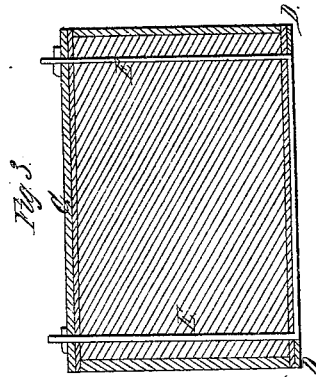
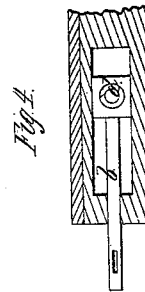
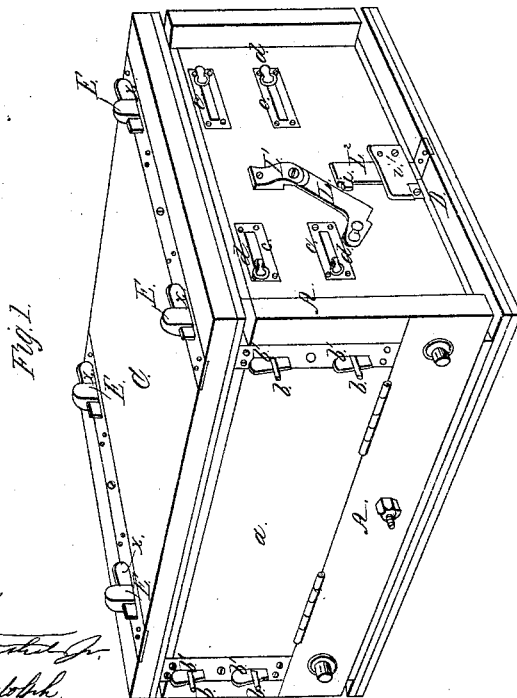
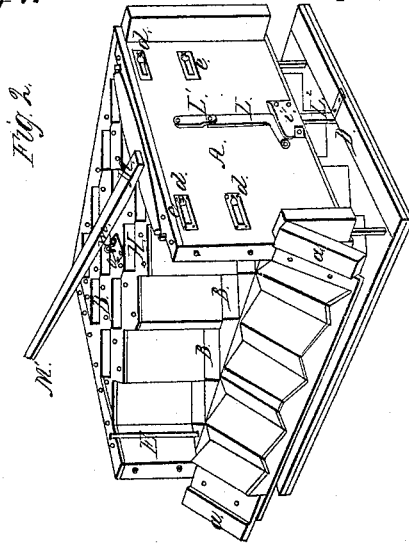


*I. H. Stone,*

*Tobacco Press.*

*N<sup>o</sup> 50,047.*

*Patented Sep. 19, 1865.*



*Witnesses;*  
*George B. Smith, Jr.*  
*Wm. Randolph.*

*Inventor,*  
*Isaac H. Stone.*

# UNITED STATES PATENT OFFICE.

ISAAC H. STONE, OF ST. LOUIS, MISSOURI.

## IMPROVEMENT IN BALING APPARATUS FOR PACKING TOBACCO.

Specification forming part of Letters Patent No. 50,047, dated September 19, 1865.

*To all whom it may concern:*

Be it known that I, ISAAC H. STONE, of the city and county of St. Louis, and State of Missouri, have invented an Improved Baling Apparatus for Packing Tobacco, Spices, Herbs, or any other Commodity that Requires Baling; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

Of the annexed drawings, Figure 1 is an elevation in perspective, showing one of the improved cases with all its parts closed up, the same as it would appear after the same had been removed from the press to which it had been subjected. Fig. 2 exhibits an elevation in perspective of the same case with the top removed, the central portion of the case raised up on the retaining-bars, which are attached to the bottom, and the side door through which the packed bales are removed from the case is thrown open. Fig. 3 is a sectional view, showing the retaining-bar and the manner in which it holds the case together. Fig. 4 is a detailed drawing, showing the joint-bolts which are used for holding the side doors in position during the process of packing.

To enable those skilled in the art to construct and use my apparatus, I will proceed to describe its construction and operation.

I construct a strong packing-case, A, the interior of which is subdivided into one or more rectangular compartments, B, each of which it is intended should be, in its horizontal section, the size of the required bale. The case A has a bottom, D, and a top, C, both of which may be securely fastened to it by means hereinafter described. The compartments B should be so arranged with reference to the inclosing-case A that a straight line drawn diagonally across one of them and bisecting it will be parallel to one of the sides of the case A. The object of this arrangement of the compartments is that the different partitions which separate them will, on being removed, separate at the angles, and thereby facilitate the removal of the packed material.

The bottom D and the top C are studded with plungers, which correspond in size, number, and plan with the several compartments, B, so that when the top and bottom are closed

up to the case A each of the compartments will be closed up by a plunger in either end of it, and between these two plungers the bale will be compressed.

To facilitate the removal of the pressed bale from the case, a portion of the side of the case A is made in the form of a door, *a*, and is hinged to the stationary portion of the same side. The door *a* is strongly secured to the balance of the case A during the process of pressing by means of the joint-bolts *b*. These joint-bolts (clearly shown in Fig. 4) have a square nut or head, into which the bolt *b* is screwed, and into which is also screwed the knob *d*, which protrudes from the side of the case, for the purpose of moving the bolt *b* in and out. A suitable groove must be made in the case to allow the nut to work backward and forward sufficiently to admit the key *b'* into the mortise in the outer end of the bolt outside of the door *a*, or to withdraw the end of the bolt clear through the door in its retrograde motion. The plate *c* is screwed over the nut of the bolt *b* to keep it in place, and the knob *d* works in a slot left in the plate for that purpose. When the bale has been pressed, and it is desired to open the case, the operation of doing so is quickly performed by taking out the keys *b'* and withdrawing the bolts *b*, so that the door *a* may be permitted to turn on its hinges. The inner side of the door *a* is supposed to form the partitions for the first tier of compartments on that side, so that when one door is opened it discloses the first tier of pressed bales. The other partitions are constructed so they can be easily withdrawn after the first tier of bales has been removed.

Before the bales can be removed it will be necessary to take off the top C, and all that it is necessary to do to free it from its fastenings is to withdraw the keys *x* from the retaining-bars E, when it can easily be lifted off.

The retaining-bars E, which are clearly shown in Fig. 3, are made in the form of a staple. A single bar of iron, with a mortise made in both of its ends for the keys *x*, is bent around so as to form a complete strap for the case. The two forked ends of this strap are inserted into mortises made through the case for that purpose, and the ends into which the keys *x* are to be inserted will extend up above the top of the case when it is in its closed po-

sition. Two of the ends of these retaining-bars will have grooves cut on top of them, for the purpose hereinafter described.

The case A will be provided with two or more jointed metallic props, L, for the purpose of holding the main body of the case up off of the bottom D during the process of filling the different compartments. The props L will be hinged to the plates L', and directly beneath these, but fastened to the bottom D, is the stationary post L''. When the case is let down on its bottom D the prop L will hang down by the side of the post L''; but when it is raised up the prop L, by the action of its own gravity, will drop on top of the post L'' and hold the case up until it is filled. The hook i on the post L'' will strike against the plate i' and act as a gage to prevent raising the case too high.

When it is desired to use this apparatus the operator will take the lever M, (after having taken off the top C,) place the two journals on the T end of it into the grooves that have been left on top of two of the retaining-bars E for that purpose, then hook the hook m into the ring o, and, taking hold of the lever at M', raise the main body of the case as high as the hooks i will let it go, at which point the props L will drop on top of the post L'' and hold it up. The material to be pressed will then be filled into the several compartments B, and when they are all full the top C will be put on. To facilitate all the various plungers on this top entering their several compartments readily, I prefer to make the ends of the retaining-bars high enough to enter first, in which case they will guide the top down to its proper position. As soon as the case is filled and the top adjusted it will be placed under any ordinary press where it can receive the requisite pressure. The props L will then be pulled off from the post L'', and the material will receive equal pressure from both ends. After the material has been compressed so much that the bottom D and top C are brought close up to the center portion of the case A, the whole case can be securely fastened together by inserting the keys x into the mortises in the upper ends of the retaining-bars E. The case, with its contents, can then be removed from the press, and remain closed until the material

shall have lost its elasticity, when the bales can be removed from the press and enveloped in their appropriate packages. The great benefit derived from thus fastening up the case is that it can be removed from the press immediately after the pressing operation has been performed, and the press will be left free to be used again. After the case has remained in its closed position long enough to impart form to the bales the keys x will be withdrawn and the top C taken off. The keys b' will then be withdrawn and the bolts b slid back in their grooves so the door a can be thrown open, so that the first tier of bales can be removed. In all former cases of this kind it has been necessary to take off the whole side of the case to get at the packed bales, and this could only be accomplished by taking out long bolts which passed clear through the case. A great saving of time is therefore effected by having a sufficient portion of the side of the case made in the form of a door, as at a, and in order to admit of this door being opened the bolts b, that retain it in position, must be withdrawn. The interior partitions of this case are divided into two parts, as well as the side of the case, and the width of the upper portion of each partition is the same as the width of the door a. I am well aware that molds or cases for pressing tobacco and other like substances have been designed by others so arranged that the several molds will part at the corners; also, that the said cases have been constructed so the sides of them could be taken off. Hence these are no inventions of mine; but

What I do claim is—

1. The retaining-bars E and keys x, for the purpose of holding the case together so it can be removed from the press as soon as the pressing operation is performed.
2. The employment of the T-lever M and the hinged props L, in connection with the post L'' and hooks i and plate i', as and for the purpose set forth.
3. The joint-bolts b, when constructed and used as and for the purpose herein described.

ISAAC H. STONE.

Witnesses:

M. RANDOLPH,  
GEORGE P. HERTHEL, Jr.