

(No Model.)

H. RAKOV.
EXCAVATING TOOL.

No. 603,858.

Patented May 10, 1898.

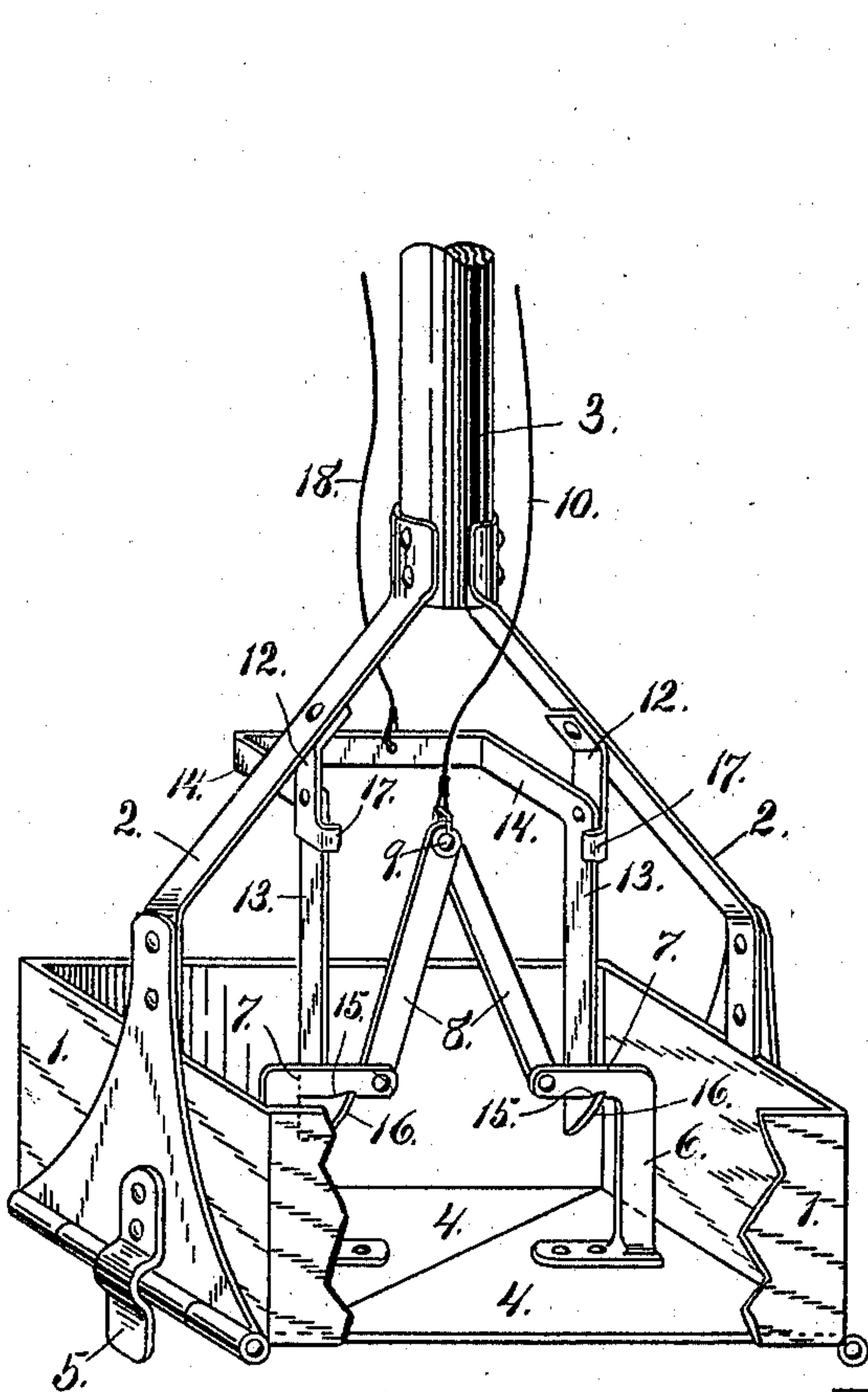


Fig. 1.

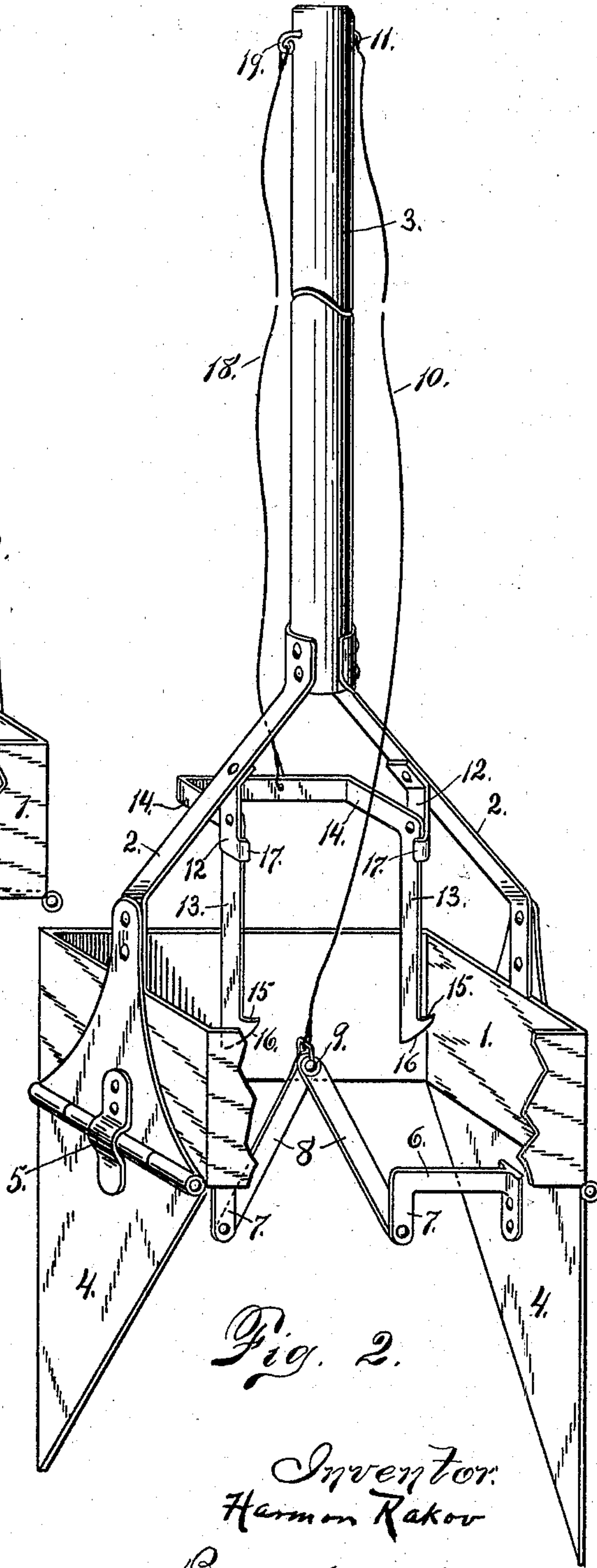


Fig. 2.

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UNITED STATES PATENT OFFICE.

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EXCAVATING-TOOL.

SPECIFICATION forming part of Letters Patent No. 603,858, dated May 10, 1898.

Application filed December 30, 1897. Serial No. 664,794. (No model.)

To all whom it may concern:

Be it known that I, HARMON RAKOV, a citizen of the United States, residing at Buffalo, in the county of Erie and State of New York, have invented certain new and useful Improvements in Excavating-Tools; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to figures of reference marked thereon, which form a part of this specification.

My invention relates to improvements in excavating-tools, and particularly to that class which are employed in removing earth from holes of small dimensions where it is impossible to use shovels—such as post-holes, for example.

The object of my invention is to provide an efficient tool which can be thrust into the loose earth at the bottom of the hole and operated at the upper end of its handle to collect and hold a quantity of the earth and dump the same after it has been removed.

To that end my invention consists of a box or receptacle mounted in an open frame carrying an elongated handle, hinged triangular box-bottom sections provided with suspending devices, rigid arms pivoted to the suspending devices and to each other and provided with an attached cord or chain extending to the upper end of the tool-handle for closing the box-bottom sections, an angular frame pivoted to the open box-frame, one section of which is provided with shoulders for removable engagement with the suspending devices on the hinged box-bottom sections and the other section having an attached cord or chain extending to the upper end of the tool-handle for effecting the release of the hinged box-bottom sections, and stops upon the box-frame for limiting the play of the hinged box-bottom sections and the pivoted engaging and releasing frame.

I will now minutely describe the manner in which I have carried out my invention.

In the drawings, Figure 1 is a perspective view of my excavating-tool shown closed, and Fig. 2 is a similar view of the tool shown open.

Referring to the drawings, 1 is the box or receptacle, of rectangular form, which is sus-

pended in the open frame 2, carrying at its upper end the elongated handle 3. The box-bottom is composed of the two triangular sections 4 4, hinged to the side walls of the box and adapted to swing downwardly into a vertical position, as shown in Fig. 2, stops 5 being placed on each side of the box to limit the outward play of the box-bottom sections 4 4, as shown. Upon each of the sections 4 4 is riveted the upright post 6, having the inwardly-extending lugs 7 7, to which are pivoted the rigid arms 8 8. These arms are pivoted together at their upper ends, as at 9, and the cord or chain 10 attached thereto and extending up to the ring 11 at the top of the handle 3.

To the hangers 12 12 is pivoted the frame, consisting of the downwardly-extending arms 13 13 and the outwardly-extending angular portion 14. The lower ends of the arms 13 13 are provided with shoulders 15 15 for engagement with the lugs 7 7 on the posts 6 6, the under sides 16 16 of the shoulders 15 15 being inclined, as shown. 17 17 are stops upon the hangers 12 12 for limiting the backward swing of the arms 13 13 beyond the vertical position shown.

To the outer end of the angular portion 14 of the pivoted frame is attached the cord or chain 18, which extends up to the ring 19 at the upper end of the handle 3.

In operation the cord or chain 18 is pulled upwardly, which causes the arms 13 13 to swing back, throwing the shoulders 15 15 out of engagement with the lugs 7 7. This permits the hinged box-bottom sections 4 4 to drop to their vertical positions, (shown in Fig. 2,) after which the pivoted frame returns by gravity to its former position. The tool is then pushed into the loose earth at the bottom of the post-hole, the pointed ends of the sections 4 4 easily penetrating into the loose earth. The cord or chain 10 is then pulled sharply upward, which causes the hinged box-bottom sections 4 4 to be thrown up into closed position, carrying with them a quantity of the loose earth. As the sections 4 4 swing up the lugs 7 7 on the posts 6 6 strike the inclined edges 16 16 of the shoulders 15 15, causing them to be thrown back out of the way until the lugs reach a position higher than the shoulders 15 15, which then swing back

by gravity under the lugs 7 7, thereby locking the hinged box-bottom sections 4 4 in closed position to hold the earth within the box or receptacle 1. The tool is then lifted
5 out of the post-hole to one side, and on pulling the cord or chain 18 upwardly the box-bottom sections 4 4 are released, permitting the earth in the box 1 to be dumped upon the ground. In this manner the excavating of
10 holes of narrow dimensions can be accomplished with extreme ease and facility, as compared with the slow and laborious use of a shovel. Again, if the hole being excavated should fill with water my improved tool can
15 be used with equal effect in removing the loose earth, while a shovel or other similar tool would be useless.

I claim—

20 An excavating-tool consisting of a box or receptacle mounted in an open frame carrying an elongated handle, hinged triangular box-bottom sections, provided with suspending devices, rigid arms pivoted to the sus-

pending devices and to each other and provided with an attached cord or chain extending to the upper end of the tool-handle for
25 closing the box-bottom sections, an angular frame pivoted to the open box-frame, one section of which is provided with shoulders for removable engagement with the suspending
30 devices on the hinged box-bottom sections and the other section having an attached cord or chain extending to the upper end of the tool-handle for effecting the release of the
35 hinged box-bottom sections and stops upon the box-frame for limiting the play of the hinged box-bottom sections and the pivoted engaging and releasing frame.

In testimony whereof I have signed my name to this specification in the presence of
40 two subscribing witnesses.

HARMON RAKOV.

Witnesses:

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