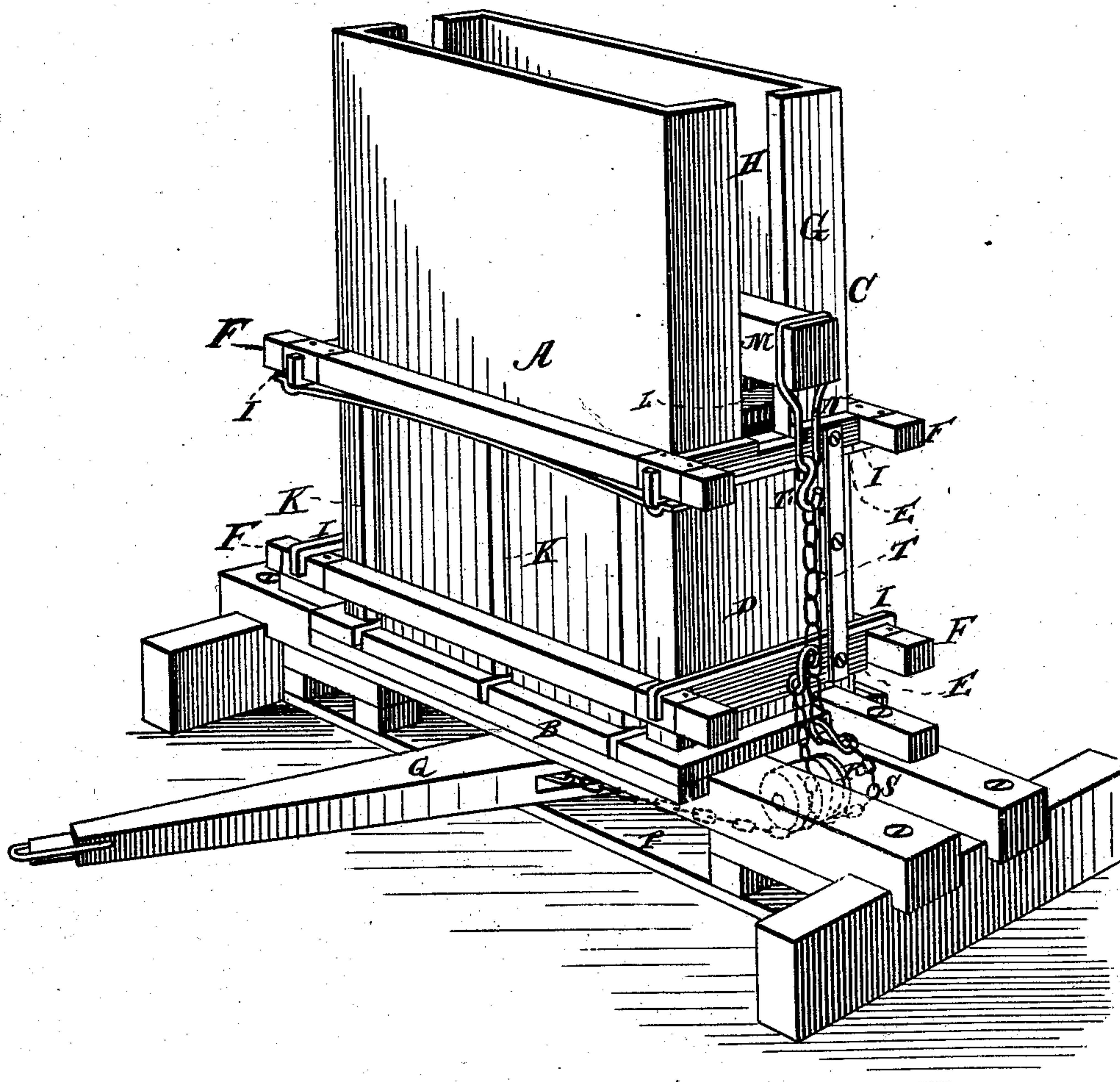


N. W. HERRING.  
Hay-Press.

**No. 224,907.**

**Patented Feb. 24, 1880.**

Fig. 1



**WITNESSES**

Robert Emmett  
Chas. G. Page

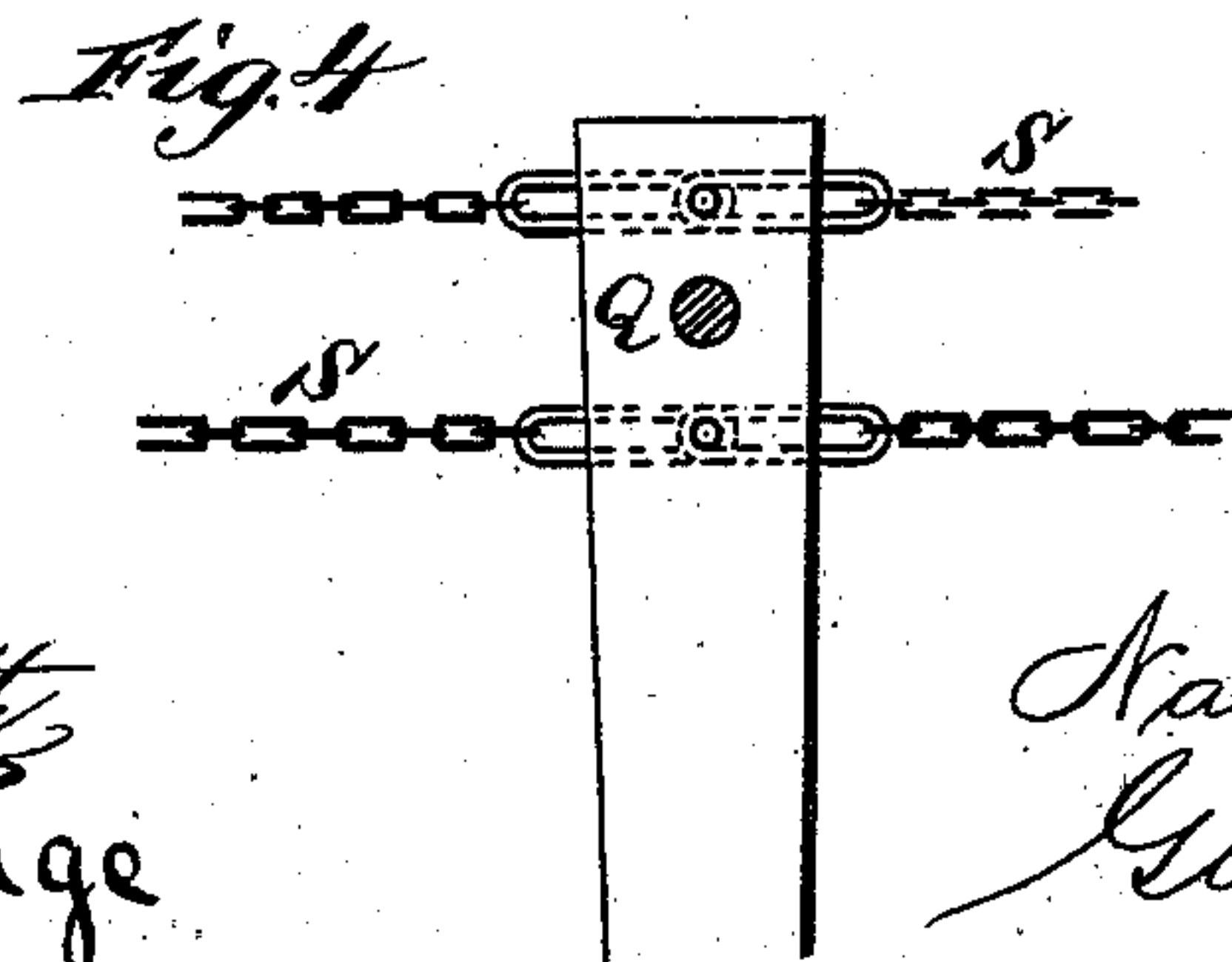
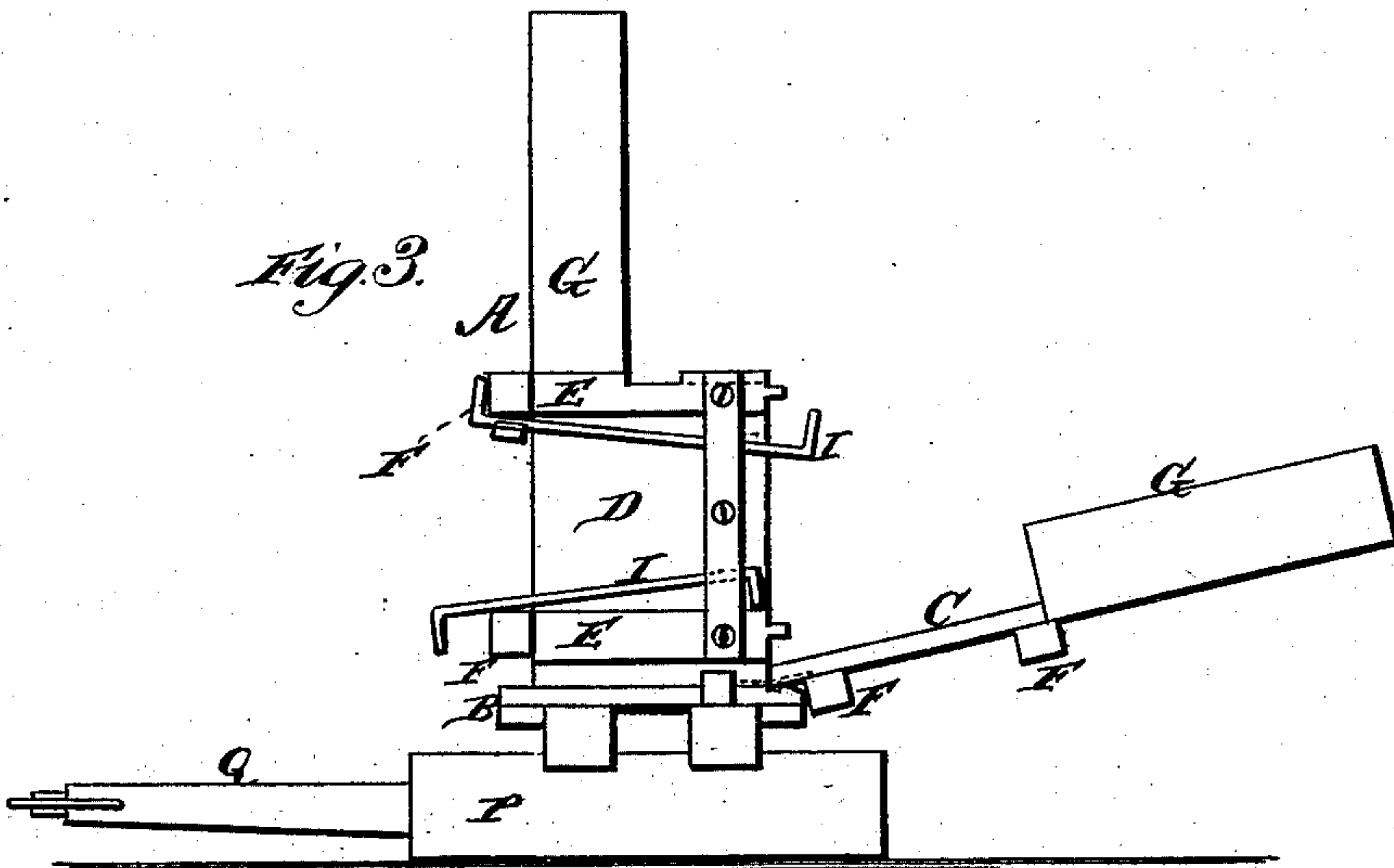
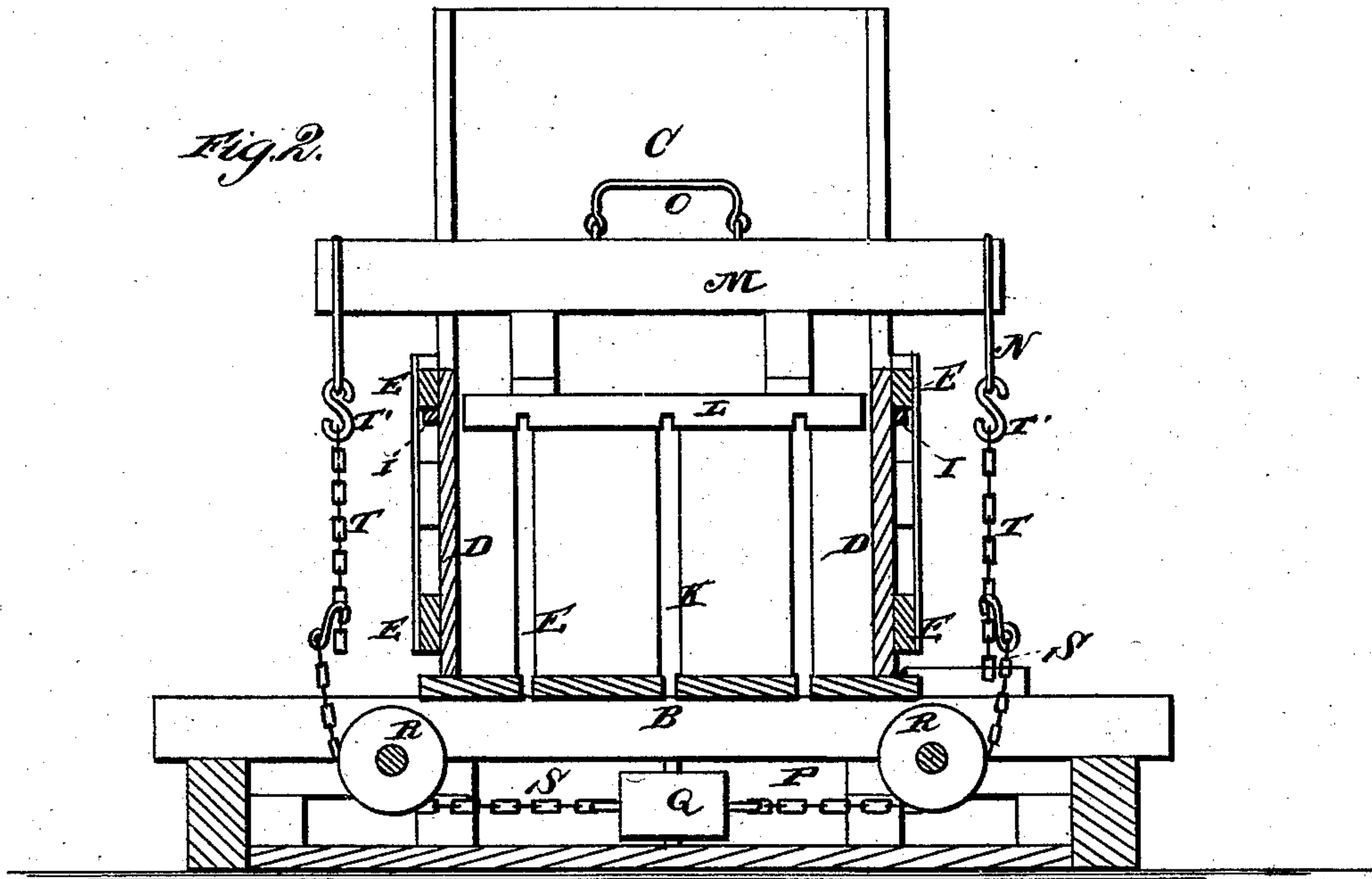
**INVENTOR**

Nathan W. Herring.  
Gilmore, Smith & Co.,  
ATTORNEYS

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WITNESSES

*Robert Smith*  
Chas. S. Page

INVENTOR

*Nathan W. Herring*  
*Gilmore Smith & Co.*  
ATTORNEYS



# UNITED STATES PATENT OFFICE.

NATHAN W. HERRING, OF CLARA, PENNSYLVANIA.

## HAY-PRESS.

SPECIFICATION forming part of Letters Patent No. 224,907, dated February 24, 1880.

Application filed January 9, 1880.

*To all whom it may concern:*

Be it known that I, NATHAN W. HERRING, of Clara, in the county of Potter and State of Pennsylvania, have invented certain new and useful Improvements in Hay-Presses; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation 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 representation of a perspective of my hay-press. Fig. 2 is a longitudinal sectional view of the same. Fig. 3 is a side-elevation view, and Fig. 4 is a detail view.

My invention relates to baling-presses for producing compact bales or bundles of hay, straw, and the like; and it consists in the construction and arrangement of parts, as herein fully set forth, and particularly pointed out in the claims.

In referring to the drawings, I will first describe the construction of the inclosing-sides and the bed of my improved press.

Let A designate one of its inclosing-sides, which is rigidly secured to the bed B, and which rises to the full height of the press. C designates the side which is opposed to the side A, and which is of a like height. This latter side C is, however, hinged to the bed B, so that when it is necessary to open the press the said hinged side may be swung down to a horizontal plane, certain locking devices being previously manipulated so as to unlock the side from its vertical or closed position.

The remaining sides are each composed of four sections, as follows: The lower section, D, of each side merely rests upon the bed B, and is maintained in position when the press is closed by means of bars E E, which are secured to said section and arranged so that their tenoned ends will fit into mortises formed in bars F F, a pair of which are secured to the side A, and a like pair to the hinged side C. The upper sections, G, of the sides just referred to consist of two narrow side boards for each side. One board of each pair is rigidly secured to the side A and the remaining board of said pair to the hinged side C, and the width and arrangement of these sectional

sides or boards are such that when the press is closed they will constitute upward continuations of the loose section D, with a slot or opening, H, between them, and extending from the top of the press down to the upper edge of the section.

The devices for locking and holding the parts above described together consist of hook-rods I, which hook over and bind upon the four bars F at each end of the press, as illustrated in Fig. 1.

The sides A C and the bed B are formed with slots K, which, when the hinged side is closed, constitute a series of continuous slots or openings, so that a separate bale-binding wire may be passed through a slot of the hinged side through the press to a corresponding slot in the rigid side, and then be allowed to drop down into the slot of the bed which is in line with these two slots or openings.

The platen L is connected, by means of suitable brackets, with a bar, M, and is made with channels corresponding in number to the slots of the bed.

The ends of the bar M, which extend beyond the platen, are adapted to work in the vertical side openings, H, and upon the extremities of this beam, which extend beyond the said openings, are arranged links N, for the purpose presently set forth.

The beam is provided with any suitable link, rings, or a bail, O, with which may be connected any suitable hoisting-rope for the purpose of raising the platen out of and away from the press.

The devices for drawing down the platen upon the hay or the like for the purpose of compressing it are as follows: Within a suitable bed-frame, P, upon which the press is mounted and secured, is pivoted a lever, Q, and also within this bed-frame are journaled two cast-iron or other suitable double-grooved rollers, R R, one being at each side of the fulcral bearing of the lever. To the lever are secured two pairs of chains, S, the chains of one set being connected with the lever at opposite sides of its pivot, and the chains of the remaining pair being connected in like manner, as shown in Fig. 4, where the connection consists of two links secured by bolts on opposite sides of the fulcrum, and to such links the ends of the chains are



secured. These chains pass around the rollers, and their links, fitting in the grooves thereof, serve to guide the chains in their travel over the same. As shown in Figs. 1 and 2, these chains are provided at their outer ends with hooks, which engage with the links of short chains T. These chains T are provided at their upper ends with hooks T', which, in turn, are hooked into the links upon the bar of the platen after the hay or the like has been placed in the press and the platen let down upon it. Before placing in the hay, however, the wires with which the bale is to be bound are passed through the slots of the hinged side into and through the slots of the opposing rigid side, and then let down so as to lie in the slots across the bed.

The operation is as follows: The hay is placed in the press and over the wires in the bed and the platen let down upon the hay and the chains hooked together, as just stated. The lever is now moved to one side, and in so doing one chain of each pair will be tightened up, while the remaining chains will be loosened. These loosened chains will then be hooked higher up upon the short chains T, and then, by reversing the movement of the lever, these chains will, in turn, be tightened, while the remaining chains will be loosened as the platen is brought down and the hay compressed. The same operation may be again gone through with, and so on, until the bale has acquired its required compactness. The platen is then raised after disconnecting it from the chains, and by inserting a hook through the slots the ends of the wires will be brought back over the bale and their ends then twisted together in front of the hinged side. The hooked rods are then knocked over or freed from their connection with the side bars, so as to liberate the hinged side. The lower side

sections, D, being now loose, will expand sufficiently to admit of a ready removal of the bale from the press, which can be done when the hinged side is brought down so as to constitute a platform along which the bale may be drawn or rolled out of the press.

In practice I propose placing a bracket upon the hinged side, so as to support it when it is let down for a platform.

The lever may be worked either with or without a wheel upon its end, as desired.

It will be noticed that the sections D constitute bearings or shoulders for the narrow sections or sides which are secured to the hinged side, which will give firmness and rigidity to the parts.

What I claim, and desire to secure by Letters Patent, is—

1. In a baling-press, the inclosing-sides, composed of the rigid side A and hinged side C, and the two remaining sides, composed of the lower sections, D, detachably secured in place, and the upper narrow sections, G, secured to the sides A and C, substantially as specified.

2. In a baling-press, the loose sides D, in combination with the hinged side C, the fixed side A, the sections of sides G, bars E and F, and rods I, substantially as specified.

3. The pivoted lever Q, with the two sets of chains connected therewith on opposite sides of its pivot, as shown, in combination with the short chains T, hooks T', links N, bar M, and platen, all constructed and arranged for operation as set forth.

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

NATHAN W. HERRING.

Witnesses:

THEO. MUNGEN,  
JAMES J. SHEEHY.