

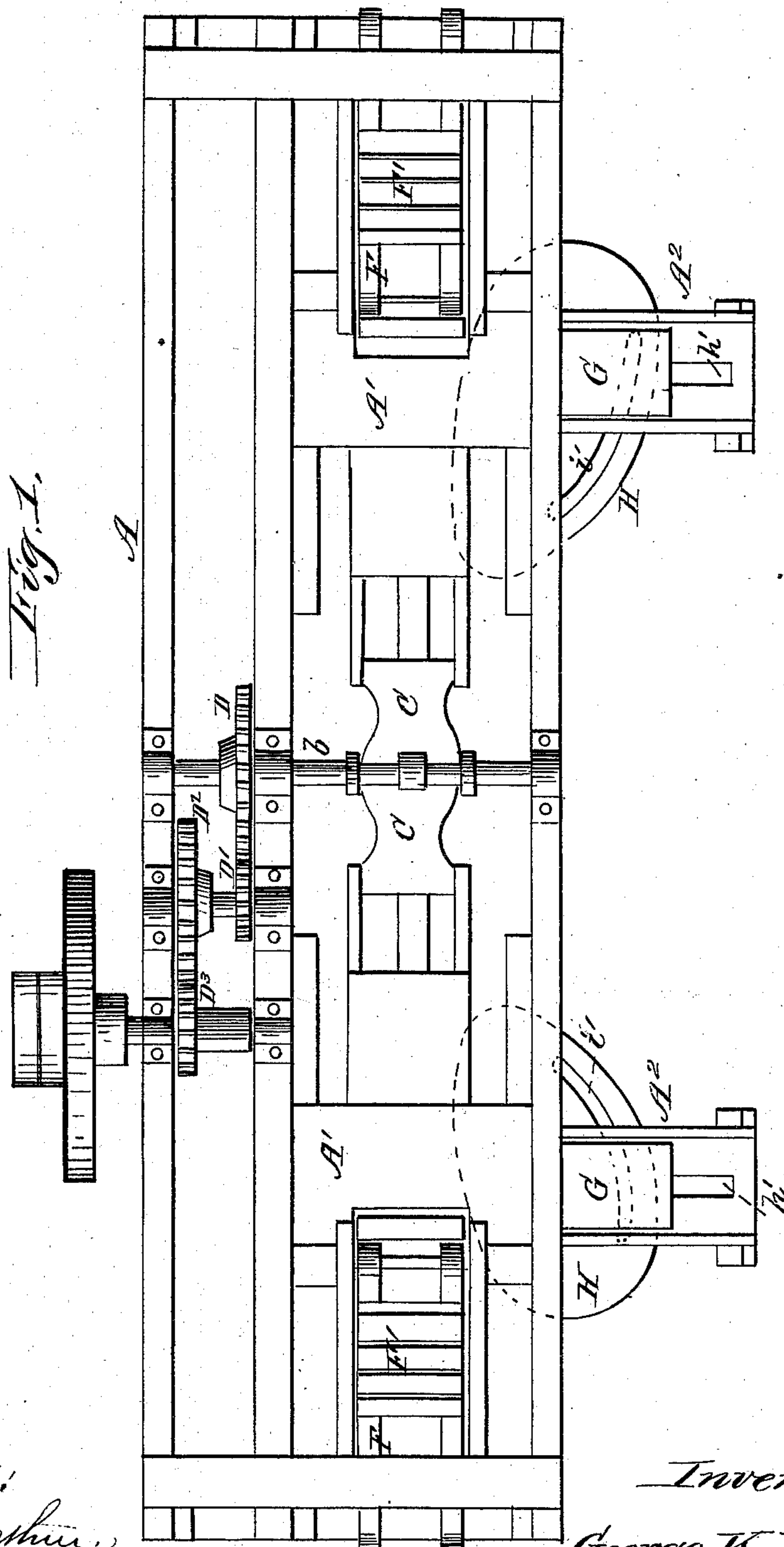
(No Model.)

2 Sheets—Sheet 1.

G. K. RICE.  
BALING PRESS.

No. 252,058.

Patented Jan. 10, 1882.



Witnesses:  
M. E. McArthur.  
John C. Kilby

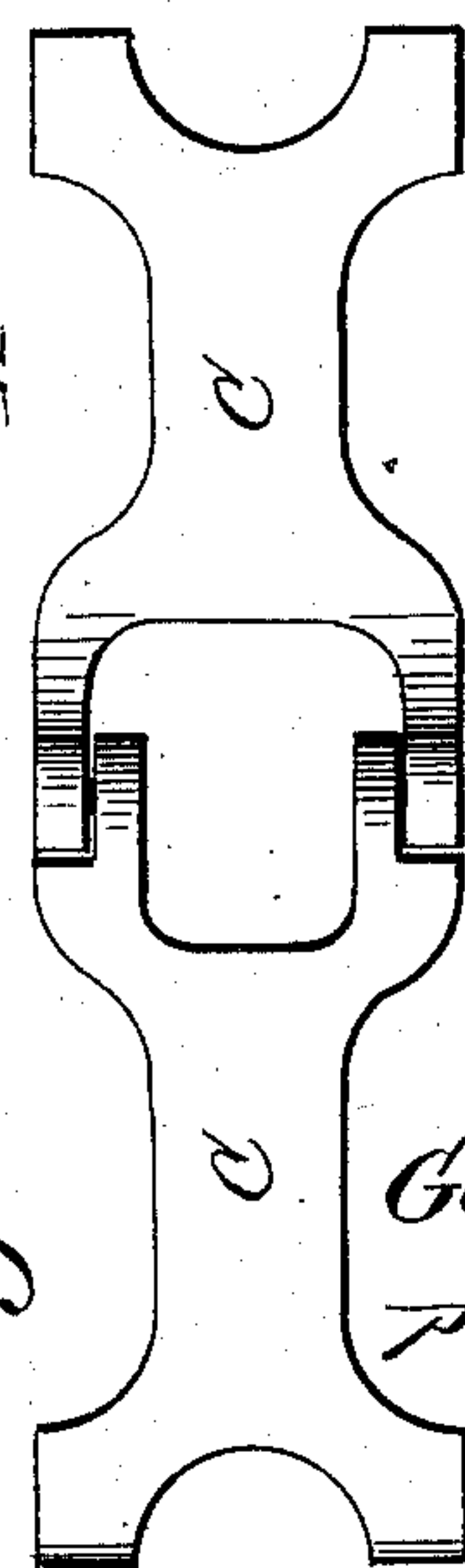
Inventor:  
George K. Rice.  
per Cha. H. Fowler,  
Attorney.

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Per. Cha. H. Fowler.  
Attorney.



# UNITED STATES PATENT OFFICE.

GEORGE K. RICE, OF BROOKFIELD, MISSOURI.

## BALING-PRESS.

SPECIFICATION forming part of Letters Patent No. 252,058, dated January 10, 1882.

Application filed November 10, 1881. (No model.)

*To all whom it may concern :*

Be it known that I, GEORGE KESTER RICE, a citizen of the United States, residing at Brookfield, in the county of Linn and State of Missouri, have invented certain new and useful Improvements in a Baling-Press; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawings is a top plan view of my invention. Fig. 2 is a longitudinal sectional elevation. Fig. 3 is a detailed view, partly in section, showing one of the plungers and its connections. Fig. 4 is a detail view, in perspective, of one of the plungers; and Fig. 5 is a plan view, in detail, of the forked levers.

The present invention has relation to certain new and useful improvements in that class of presses especially adapted for baling hay, though equally applicable for baling other materials of a similar nature—such as tow, cotton, and the like; and the object thereof is to provide means whereby the simultaneous baling and delivery of two bales at one operation is effected in an expeditious and efficient manner. These objects I attain by the mechanism substantially as shown in the drawings, and hereinafter described.

In the accompanying drawings, A represents an upright frame, of rectangular or other suitable shape, and of such width to conform to the intended width of the prospective bale, and having in its lower half two compartments or chambers, A', arranged with an intermediate space between and opposite each other, and provided with feeding troughs or chutes A<sup>2</sup> on one side of the press. The sides of these chambers or compartments are formed of spaced-apart slats, as is common, to permit of the passing through them of the tying wire or twine to secure the contents of the bale preparatory to delivery.

B B are plungers, preferably of the form shown in Fig. 4 and in section in Fig. 2, and adapted one to move upon trucks or rolls in each of the compartments A'. These plungers are toggle-jointed, as at a, the levers C being forked and so formed or constructed where they are jointed together as to admit of the arms of the levers being drawn completely together.

The levers C at their upper ends are connected to a shaft or axis, b, and to a double-slotted link, c, which in turn is connected to a crank-arm, c', which is secured to a shaft, d. This shaft d may be driven by a train of gearing, D D' D<sup>2</sup> D<sup>3</sup>, or any suitable arrangement of driving mechanism, fly-wheel, and other connections usually employed in driving machinery, two belt-wheels being employed, one working loose for the belt to run on when the press is to be stopped.

As the driving-gear to the press is of the usual kind employed in machinery, I do not desire to be understood as limiting my invention to the construction shown, as it may be variously modified without departing from the principle of my invention.

At the points of connection between the parts a and C c there are supplied flanged rollers e e', traveling upon their lesser diameters in horizontal slots E, which curve upwardly at their meeting points, as shown at f, and merge into a single upright or vertical slot, E', in the central boarded portion of the upright frame A. It will be observed that by this arrangement and construction of parts the plungers B by the motion of the gearing will receive a back-and-forth motion, the rolls e moving in the vertical slots E' toward the upper ends thereof, and the rolls e at the lower or horizontal portion of the slots, as shown at E, move up the curved portions thereof during the backward motion of the plungers preparatory to passing the hay or straw from the side feeding-troughs in front of the plungers. The latter operation having been performed and the plungers begun to move forward, the rolls e will descend, the slot E' and the rolls e' descend and travel in the horizontal slots E, carrying with them the parts C, c, and a and spreading apart the levers C, the action of which will be to bring the plungers forcibly into contact with the hay or contents of the compartments A', and thus press the hay into a compact form for baling. Each plunger being in operation and acting upon the contents of its chamber, it will thus be seen that two bales will be simultaneously formed and delivered from the press during or at one operation.

A parallel endless belt, F, is at each end of the frame A, and is arranged triangularly around three or more sets of pulleys, g, secured



to the frame, as shown in Fig. 2. These belts F carry three or more gates, F', or any number may be employed according to the length or size of the bale required, said gates being adapted to pass through the upper side of the compartments A' and pass into the same.

Each compartment or chamber A' is supplied with a similar arrangement of belts and gates, and it will be observed that with the forward or inner one of the gates standing in the compartment, as seen in Fig. 2, the mass of hay or straw being forced along into the same by the plunger will be backed by and be moved along with said gate, which, with the plunger, keeps the hay or straw compactly pressed until tied and delivered from the press. These gates move successively into position in the compartments A' as they are needed, the action of the hay or contents of the compartments being forced along by the plungers against one gate moving the succeeding gate into the position occupied by it, and at the proper moment. This latter movement is effected by spacing the gates the required intervals upon their belts.

The feeding troughs or chutes A<sup>2</sup> of the compartments or baling-chambers A' are arranged at one and the same side of the press, and have sliding or working plungers G, as shown in Fig. 1, the action of which is such as to enable them to feed the hay or straw into the compartments in front of the plungers B. To this end a stud or projection, h, passes down from the plunger G through a slot, h', in the bottom of the trough A<sup>2</sup>, and connects with a slide, h<sup>2</sup>, suitably supported under the press, and having a stud or pin, i, which works in a cam-groove, i', of the eccentrically-pivoted lever H, said lever also being connected by a link, j, to a pendant, k, depending from the plunger B or an arm, l, thereof.

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

1. In a baling-press, the combination, with

plungers adapted to work in chambers, of toggle-joints and levers connected to the driving-power and adapted to work in a vertical slot having diverging horizontal slots, substantially as and for the purpose set forth.

2. In a baling-press, the combination, with two plungers and endless belts and gates arranged as described, of operating mechanism, substantially as shown and described, whereby the simultaneous baling and delivery of two bales at one operation are accomplished.

3. In a baling press, the combination, with the plungers B, working in chambers A' and adapted for joint operation, they having a toggle-joint and lever connection with a common driving-point, and their adjuncts adapted to travel in a vertical slot, E', having horizontal branched slots E upon flanged rolls e e', to effect the simultaneous baling of the hay or straw in two bales at one operation and the delivery thereof from the press, substantially as set forth.

4. In a baling-press, the plungers B and chambers A, in combination with the feeding-plunger G and its trough or chamber A<sup>2</sup>, the cam-slotted lever H, connected by a link to plunger B, and the slide h<sup>2</sup>, connected to the plunger G and having a stud or pin, i, working in the slot on lever H, substantially as and for the purpose specified.

5. In a baling-press, the combination, with the frame A, having the chambers A' and the plunger B, of the endless belt F, having the gates F', of any desired number, adapted to successively enter the aforesaid chamber by the action of the incoming mass of hay or straw, substantially as and for the purpose set forth.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

GEORGE KESTER RICE.

Witnesses:

GEO. N. ELLIOTT,

JAMES A. ARBUTHNOT.