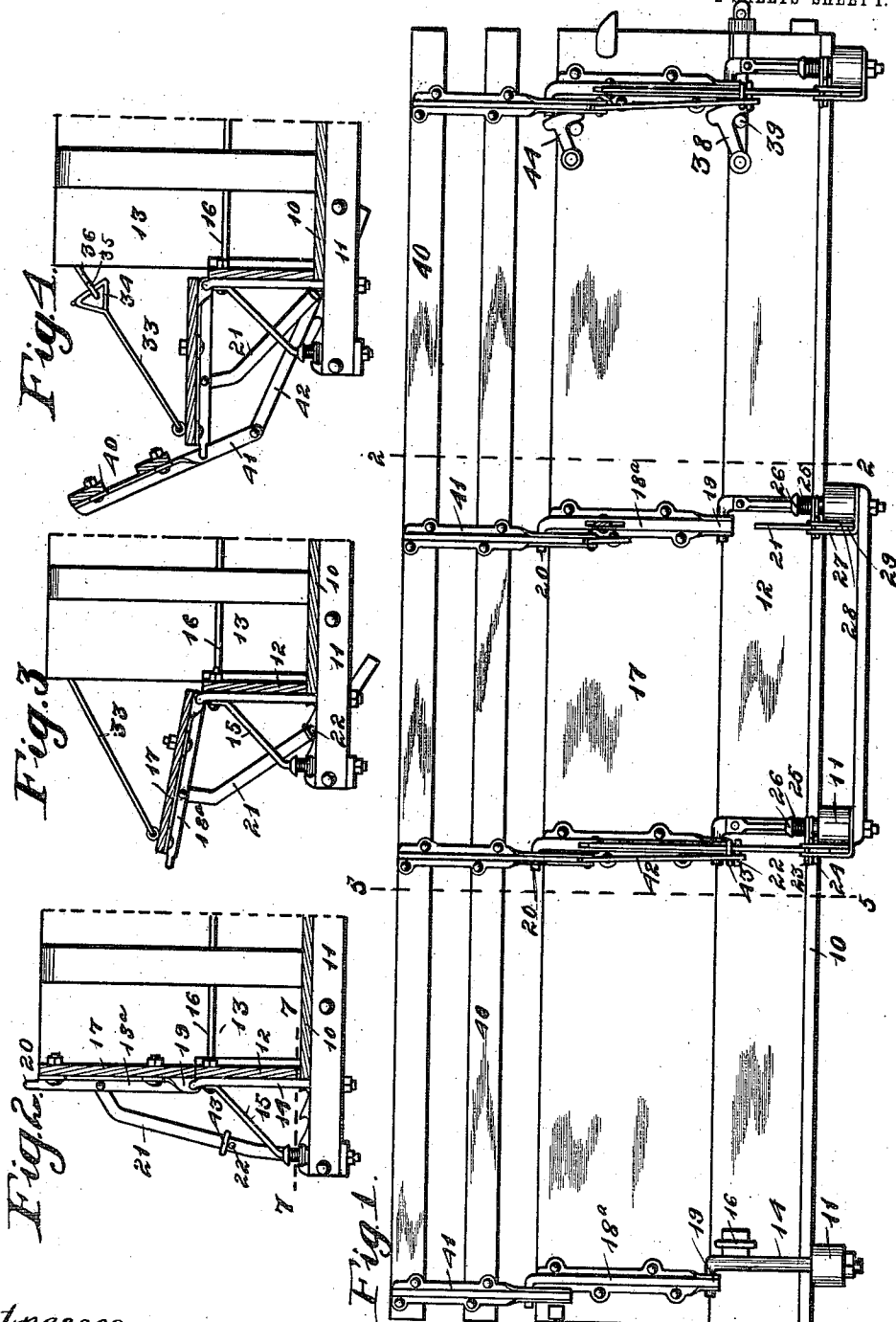


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ADJUSTABLE WAGON BOX.
APPLICATION FILED AUG. 8, 1910.

979,722.

Patented Dec. 27, 1910.

2 SHEETS-SHEET 1.



Witnesses.
W. A. Softow.
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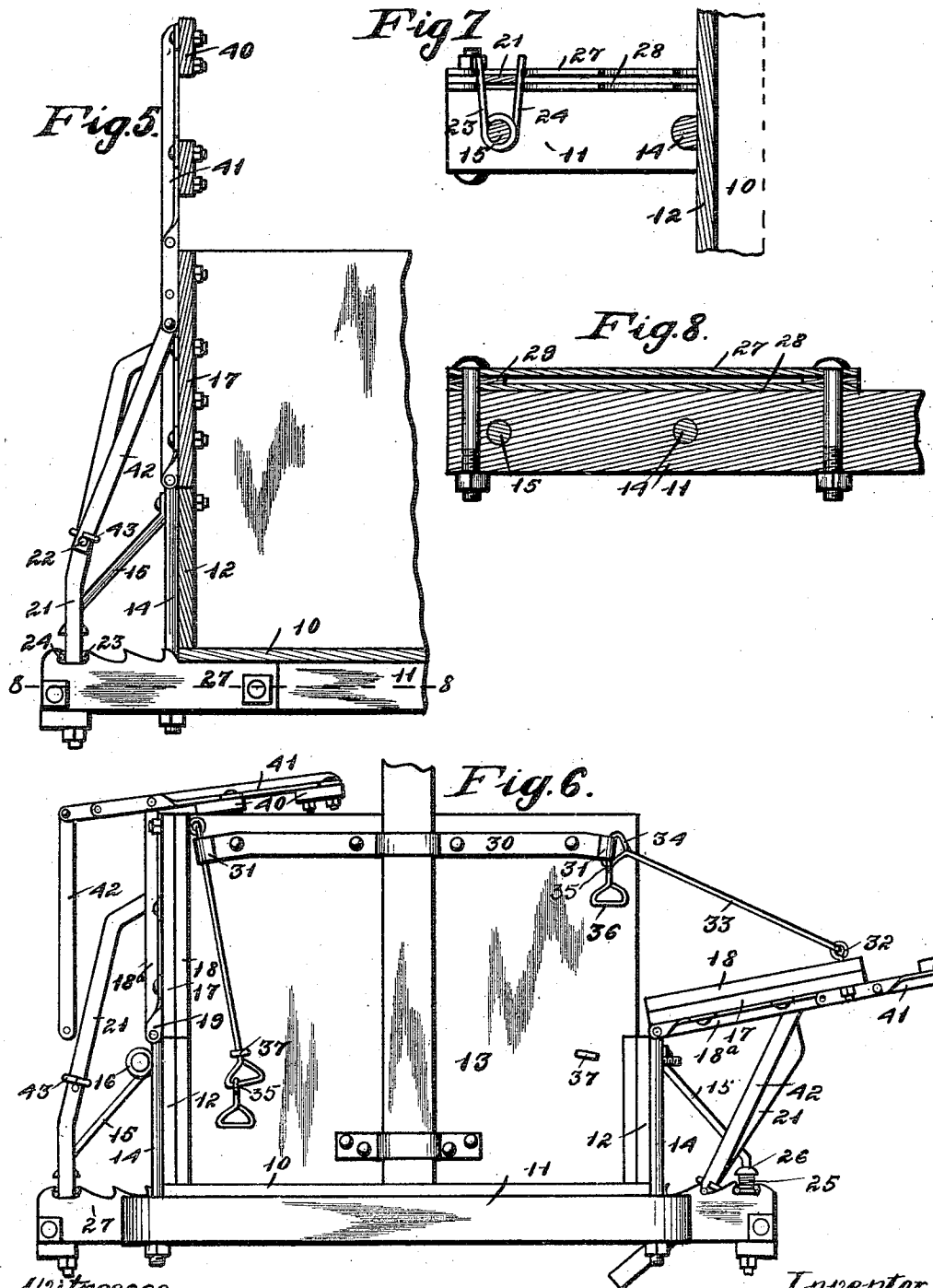
Inventor
Andrew E. Sutherland
by Ralph D. Craig Atty.

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UNITED STATES PATENT OFFICE.

ANDREW E. SUTHERLAND, OF MADRID, IOWA.

ADJUSTABLE WAGON-BOX.

979,722.

Specification of Letters Patent.

Patented Dec. 27, 1910.

Application filed August 8, 1910. Serial No. 576,191.

To all whom it may concern:

Be it known that I, ANDREW E. SUTHERLAND, a citizen of the United States, residing at Madrid, in the county of Boone and State of Iowa, have invented a certain new and useful Adjustable Wagon-Box, of which the following is a specification.

The object of my invention is to provide a wagon box of simple, durable and inexpensive construction so arranged that it may be readily, quickly and easily adjusted to various positions to meet the requirements for different uses to which wagon boxes are ordinarily put and to provide a device of this kind in which the various adjustments may be made by hand and without the use of tools and when once made will be firmly and securely supported in such position.

My invention consists in certain details, in the construction, arrangement and combination of the various parts of the device, whereby the objects contemplated are attained, as hereinafter more fully set forth, pointed out in my claims and illustrated in the accompanying drawings, in which:

Figure 1 shows a side elevation of a wagon box embodying my invention with the adjustable sideboard member and the extension side rack shown in upright positions. Fig. 2 shows a sectional view on a reduced scale of part of my improved wagon box with the adjustable side shown in upright position and the extension rack removed, said view being taken on the line 2—2 of Fig. 1. Fig. 3 shows a similar view with the adjustable side shown in an outwardly and upwardly inclined position. Fig. 4 shows a similar view with the adjustable side shown in a substantially horizontal position and the extension rack in position inclined upwardly and outwardly. Fig. 5 shows a sectional view of part of my improved wagon box taken on the line 5—5 of Fig. 1. Fig. 6 shows a front end elevation of a wagon box embodying my invention, the left side being shown in position with the extension rack folded inwardly over the top of the wagon box and the adjustable side on the right of the figure being shown extended outwardly and upwardly. Fig. 7 shows an enlarged, detail, sectional view on the line 7—7 of Fig. 2, and Fig. 8 shows an enlarged, detail, sectional view on the line 8—8 of Fig. 5.

Referring to the accompanying drawings,

I have used the reference numeral 10 to indicate the bottom of the wagon box. Beneath the bottom is a number of transverse supporting beams 11. Two stationary wagon box sides 12 are provided and a front 13 of ordinary construction is secured to the sides 12 and the bottom 10. I provide for permanently securing the sides 12 in position by means of the upright bars 14 which are extended through the beams 11 and which are secured to the outer surfaces of the sides 12. The upper ends of these bars 14 are extended horizontally toward the front of the wagon box for purposes hereinafter made clear. Additional braces are provided for the sides at all except the front beam, which braces are indicated by the numeral 15 and which extend outwardly and downwardly from the tops of the bars 14 to the outer ends of the beams 11. In order to provide additional bracing for the front ends of the sides 12, I provide a screw threaded rod 16 to extend through the sides and adjacent to the front. The parts before described are of ordinary construction, hence further description of their operation is deemed unnecessary.

There are two adjustable sides, each of which comprises a body portion 17. On the inner face of the front end of each side is a rib 18 to overlap the front 13 and to prevent the front from moving forwardly or the adjustable side from moving rearwardly when in a vertical position. Fixed to the outer surface of the adjustable side 17 is a series of reinforcing bars 18^a, each having at its lower end a lug 19 provided with an opening designed to receive the horizontally extended end of the adjacent bar 14, as clearly shown in Fig. 1, and at the upper end of each of said bars 18^a is a forwardly extended lug 20 for purposes hereinafter made clear.

In use it is desirable to firmly and securely support the adjustable side in three positions to wit: First vertically, second outwardly and upwardly inclined and third horizontally and outwardly extended as shown in Figs. 2, 3 and 4. For the purpose of readily, quickly and easily adjusting the adjustable side to any one of said positions and for firmly supporting it therein, I have provided the following mechanism: Pivoted to each of the three bars 18^a in the rear of the front end of the wagon box is a flat metal

arm 21 extended first outwardly, and then downwardly relative to the adjustable side when it is in its upright position.

At a point spaced apart from the lower
 5 end of each bar is a pin 22 for purposes hereinafter made clear. Mounted upon each of the braces 15 near its lower end and above the beam 11 are two small arms 23 and 24,
 10 each being provided with a loop in its end arranged in position to encircle the brace 15. Above the said arms 23 and 24 is an extensible coil spring 25, the upper end of which engages a stationary collar 26 on the brace
 15 15 to thereby apply a yielding pressure in a downward direction upon both of the arms 23 and 24. Fixed to the front side of each of the beams 11 except the forward one, are two metal plates 27 and 28 spaced apart from
 20 each other to leave an opening between them large enough to admit the lower end of the arm 21. The top edges of said plates 27 and 28 are provided with three notches as clearly
 25 shown in Fig. 5, the outer one of said notches being so arranged that the arms 23 and 24 may be placed on opposite sides of the arm 21 and in said notch to thereby prevent movement of the arm 21 toward or from
 30 the wagon box and when said arms 23 and 24 are so placed they will be yieldingly held in said notch by means of the spring 25. When the arm 21 is in the position shown
 35 in Fig. 5 its downward movement is limited by having its lower end engage a block 29 between the plates 27 and 28 as clearly shown in Fig. 8. When it is desired to place
 40 the adjustable side in the position, shown in Fig. 3, extended outwardly and upwardly, the operator first removes the arms 23 and 24 from the outer notch in the plates 27 and 28 thus permitting the arm 21 to swing inwardly toward the wagon box. When it
 45 swings inwardly far enough to clear the block 29 it may move downwardly and permit the adjustable side to swing outwardly and when it has moved downwardly a considerable distance the pin 22 will rest in the second notch on the plates 27 and 28, as clearly shown in
 50 Fig. 3, and when in this position the arm 21 will brace and support the adjustable side in the position shown in Fig. 3. If it is desired to move the adjustable side to the position shown in Fig. 4, then the arm 21 is manipulated so that a pin 22 will rest in the inner notch in the plates 27 and 28 as
 55 shown in Fig. 4.

I have provided for supporting the front end of the adjustable side in the positions shown in Figs. 2, 3 and 4 as follows: Secured to the forward portion of the front 13
 60 is a strap 30 having a hook 31 at each end. Secured to the front portion of the adjustable side 17 is an eye-bolt 32. A rod 33 is pivotally connected to the eye-bolt and is provided with a loop 34. A second loop 35
 65 is pivoted to said loop 34 and provided with

a loop 36. These parts are so arranged and proportioned that when the adjustable side is in its upright position, as shown to the left in Fig. 6, the rod 33 may rest in the adjacent hook 31. Said rod 33 may be held
 70 in this position by means of a stationary hook 37 on the front 13, to thereby firmly hold the adjustable side in its upright position. When it is desired to support the adjustable side in its outwardly and upwardly
 75 inclined position, as shown in Fig. 6, the loop 34 is placed in engagement with the hook 31 and when it is desired to support the adjustable side in the position shown in Fig. 4, the loop 36 is placed on the hook 31.
 80

It will be noted by referring to Fig. 1 that the adjustable side is connected with the stationary side 12 by having the upper ends of the bars 14 extended through openings in the bars 18^a. For preventing the
 85 adjustable side from becoming detached by moving forwardly, I have provided at the rear end of the stationary side 12 a pivoted locking hook 38, the downward movement of which is limited by a stationary pin
 90 39. This hook is designed to engage the adjacent lower end of the bar 18^a to thereby prevent said bar and the adjustable wagon side from moving forwardly, the pin 39 being provided to prevent the hook from moving
 95 downwardly. When it is desired to remove the adjustable side this hook 38 is first elevated whereupon the entire side 17 may be moved forwardly until detached from the wagon box. I have also provided
 100 an extension rack for each side of the wagon box consisting of slats 40. These slats are connected by the bars 41, which bars have near their lower ends openings to receive the extensions 20 of the bars 18^a, and pivoted to the lower end of each of the bars 41
 105 is an arm 42. There is no arm 42 provided for the front bar 41. At the lower end of each of the arms 42 is an opening to receive the pin 22 and slidably mounted upon each
 110 of the arms 21 is a spring wire loop 43 designed to receive the lower end of the arm 42. When it is desired to support the extension side in an upright position, as shown in Fig. 1, the arm 42 is slipped into the
 115 spring metal loop 43 and the pin 22 is inserted in the opening in the lower end of the arm 42 so that said arm 42 forms a brace to firmly hold the extension side in its vertical position. When it is desired to move
 120 the extension side and the adjustable side from the positions shown in Fig. 5 to the positions shown in Fig. 4, the arms 42 are first detached from the pins 22, then the adjustable side is swung outwardly and then
 125 the extension side is moved to the position shown in Fig. 4 and the arm 42 connected with the pin 22 and with the spring loop 43 to thereby firmly support and brace the extension side in the position shown in Fig. 130

4. When it is desired to use the extension side as the top of an inclosed stock rack the arm 42 is detached from the pin 22 and the extension side is swung inwardly to rest upon the top of the front and the adjustable sides, as shown to the left in Fig. 6. I have also provided means for securing the extension side to the adjustable side by means of a hook 44 similar to the hook 38.

10 In practical operation it is obvious that the various adjustments or the removal or replacement of any of the detachable parts may be effected very quickly and easily without the use of tools. In adjusting the device to the position shown in Fig. 2, it is obvious that the arms 21 may be firmly supported relative to the beams 11 by simply placing the arms in positions resting on the blocks 29 and then moving the arms 23 and 24 to positions within the outer notch of the plates 27 and 28 so that said arms will be firmly held against downward movement by the block 29, against forward and rearward movement by the plates 27 and 28, and against movement inwardly and outwardly relative to the wagon, by the arms 23 and 24 in the notch in the plates 27 and 28. In adjusting the adjustable sides 17 to the position shown in Fig. 3, the pin 22 engages the middle notch and the arm 21 is held against forward and rearward movement by passing between the plates 27 and 28 and when the adjustable side is moved to a horizontal position it is firmly held in position by means of the pin 22 engaging the inner notch. The extension sides, when in an upright position as shown in Fig. 5, are firmly held and supported by their arms 42 engaging the pin 22 and being held in position thereon by the spring hook. The same pin and spring hook is used to support the arm 42 when adjusted to the position shown in Fig. 4. Any or all of the adjustable and detachable parts of the device may be quickly and easily removed and when so removed all of the parts connected with it will be removed with it and there are no loose parts that may be lost or misplaced.

I claim as my invention:

50 1. A wagon box, comprising a bottom, stationary sides and a front, bars on the stationary sides extended upwardly and forwardly, adjustable sides, a number of bars on each adjustable side, each bar having an opening therein to receive the forwardly extended portion of the bar on the stationary side, and a hook pivoted to the stationary side and designed to engage one of the bars on the adjustable side to prevent said adjustable side from being detached from the forwardly extended portions of the bars on the stationary side.

65 2. A wagon box, comprising a bottom, stationary sides and a front, bars on the stationary sides extended upwardly and for-

wardly, adjustable sides, a number of bars on each adjustable side, each bar having an opening therein to receive the forwardly extended portion of the bar on the stationary side, a hook pivoted to the stationary side and designed to engage one of the bars on the adjustable side to prevent said adjustable side from being detached from the forwardly extended portions of the bars on the stationary side, and a pin for limiting the downward movement of said hook.

3. An improved wagon box, comprising a stationary bottom, stationary sides secured thereto, beams under the sides extended outwardly beyond the sides, each beam being provided with plates spaced apart, a block between each pair of plates at their outer ends, each pair of plates also being provided with a notch at each outer end, a brace connected at its upper end to the stationary side and at its lower end to the adjacent beam, two arms pivotally mounted on said brace and designed to enter the adjacent notch, an adjustable side hinged to the stationary side, and an arm pivoted to the adjustable side and extended downwardly between said plates, said arm being designed to rest upon said block and the pivoted arms on the brace being designed to engage the edges of said arm to hold said arm in position on said block.

4. An improved wagon box, comprising a stationary bottom, stationary sides secured thereto, beams under the sides extended outwardly beyond the sides, each beam being provided with plates spaced apart, a block between each pair of plates at their outer ends, each pair of plates also being provided with a notch at each outer end, a brace connected at its upper end to the stationary side and at its lower end to the adjacent beam, two arms pivotally mounted on said brace and designed to enter the adjacent notch, an adjustable side hinged to the stationary side, and an arm pivoted to the adjustable side and extended downwardly between said plates, said arm being designed to rest upon said block and the pivoted arms on the brace being designed to engage the edges of said arm to hold said arm in position on said block, each of said arms pivoted to the adjustable sides being provided with a pin and each pair of plates being provided with notches to receive said pin.

5. An improved wagon box, comprising a stationary bottom, stationary sides secured thereto, beams under the sides extended outwardly beyond the sides, each beam being provided with plates spaced apart, a block between each pair of plates at their outer ends, each pair of plates also being provided with a notch at each outer end, a brace connected at its upper end to the stationary side and at its lower end to the adjacent beam, two arms pivotally mounted on said brace

and designed to enter the adjacent notch, an adjustable side hinged to the stationary side, an arm pivoted to the adjustable side and extended downwardly between said plates, 5 said arm being designed to rest upon said block, and the pivoted arms on the brace being designed to engage the edges of said arm to hold said arm in position on said block, and a spring on said brace and in en- 10 gagement with the pivoted arms on the brace to yieldingly hold said pivoted arms in the notch.

6. In a wagon box, the combination of a wagon side, arms connected to the wagon 15 side and extended outwardly and downwardly, a spring metal loop slidingly mounted on each of said arms, an extension side, bars fixed to the extension side pivoted to the wagon side and extended beyond said 20 pivotal point, arms pivoted to said bars beyond their pivotal points and provided with openings at their lower ends, said arms being designed to enter said spring loops and pins in the arms on the wagon side designed 25 to enter said openings, for the purposes stated.

7. In a wagon box, the combination of a stationary wagon side, a beam extended outwardly therefrom, plates secured to the side of said beam and having notches in their 30 tops, said plates being spaced apart from each other, an adjustable wagon side pivoted to the stationary wagon side, an arm pivoted to the adjustable wagon side extended outwardly and downwardly between said plates, 35 a pin carried by said arm designed to engage the notches in the plates, a spring loop slidingly mounted on said arm above the pin, an extension wagon side, bars fixed thereto pivoted to the upper end of the adjustable 40 wagon side and extended beyond said pivotal point, and arms pivoted to the ends of said bars and provided with openings in their lower ends to receive the pins of the aforesaid arms, the arms on the extension 45 side being designed to enter the spring loops, for the purposes stated.

Des Moines, Iowa, July 1, 1910.

ANDREW E. SUTHERLAND.

Witnesses:

E. P. DALANDER,

EDNAH RINGSTRAND.