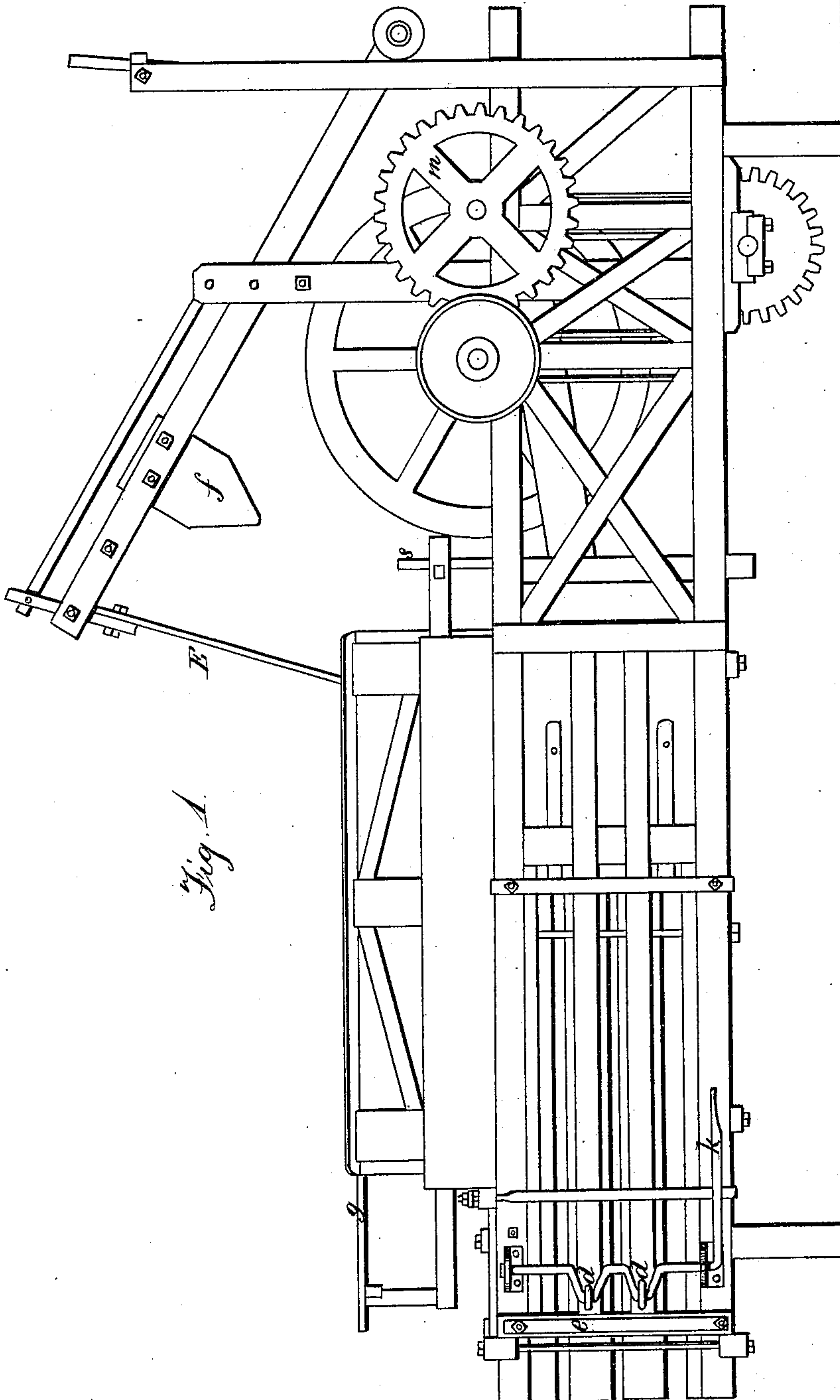


P. K. DEDERICK.
BALING PRESS.

No. 177,218.

Patented May 9, 1876.



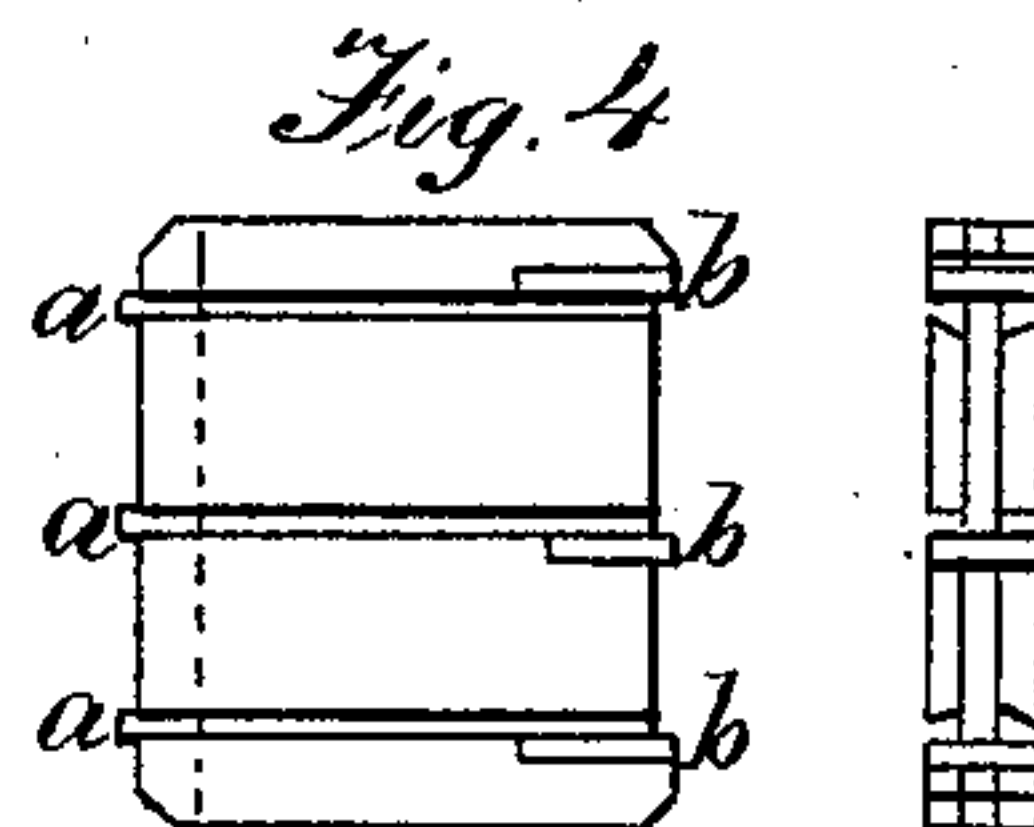
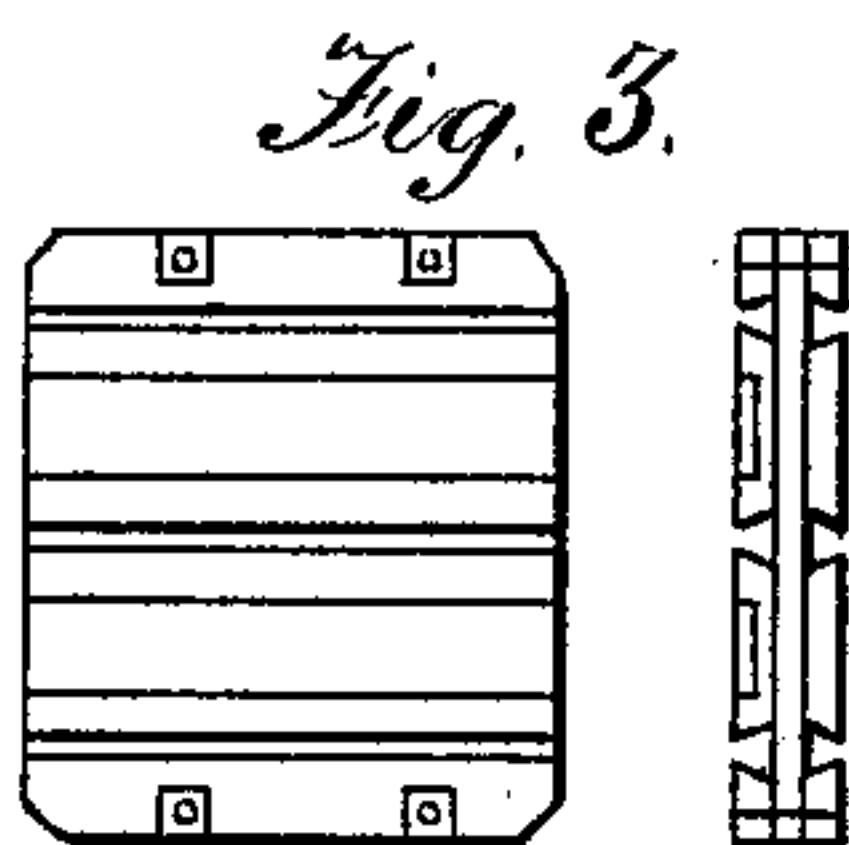
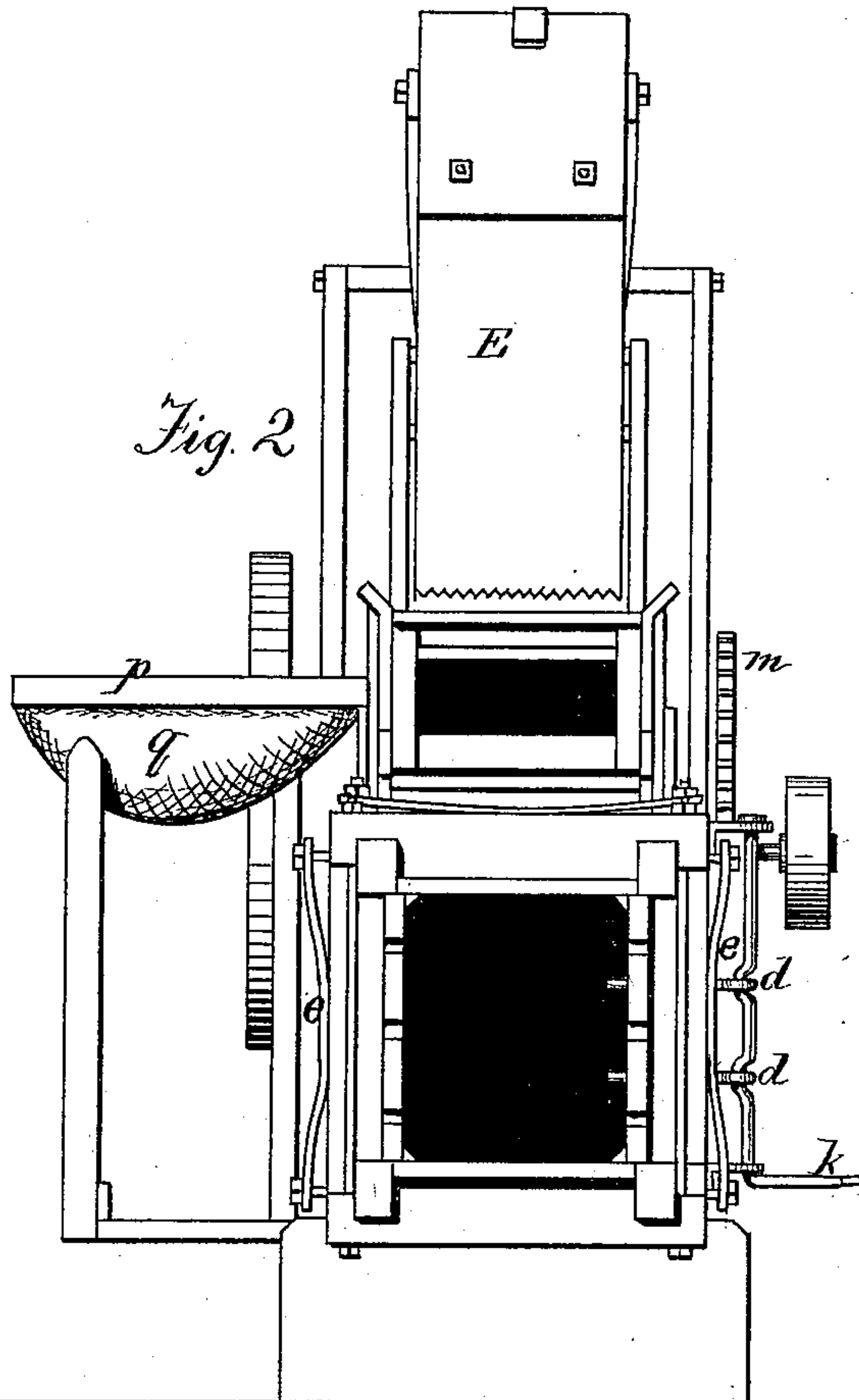
Witnesses;
Grenville Lewis
N. Church

Inventor
Peter K. Dederick
By Hill, Maworth & Spear
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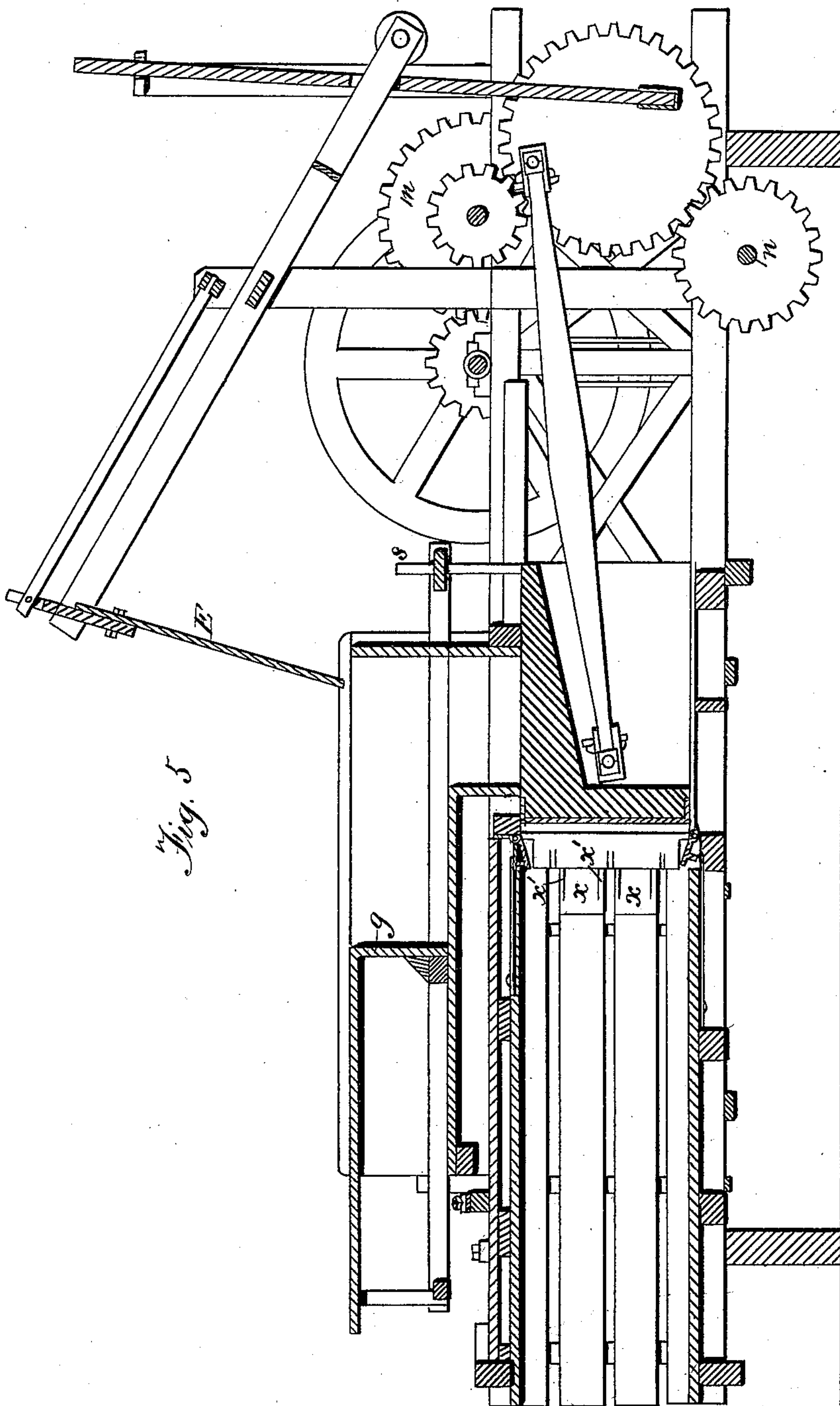


Fig. 5

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UNITED STATES PATENT OFFICE

PETER K. DEDERICK, OF ALBANY, NEW YORK.

IMPROVEMENT IN BALING-PRESSES.

Specification forming part of Letters Patent No. **177,218**, dated May 9, 1876; application filed April 8, 1876.

To all whom it may concern:

Be it known that I, PETER K. DEDERICK, of Albany, in the county of Albany and State of New York, have invented certain new and useful Improvements in Presses for Baling Hay and other Material; and I do hereby declare the following to be a full, clear, and accurate description of the same, reference being had to the accompanying drawings, forming part of this specification.

The invention set forth consists of certain improvements upon the baling-press described in Letters Patent hitherto granted me, more particularly in those numbered 170,997 and 170,998, dated December 14, 1875.

The first part consists in forming a follower with projections upon the ends thereof, so that by means of these projections the follower fills the press-box in its passage, and at the same time passes through the narrower part of the chamber, with the projections moving in the slots of the said chamber, and also through grooves in the retainers, which are hereafter more fully described.

The second relates to the rods and bands at the discharge end, which are made to pass through springs to regulate the pressure by an even amount of friction.

The third point in my improvement consists of the projections fixed upon the walking-beam, by which the beam is moved automatically to raise the beater out of the way of the traverser.

The fourth point consists of a shaft with gears meshing into the crank-wheels, with the coupling upon the shaft for connection with the lever horse-power.

The fifth point relates to a screen and scaffolding fixed to the side of the press-box, with an inclined guide underneath, to turn the dust and chaff from the workman.

The sixth point relates to a flanged guard placed next the hinged retainers, to prevent the material, after passing therefrom, pressing into the slots.

Figure 1 of the drawings represents a side view of my improved press. Fig. 2 is an end view, showing the barb, spring, and scaffolding. Figs. 3 and 4 are views of the follower. Fig. 5 is a longitudinal section of the press. Fig. 6 shows the flanged guard.

In making heavy bales in a perpetual press it is sometimes necessary to screw up the discharge end until it is a half inch, or thereabout, smaller than the other parts of the chamber. In such case it is necessary to make the follower smaller by so much, in order that it may pass through this diminished discharge end; but when the follower is made smaller in this way, in passing through the press-box loosely, as it must, the material under compression sometimes covers the ends of the grooves, and renders it difficult to find them for the purpose of passing the tie-wire through them. I have, therefore, placed upon the ends of the follower small studs of a size just sufficient to fill the press-box, so that the follower passes through with the studs in contact with the sides of the press-box. In order that these studs may easily pass the retainers, I groove the retainers to correspond with the studs on the ends of the follower; or the retainers may be made in sections corresponding with the irregular edge of the retainer. In passing through the chamber these studs on the end of the follower project into the slots, and thus readily indicate to the workmen where the follower is, making it quick and easy to pass the ties around the bale. It is not absolutely essential to groove the valves for these studs, as the valve may yield sufficiently to let the studs pass without grooves; but it is better to groove them. The projections on the follower may be made by inserting a strip of metal in the edge of the follower, the edge of the strip being cut away to leave the required projections, as shown at *a* in Fig. 4. These projections may also be formed by flat pieces of metal inserted horizontally in the follower, as shown at *b* in the same figure.

In order to prevent the material under compression from forcing itself into the grooves in the face of the follower, I make these grooves of dovetail form, as shown in Figs. 3 and 4. The barbs are shown more clearly in Fig. 2. They project through the side of the chamber near the discharge end, and may be connected with a crank-rod, which is operated by a lever, so that they can be moved simultaneously. This is not essential, as they may be connected and operated in any other convenient way. The barbs are marked *d d*

in the figure referred to. By operating the hand-lever *h* they may be forced into the bale and hold it in place, and are withdrawn by a reversed movement of the lever.

In Figs. 1 and 2 are shown the band and the tie-rods, with their spring-connections. The spring *e*, in this instance, is a flat semi-elliptical spring, placed with the convex side upon the cross-piece, and the ends of the tie-rods and band pass through the ends of the cross-piece, and up through the ends of the spring, where they are held adjustable by means of nuts. Through these nuts a regulated amount of pressure can be applied to the discharge end either by the band or by the tie-rods. This is useful only in pressing very fine material, and a spiral or any other form of spring may be used instead of those shown.

Referring to Fig. 1, a projection, *f*, may be seen upon the walking-beam. It is made with an inclined face, so that on the return of the plunger the bar *s*, connected to and moving with the rake *g*, may strike it when down, and raise the walking-beam, and with it the beater *E*, to prevent the beater from being crushed in case it should be entangled in the hay, so that the weight of the opposite end alone could not withdraw it. For greater strength and ease of working I have placed two pinions on the drive or belt shaft, and two gear-wheels, *m m*, connecting with and worked by them. I have also placed a shaft, *n*, beneath, with gears meshing into the crank-wheels, and with a coupling fixed on one end of the shaft, so that by use of tumbling-rods the press may be operated by lever horse-power; or, if desired, a beveled gear may be put in the place of the coupling, and the tumbling-rods extended forward on the machine. The screen and scaffolding are shown in Fig. 2. The scaffolding is of ordinary construction, fitted to hold the material which is to be fed to the machine. It is made open, so as to allow the dust and chaff to pass through as the hay or other material is pitched upon it into the press. Below this scaffolding I place an inclined guide to turn the chaff or dirt, and

discharge it upon one side, and prevent it from falling upon the back of the man working at the band underneath. A platform may be used without the slide; but it is not so comfortable for the workman below. The scaffolding is shown at *p* in Fig. 2, and the screen at *q* in the same figure. The metal strips are shown in Fig. 6 detached, and in Fig. 5 in place, and are marked *x*. They are formed with flanges *x' x'*, turned inward, and serve to prevent the hay or other material, after passing the hinged retainer, from expanding into the slots, by which the slots in the particular follower would be covered at the end, thus making it difficult to insert the wires. They are applied as shown in Fig. 5, the end having the flanges being placed next the hinged leaf.

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

1. The follower made with projections upon its ends, as set forth.
2. The retainers arranged in the sides of the box, and grooved to correspond with projections on the ends of the follower, as set forth.
3. The springs applied to the rods and band for the purpose of affording regulated pressure upon the discharge end, as set forth.
4. The projection fixed upon the walking-beam, in combination with the follower, by which it is moved, as and for the purposes described.
5. The shaft *n* and gear-wheels thereon, meshing into the crank-wheels, for connecting the mechanism to a horse-power, as and for the purposes set forth.
6. The flanged plates *x*, in combination with the retainer and slotted chamber, as set forth.
7. In combination with the baling-press, the scaffolding, with its screen and inclined guide, all arranged to operate as and for the purpose set forth.

PETER K. DEDERICK.

Witnesses:

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W. A. SKINKLE.