

(No Model.)

2 Sheets—Sheet 1.

A. H. BALLAGH.

BALING PRESS.

No. 277,439.

Patented May 15, 1883.

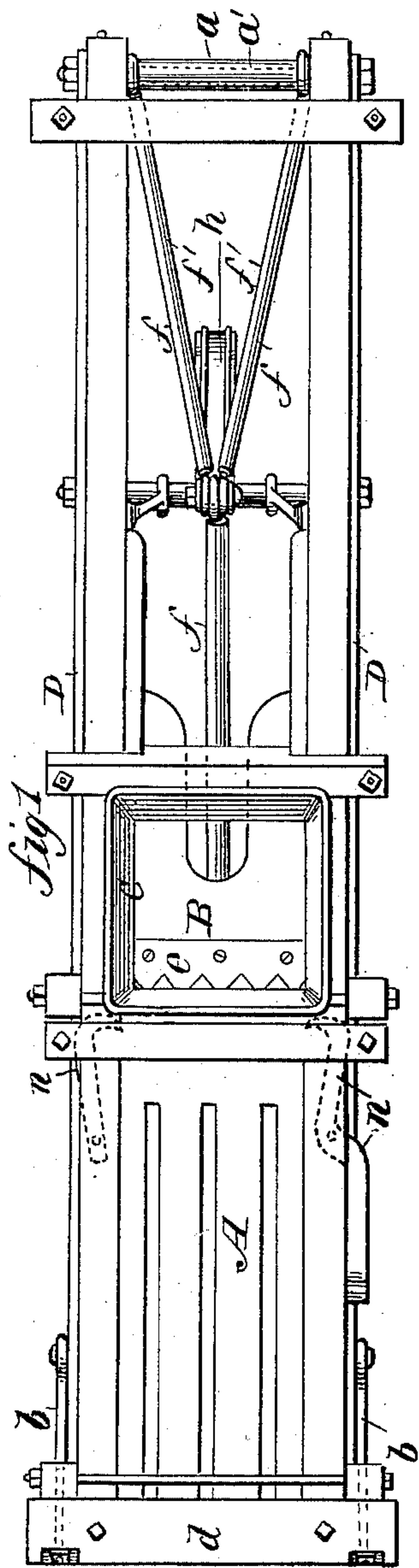
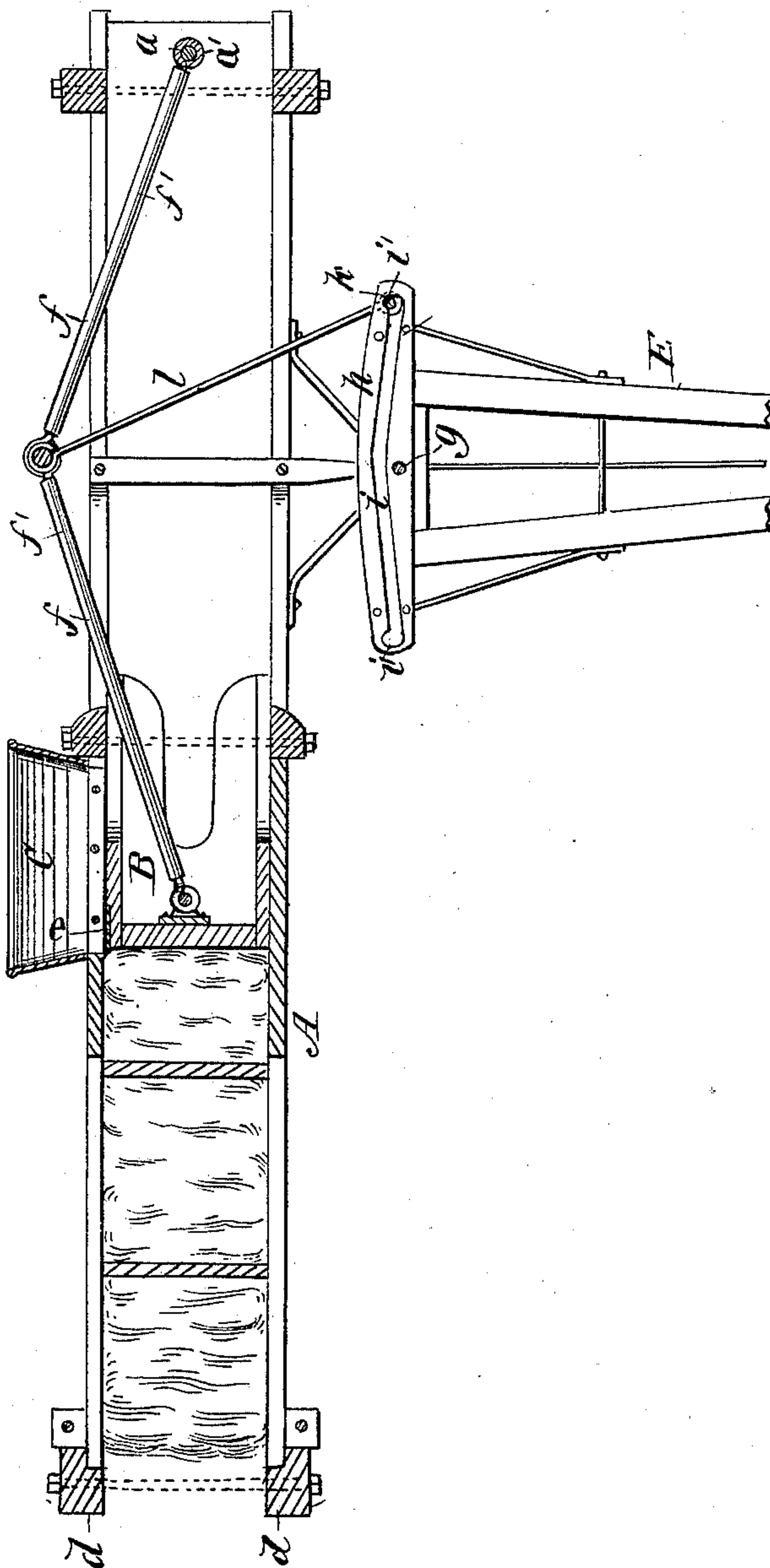


Fig. 2



WITNESSES:

J. D. Garfield
C. Sedgwick

INVENTOR:

A. H. Ballagh
BY *Munn & Co*
ATTORNEYS.

(No Model.)

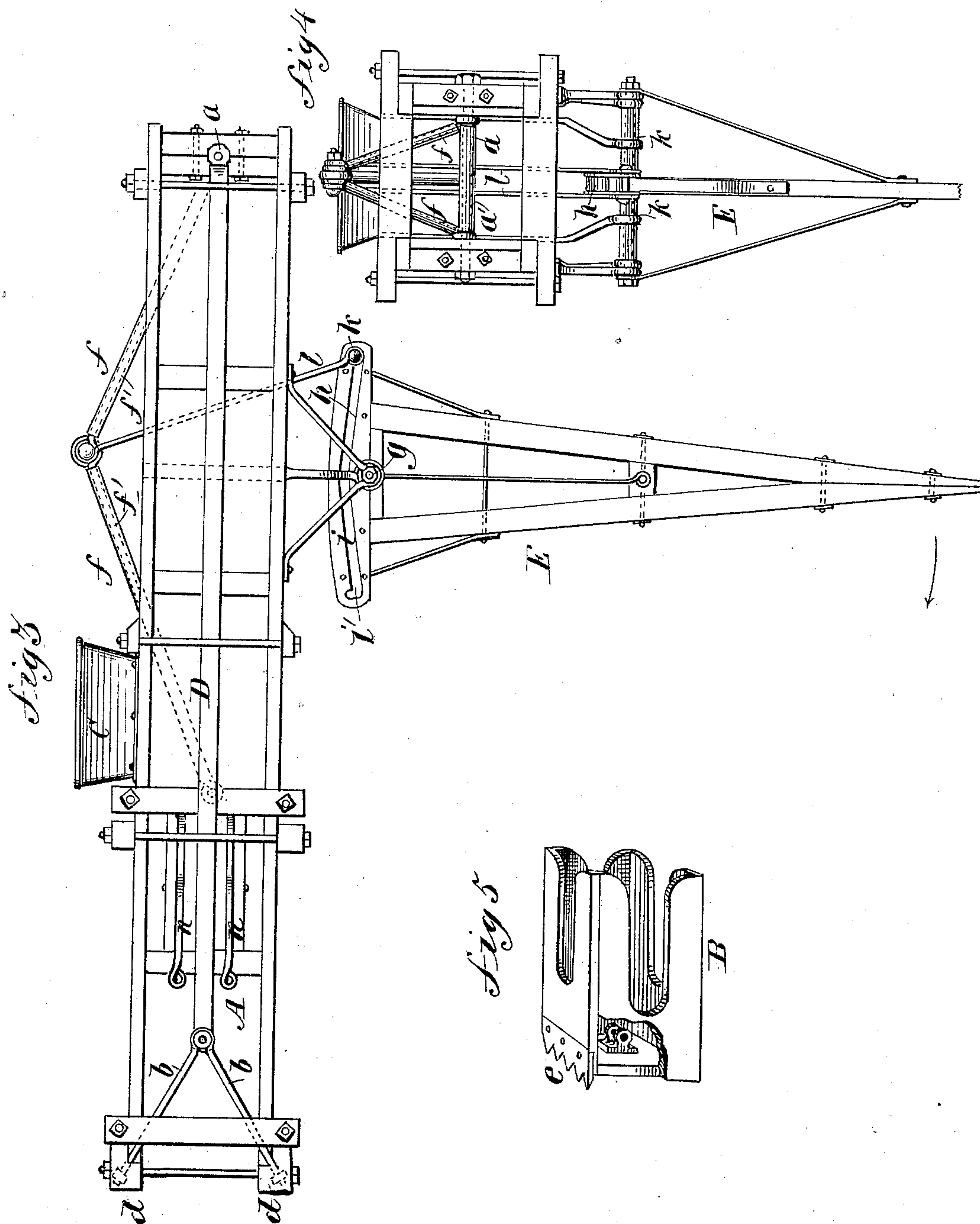
2 Sheets—Sheet 2.

A. H. BALLAGH.

BALING PRESS.

No. 277,439.

Patented May 15, 1883.



WITNESSES:

J. D. Garfield
L. Sedgwick

INVENTOR:

A. H. Ballagh

BY

Munn & Co
ATTORNEYS.

UNITED STATES PATENT OFFICE.

ANDREW H. BALLAGH, OF MACON, MISSOURI, ASSIGNOR OF ONE-THIRD TO
JAMES W. DUNNAWAY, OF SAME PLACE.

BALING-PRESS.

SPECIFICATION forming part of Letters Patent No. 277,439, dated May 15, 1883.

Application filed September 8, 1882. (No model.)

To all whom it may concern:

Be it known that I, ANDREW H. BALLAGH, of Macon, in the county of Macon and State of Missouri, have invented a new and useful Improvement in Baling-Presses, of which the following is a full, clear, and exact description.

My improvements relate to presses for baling hay and cotton.

The invention consists of certain novel features of the mechanism for operating the follower and in other parts of the press, as hereinafter described and claimed.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a side view of my improved press. Fig. 2 is a longitudinal section of the same. Fig. 3 is a plan view of the press. Fig. 4 is an end view. Fig. 5 is a perspective view, partly sectional, of the follower.

A is the baling-chamber. B is the follower. C is the feed-aperture, and D D are strain-bars extending from end to end of the press-frame. These bars are connected at one end to a cross-bar, *a*, and at the other end they are connected by forked braces *b b* with the cheek-pieces *d* at the mouth of the baling-chamber, whereby any strain upon the bars D tends to draw the cheek-pieces *d* together and resist the expansive force of the bale as it is discharged, and so that the bale is held with sufficient pressure to serve as a resistance to the bale that is being compressed.

The follower B is formed with a cutter, *e*, and to the follower is connected one bar, *f*, of a pair of toggle-bars, the other bar *f* being connected to the cross-bar *a* at the end of the press, and the two toggle-bars *f* are jointed together. In order to prevent lateral movement of the bars *f*, I prefer to form the portion connected with the cross-rod *a* of two bars, as shown in Figs. 1 and 4.

E is the operating-lever of the press, the same being a sweep of suitable length, pivoted at *g* to a suitable support at the side of the press. This sweep-lever is provided with a T-bar, *h*, at its inner end, in which is a double-inclined slot, *i*. In this slot is a slide-pin, *k*, which is connected by links *l l* with the joint-pin of the toggle-bars *f*.

In order to strengthen the toggle-bars *f*, they are covered by tubes or sleeves *f'*. The cross-rod *a* is strengthened by a sleeve, *a*, in the same manner. The ends of the slot *i* in the T end of the lever E are formed with side extensions, *i'*, for receiving the pin *k* and retaining the same until the bale is pressed. At the upper and under sides of the press-box are the hooks or holders *n*. These are pivoted so that they may move in and out of slots in the press-box, and are weighted to move outward by gravity, those at the upper side being formed to extend beyond the pivot, so as to obtain the action of the weight in the proper direction.

In the operation of the press, when the sweep E is turned in a direction parallel with the press-frame, the follower or beater B is thereby drawn past the opening, so that the material can be placed within the baling-chamber. Then, by turning the sweep E, the follower is moved outward and the material compressed. When the sweep reaches the reverse position, with its T end at right angles to the press-frame, the pin *k* is released by the strain from the recess at the end of the slot *i*, and the pin moves to the other end of the slot, thereby drawing back the follower to the position for feeding the material. The material is again compressed by reversing the movements of the sweep. When sufficient material has been compressed to form a bale, separating-boards are inserted, and the operation continued as before, the compressed bale serving as a resistance, and the baling-chamber is of such length that it will always contain one or more pressed bales. The bands and ties are applied to the completed bale while the next bale is being compressed.

In a continuous press, such as herein described, the elasticity of the compressed material will be sufficient to return the follower to its first position, as described; but in a chamber-press or a press wherein a single bale is formed, the lever E will have to be moved in one direction for returning the follower, and in that case it will be necessary that the recesses *i'* in the end of the slot *i* be formed at both sides, so as to catch the pin *k* and hold it for drawing the follower back.

The cutter *e* on the follower B is for the purpose of cutting off any material projecting into

the feed-opening that might bind the follower, and it also insures the formation of a smooth finish on the bale, and dispenses with the usual feed-door. This is an important feature of the
5 press.

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

1. In baling-presses, the longitudinal strain-
10 ing-bars D, provided with forks *b b*, connect-
ing to the cheek-pieces at the mouth of the
press, substantially as shown and described.

2. In baling-presses, the sweep E, having a
T end formed with the slot *i*, connected by
15 links *l* to the toggle-bars of the follower, sub-
stantially as described, for operation as set
forth.

3. In baling-presses, the combination of the
operating-links *l* and the pin *k* with the T-
ended sweep E, formed with the slot *i*, having
a recess, *i'*, at each end, substantially as shown 20
and described.

4. The combination of the tubes *f'* with the
jointed toggle-bars *f*, substantially as and for
the purpose set forth.

5. The sliding follower or beater B, provided 25
with a cutter, *e*, substantially as described.

ANDREW H. BALLAGH.

Witnesses:

J. E. THOMPSON,
T. A. H. SMITH.