter bevel-gear be-
ing also provided with teeth upon its periph-
ery, which engage with the teeth of the cog-
wheel n'. The double beveled gear m also 95
has teeth or projections formed upon its pe-
riphery, which are adapted to engage the bale
as it moves out of the delivering-chamber,
causing the wheel m to revolve and operate
the smaller wheels n, n', and o. 100

The wires Q for tying the bale 4 are intro-
duced from the opposite side of the deliver-
ing-chamber in the usual manner, and the
ends of the same are inserted in holes made

in the small cog-wheels. Along the center of the top of the delivering-chamber I place the apertured lugs *ee*, in which works a rod *c*, which at its forward end is provided with a ratchet-faced wheel *L*, adapted to engage with the ratchet-faced lever *L'*, loosely secured to the rod *c*. The opposite end of the rod *c* is provided with a thread and works in a threaded lug *d*, attached to the upper side of the compressing-plate *K*, working in inclined ways at the end of the delivering-chamber, said chamber being slotted, as at *d'*, to permit the movement of the lug *d*.

The operation of the machine is as follows:

The plunger being pressed forward by means of the sweep and pitman, the feeding apron and arm assume the positions shown in Fig. 1, and a sufficient quantity of hay is placed upon the apron. As the sweep is swung around, the end of the trip-lever impinges against the shoulder *g* of the pitman, and when said trip-lever reaches a position a little beyond the perpendicular to the pitman its extremity slips from the shoulder, and the plunger is drawn back by means of the coil-spring, the apron is thrown to a vertical position, (shown in dotted lines, Fig. 1,) and the feeding arm or rake carrying the cross-piece *k* is made to descend by the stirrup *h* pressing all the hay carried by the apron into the feeding-box. At the same time that the arm *h* forces the rake down it also throws the crank-arm back and operates the lifting-bar *o'*, thus lifting the tucker or shield *N*. The hay being in the box *B*, the sweep is thrown around and by means of the arms *G'* and pitman *G* the plunger is moved forward, compressing the hay in the baling-chamber. The apron and feed-arm have by this time assumed the positions shown in Fig. 1, and the tucker also has been forced down by the springs *N'*. Another quantity of hay is placed upon the apron and the operation repeated, the tucker *N* preventing any hay being drawn back with the plunger, and the retainers *3* prevent any forward movement of the bales. As the bales pass through the delivering-chamber wire ties are introduced, in the usual manner, through one side of the chamber and, surrounding the bales at different heights, have their ends inserted in the holes of the cog-wheels, and to prevent their being withdrawn the ends are bent, as best shown in Fig. 4. The bale now passing along will turn the gear *m*, which in turn will operate the small gears, thereby twisting the end of the wire ties *Q* in a much better manner than could be done by hand.

To compress the end bale in order to offer resistance sufficient to enable the bale which is in process of formation to be properly compressed, I provide a compressing-plate *K* at the end of the baling-chamber, which is adapted to be elevated or depressed to engage or

release the bale. Said depressing-plate is provided with inclined or cam flanges *k'*, whereby when drawn inward or forward the plate is depressed, and when moved outward or rearward it is elevated.

In lugs *ee* on the top of the baling-chamber is mounted a threaded rod *c*, which screws into a tapped lug *d* on the upper side of the plate, whereby when said rod is turned the plate is drawn inward or outward, and on one end of the rod is mounted an operating-lever *L'*, which has a clutch or ratchet-plate connection with the rod through the ratchet-head *L*.

Having thus described my invention, what I claim is—

1. In a baling-press, the combination, with a plunger, of a feeding-apron hinged thereto, and a pivoted feeding-arm operated by said apron, and connections between said apron and feeding-arm, substantially as shown and described.

2. In a baling-press, the combination, with a plunger, of a feeding-apron hinged thereto, a pivoted feeding arm or rake, the tucker or shield, the stirrup, and connecting devices for operating said rake and tucker, substantially as shown and described.

3. The combination, with a baling-chamber, of a compressing-plate provided with cam-flanges and carrying a tapped lug upon its upper surface, a screw-threaded rod engaging a threaded opening in said lug, and the lever engaging said rod to operate the same, substantially as shown and described.

4. In a baling-press, the combination, with a plunger having a pitman connected thereto, the pivoted link-arm connected to said pitman, a spring to retract the plunger, the sweep, and connecting devices between the sweep and the pitman, of the feed-apron hinged to the plunger, the pivoted feed arm or rake, the stirrup *h*, connected to said feed arm or rake and carrying an arm *h'*, the tucker *N*, the lifter-bar *O'* to engage and operate said tucker, and the connecting-rod *O* between the arm *h'* and said lifting-bar, substantially as specified.

5. In a baling-press, the combination, with the baling-chamber, of the plunger operating therein, the feeding-apron pivoted to said plunger, the slotted arm or rake *M*, the stirrup connecting the feeding-apron to the arm or rake and carrying a side arm *h'*, the tucker *N*, the lifter-arm *O'* to engage and operate said tucker, and the slotted connecting-bar *O* between the arm *h'* and the lifting-arm, substantially as specified.

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

JOHN A. HAMPTON.

Witnesses:

F. G. FISCHER,
A. A. HIGDON.