

(No Model.)

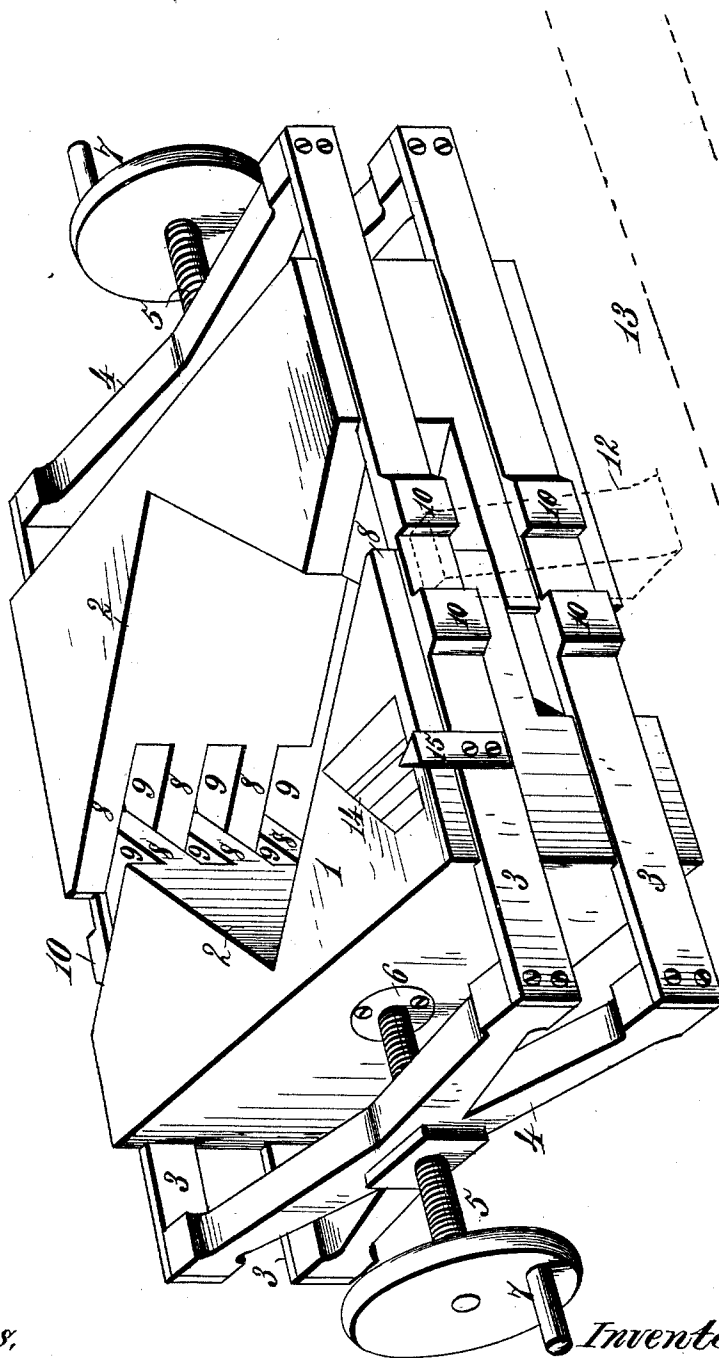
2 Sheets—Sheet 1.

W. P. WATT.
TOBACCO BOX CLAMP.

No. 468,272.

Patented Feb. 2, 1892.

Fig. 1.



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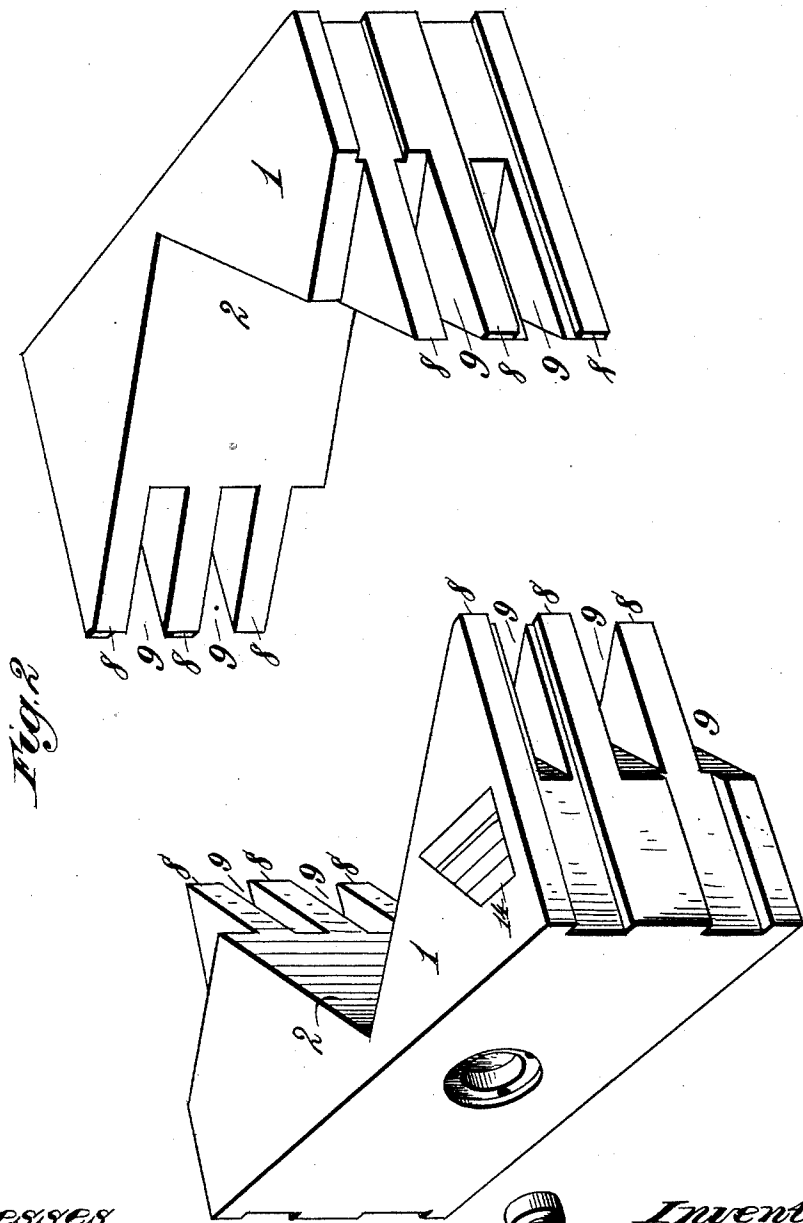
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UNITED STATES PATENT OFFICE.

WILLIAM P. WATT, OF WINSTON, NORTH CAROLINA.

TOBACCO-BOX CLAMP.

SPECIFICATION forming part of Letters Patent No. 468,272, dated February 2, 1892.

Application filed August 20, 1891. Serial No. 403,224. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM P. WATT, a citizen of the United States, residing at Winston, in the county of Forsythe and State of North Carolina, have invented new and useful Improvements in Tobacco-Box Clamps, of which the following is a specification.

In boxing or packing tobacco it is usual to employ a box-clamp composed of two square clamp-heads formed with angular or V-shaped recesses in their adjacent sides to create a space for the square box into which the tobacco is to be pressed in such manner that the sides of the box are held by the clamp-heads and prevented from spreading when the tobacco is subjected to the action of the tobacco-press for pressing the tobacco into the box. In prior constructions of this character the clamp-heads are not well adapted to accommodate boxes of varying size, in that if separated to receive a box of greater capacity than the size for which the clamp-heads were designed the ends of the box-sides are unsupported and will spread laterally during the pressing operation. This objection renders it necessary to provide different clamp-heads for boxes of different size or capacity, and this is not only expensive, but involves considerable trouble and labor.

The objects of my invention are to improve tobacco-box clamps, to provide means for supporting and guiding the clamp-heads, and to provide novel means for rendering the clamp-heads susceptible of adjustment to receive boxes of varying size or capacity while preserving the continuity of the walls of the box chamber or space, whereby the sides of boxes varying in dimensions will be continuously supported and pressed throughout their length, and a box-clamp is produced which can be practically used for pressing or packing tobacco into boxes which vary considerably in size and capacity.

To accomplish these objects my invention involves the features of construction and the combination or arrangement of devices hereinafter described and claimed, reference being made to the accompanying drawings, in which—

Figure 1 is a perspective view of my im-

proved tobacco-box clamp, and Fig. 2 is a detail perspective view of the two clamp-heads.

In order to enable those skilled in the art to make and use my invention, I will now describe the same in detail, referring to the drawings, wherein—

The numerals 1 indicate two clamp-heads composed of squared blocks having their adjacent sides formed with angular or V-shaped recesses 2, so that when the two clamp-heads are relatively arranged, as shown, a square box chamber or space is provided to receive the box into which the tobacco is to be pressed or packed.

The ends of the clamp-heads are each provided with longitudinal grooves engaging the horizontal side bars 3 of a surrounding frame in which the clamp-heads are adapted to move to and from each other. The extremities of the side bars 3 are rigidly connected by cross-heads 4, through each of which passes a screw-shaft 5, loosely connected to the clamp-heads and provided at their outer ends with suitable hand-wheels or cranks 7, so that by rotating the screws the clamp-heads are moved toward or from each other, and in such movement are supported and guided by the side bars of the surrounding frame. The screw-shafts may be loosely connected with the clamp-heads by providing their inner extremities with collars held in engagement with the clamp-heads by disks 6, which are screwed in position on the clamp-heads, so that the screw-shafts 5 can rotate independent of the clamp-heads.

The ends of the clamp-heads are each formed with a series of tongues 8 and grooves 9, and the tongues of one clamp-head enter the grooves of the opposite clamp-head in such manner that the two clamp-heads can be separated from each other to a considerable extent, while the tongues 8 preserve the continuity of the internal surfaces formed by the angular recesses 2. The outer edges of the tongues constitute continuations of the end surfaces of the clamp-heads, while the inner surfaces of such tongues constitute rectilinear continuations of the surfaces of the angular recesses, and therefore the sides of boxes of varying dimensions will be supported

and pressed throughout their length, and thereby prevented from spreading at the end portions when the tobacco introduced into the box is subjected to the action of the tobacco-press.

The side bars of the surrounding frame are provided with laterally-projecting lugs 10 to form seats for receiving uprights or standards 12, rising from the bed-plate 13 of a tobacco-press, as indicated by dotted lines in Fig. 1. The uprights or standards by engaging seats in the side bars serve to accurately center the surrounding frame with relation to the platen or pressure-plate of the tobacco-press.

For the purpose of indicating the proper position of the clamp-heads relatively to the center of the platen or pressure-plate I provide the rear clamp-head with a scale 14 to operate in conjunction with an index 15, fixed to one of the side bars of the surrounding frame. The clamp is intended to be set by turning the rear screw-shaft until the proper graduation of the scale coincides with the index, so that the box can always be placed directly under the center line of pressure. The front clamp-head is adjusted by its operating-screw until the box chamber or space is of a size sufficient to receive the desired tobacco-box, after which the front clamp-head is tightened up for the purpose of clamping the tobacco-box in position. The box is then supplied with tobacco, and pressure is applied in the usual manner to press or pack the tobacco into the box.

The uprights or standards by engaging the seats formed by the lugs on the surrounding frame effectually prevent the latter from horizontal movement, and since the clamp-heads are connected with the surrounding frame by means of the screw-shafts it will be evident that the clamp-heads cannot accidentally move out of proper position.

The tightening and loosening of the clamp-heads are effected by operating the screw of the front clamp-head, the screw of the rear clamp-head being for the purpose of regulating the rear clamp-head, so as to place the center of the tobacco-box in line with the standards or uprights 12 in such manner that the center of the tobacco-box will always be in coincidence with the center line of the press-platen or pressure-plate.

By constructing the angularly-recessed clamp-heads with interlocking tongues or grooves I am enabled to move the clamp-heads to a considerable extent in a direction away from each other for the purpose of receiving a tobacco-box of large size; but this adjustment of the clamp-heads does not leave the sides of the box unsupported at the ends, because the tongue-and-groove connections preserve the continuity of the box-sustaining walls of the chamber or space produced by the angular recesses. In this respect my invention differs materially and substantially from all prior tobacco-box clamps, and I am

enabled by the employment of a single clamp to clamp boxes which vary largely in size. The construction described is also important and useful, in that it enables boxes to be put into a perfectly square form if their sides have become warped.

Having thus described my invention, what I claim is—

1. A tobacco-box clamp consisting of two angularly-recessed clamp-heads formed with interlocking tongues and grooves to preserve the continuity of the box-sustaining walls of the box chamber or space produced by the angular recesses, a suitable frame comprising parallel side bars between which one of the clamp-heads is guided, and a screw passing through a part of the frame and engaging the movable clamp-head for adjusting it toward and from the other clamp-head, substantially as described.

2. The combination, in a tobacco-box clamp, of two angularly-recessed clamp-heads having interlocking tongues and grooves at their end portions, a surrounding frame in which the clamp-heads are guided, and means for adjusting one clamp-head toward and from the other, substantially as described.

3. A tobacco-box clamp consisting of a frame having means for holding it in a stationary position on the bed-plate of a press, and two angularly-recessed clamp-heads movable in and guided by the stationary frame and formed with interlocking tongues and grooves, and the tongues having their inner edges coincident with the rectilinear surfaces of the angular recesses for preserving the continuity of the box-sustaining walls of the box chamber or space produced by the angular recesses, substantially as described.

4. The combination of a surrounding frame having lugs to provide seats for receiving uprights or standards on the bed-plate of the press, a pair of angularly-recessed clamp-heads engaging the side bars of the surrounding frame and formed with interlocking tongues and grooves to preserve the continuity of the box-sustaining walls of the box chamber or space produced by the angular recesses, and screws engaging the ends of the surrounding frame and connected with the clamp-heads, substantially as described.

5. A tobacco-box clamp consisting of a surrounding frame, two angularly-recessed clamp-heads formed with interlocking tongues and grooves and parallel sides guided by the frame, and means for independently moving the heads, substantially as described.

In testimony whereof I have hereunto set my hand and affixed my seal in presence of two subscribing witnesses.

WILLIAM P. WATT. [L. s.]

Witnesses:

J. B. FIELD,

A. R. BENNETT.