C. A. FLEMING.

SHOVELING BOARD.

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928,116. Patented July 13, 1909.

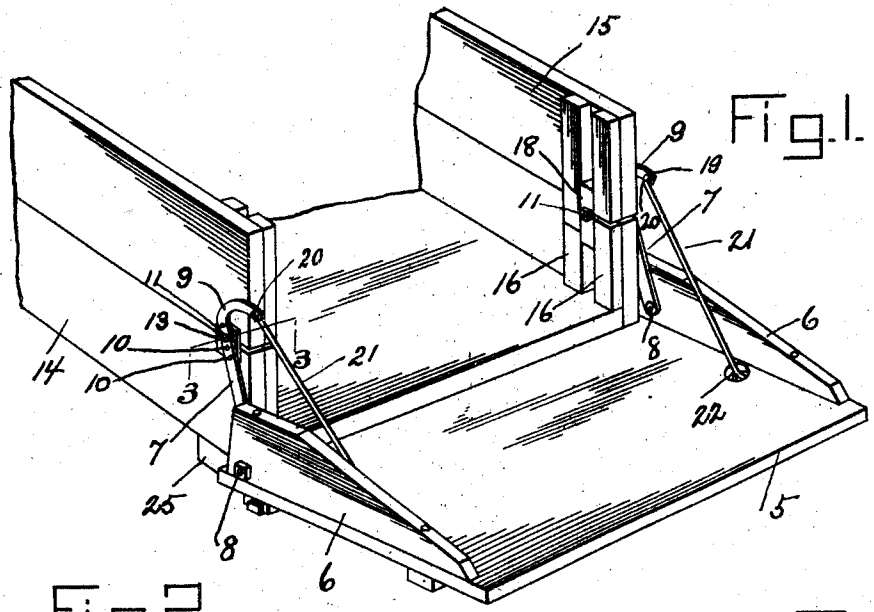


Fig. 1.

Fig. 2.

Fig. 3.

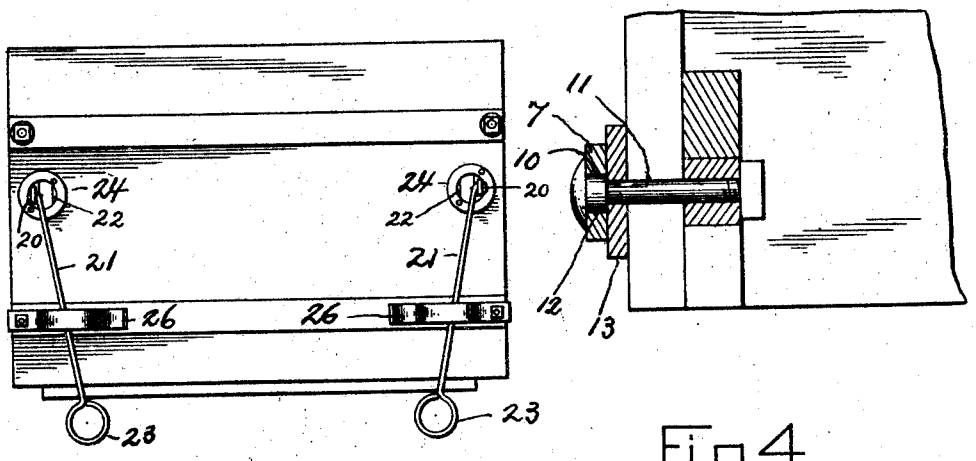
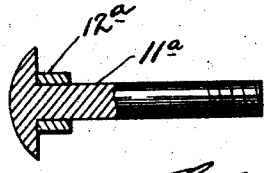


Fig. 4.



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UNITED STATES PATENT OFFICE.

CLIFFORD A. FLEMING, OF HUNTSVILLE, MISSOURI.

SHOVELING-BOARD.

No. 928,116. Specification of Letters Patent. Patented July 13, 1909.

Application filed October 31, 1908. Serial No. 460,443.

To all whom it may concern:

Be it known that I, CLIFFORD A. FLEMING, a citizen of the United States, residing at Huntsville, in the county of Randolph and State of Missouri, have invented certain new and useful Improvements in Shoveling-Boards, of which the following is a specification.

This invention relates to shoveling boards for wagons; and it has for its object to provide a shoveling board of simple and improved construction which may be readily attached to or connected with the tail end of an ordinary grain box without the necessity of boring holes for the reception of bolts or fastening members of like character.

A further object is to provide a construction whereby the shoveling board may be applied, with equal facility and efficiency, to grain boxes of various heights.

A further object of the invention is to provide a hinge bolt which shall be strong, durable and non-binding and which will enable the hinge straps or braces used in connection with the improved shoveling board to work freely and efficiently.

Still further objects are to simplify and improve the construction and operation of this class of devices.

With these and other ends in view which will readily appear as the nature of the invention is better understood, the same consists in the improved construction and novel arrangement and combination of parts which will be hereinafter fully described and particularly pointed out in the claims.

In the accompanying drawing has been illustrated a simple and prefered form of the invention, it being, however, understood that no limitation is necessarily made to the precise structural details therein exhibited, but that changes, alterations and modifications within the scope of the invention may be resorted to when desired.

In the drawings—Fig. 1 is a perspective view of the tail-end of a wagon box equipped with the improved shoveling board, the latter being shown extended for use. Fig. 2 is a rear end view showing the shoveling board raised, to form an end gate. Fig. 3 is a sectional detail view, enlarged, taken on the plane indicated by the line 3—3, in Fig. 1. Fig. 4 is a sectional detail view illustrating a slightly modified construction of the hinge bolt.

Corresponding parts in the several figures are denoted by like characters of reference.

The shoveling board 5 is provided with side pieces 6, 6, constituting wings or flanges which, as well as the board itself, may be made of wood, metal or any other suitable material, the dimensions being such that when the shoveling-board is applied to the wagon box, the wings or flanges 6, 6, will lie exteriorly adjacent to the sides of said box. Upon the inner side of the wings 6, 6, near the lower ends of the latter, the hinge straps or brackets 7, 7, are pivotally attached by means of bolts 8. The outer ends of the straps 7, are provided with curved or hook-shaped terminals 9, adjacent to which each of said straps is provided with a plurality of apertures 10, for the passage of a bolt 11, which constitutes the hinge upon which each of said straps is adapted to turn. Each of the bolts 11 is provided adjacent to the head thereof with an annular enlargement constituting a shoulder 12, which forms the bearing for the strap 7; each of the bolts 11 carries, adjacent to the shoulder or enlargement 12, a washer-plate 13 of large dimensions which is adapted to space the hinge strap from the outside of the wagon box to which the shoveling board is applied. The bolts 11 are placed in the cracks between the upper edges of the lower wagon box 14, and the lower edges of the side-members of the top box or extension 15; the side members of the lower and upper wagon box are provided, near the tail-end of the box, with the usual cleats 16, for the accommodation of the end-gate or tail board.

When the improved shoveling board is used, the tail board or end-gate is obviously dispensed with, and the spaces between the cleats 16, will now be partly occupied by cleats or blocks 18 that are mounted upon the bolts 11, and serve to retain said bolts in position.

The hook-shaped extensions 9 of the braces 7, are provided near their outer ends or extremities with apertures 19, for the reception of hooks 20, formed at the upper ends of the brace-rods 21, which latter extend

through apertures 22, in the shoveling board, and are provided with terminal rings 23 forming handles which are sufficiently large to prevent them from passing through the apertures 22; the latter are reinforced, upon the outer or rear side of the shoveling board by metallic collars or washers 24.

The improved shoveling board may be very readily and quickly applied to any ordinary conventional wagon box or grain box having a top-box extension by simply lifting the rear ends of the side members of the top box sufficiently to enable the hinge bolts 11 to be inserted into the crack between the lower box and the top box until the blocks 18 are accommodated in the spaces or grooves between the cleats 16.

When the shoveling board is extended for use, the lower edge thereof will extend beneath the tail end of the wagon box proper, and abut upon the cross-piece or cleat 25 which almost invariably is found extending transversely across the box adjacent to the tail-end; if missing, such a cleat or cross-piece may, of course, be readily supplied. The shoveling board, then, will be supported in an extended, approximately horizontal position, with its lower edge supported in the angle between the cross-piece 25 and the under side of the wagon box, while the rods 21, extending from the hook-shaped terminals 9 of the straps or braces 7 through the apertures 22, serve to support the weight of the shoveling-board, the latter resting upon the rings or enlargements that constitute the handles 23 of the outer ends of the rods 21. When the shoveling board is moved to an upright or approximately vertical position, it swings upon the bolts 8, whereby the wings 6, are connected with the straps 7, and the latter will turn or rock upon the bolts 11 to permit the requisite movement of the board; the rods 21 and the hook-shaped terminals 9 of the straps 7, being guided through the apertures 22 until the rods 21 swing or depend loosely from the projecting ends of the hooks 9 adjacent to the rear side of the shoveling board where they may now be placed in engagement with the clips 26, that are provided for the purpose, as will be best seen in Fig. 2 of the drawing; said supports will thus constitute fastening devices whereby the shoveling board is maintained in a raised or closed position.

It is desired to be understood that the bolts 8, are preferably constructed with annular enlargements constituting shoulders resembling the shoulders 12 of the bolts 11, adjacent to the heads thereof, where they engage the lower ends of the straps 7.

In Fig. 4 of the drawings has been illustrated a slightly modified construction of one of the bolts, here designated 11^a, under which said bolt, in lieu of an integral enlargement or shoulder, is provided adjacent to the head thereof, with a sleeve or collar 12^a which will answer practically the same purpose as the collar or enlargement 12.

From the foregoing description taken in connection with the drawings hereto annexed, the operation and advantages of this invention will be readily understood. The construction of the improved shoveling board is simple and inexpensive, and it may, with the greatest facility, and without previous preparation, be readily applied to any wagon box or grain box of ordinary conventional construction as a substitute for an ordinary tail-board or end-gate.

The improved shoveling board may readily be applied to wagon boxes of varying height owing to the presence of a plurality of perforations or apertures 10, in the straps 7, whereby the bolts 11, may be adjusted at the proper height. It is obvious that when the shoveling board is raised to the approximately vertical position indicated in Fig. 2, it constitutes an end-gate whereby the tail-end of the wagon box is efficiently closed; when the board is extended to the approximately horizontal position shown in Fig. 1, it constitutes a scoop board, the use of which is well understood.

Having thus described the invention, what is claimed is:

1. The combination with a wagon box having a top box, and the side boards of which are provided with pairs of cleats adjacent to the tail end thereof, of bolts fitted in the cracks between the wagon box and the top box, blocks upon said bolts lying in the spaces between the cleats, washer plates upon the bolts adjacent to the outer sides of the side boards of the wagon box, straps pivoted upon the bolts and having hook-shaped extensions, a shoveling board having wings connected pivotally with the lower ends of the straps and provided with apertures adjacent to the wings, supporting rods connected pivotally with the hook-shaped extensions of the straps, extending through the apertures in the shoveling board and having enlargements constituting handles, and clips upon the outer side of the shoveling board adapted to be engaged by the supporting rods.

2. The combination with a wagon box having a top box, of bolts fitted in the cracks between the boxes and having blocks accommodated in grooves adjacent to the tail end of the box, straps pivoted upon the bolts and having hook-shaped extensions, a shoveling board having wings connected pivotally with the lower ends of the straps and having apertures for the passage of the hook-shaped extensions of said straps, supporting rods connected with the hook-shaped exten-

sions, and extending through the apertures of the board and having terminal enlargements forming handles of a size to prevent their passage through the apertures, and means for securing the depending ends of the supporting rods when the shoveling board is in a raised position.

In testimony whereof I affix my signature in presence of two witnesses.

CLIFFORD A. FLEMING.

Witnesses:
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