

No. 764,672.

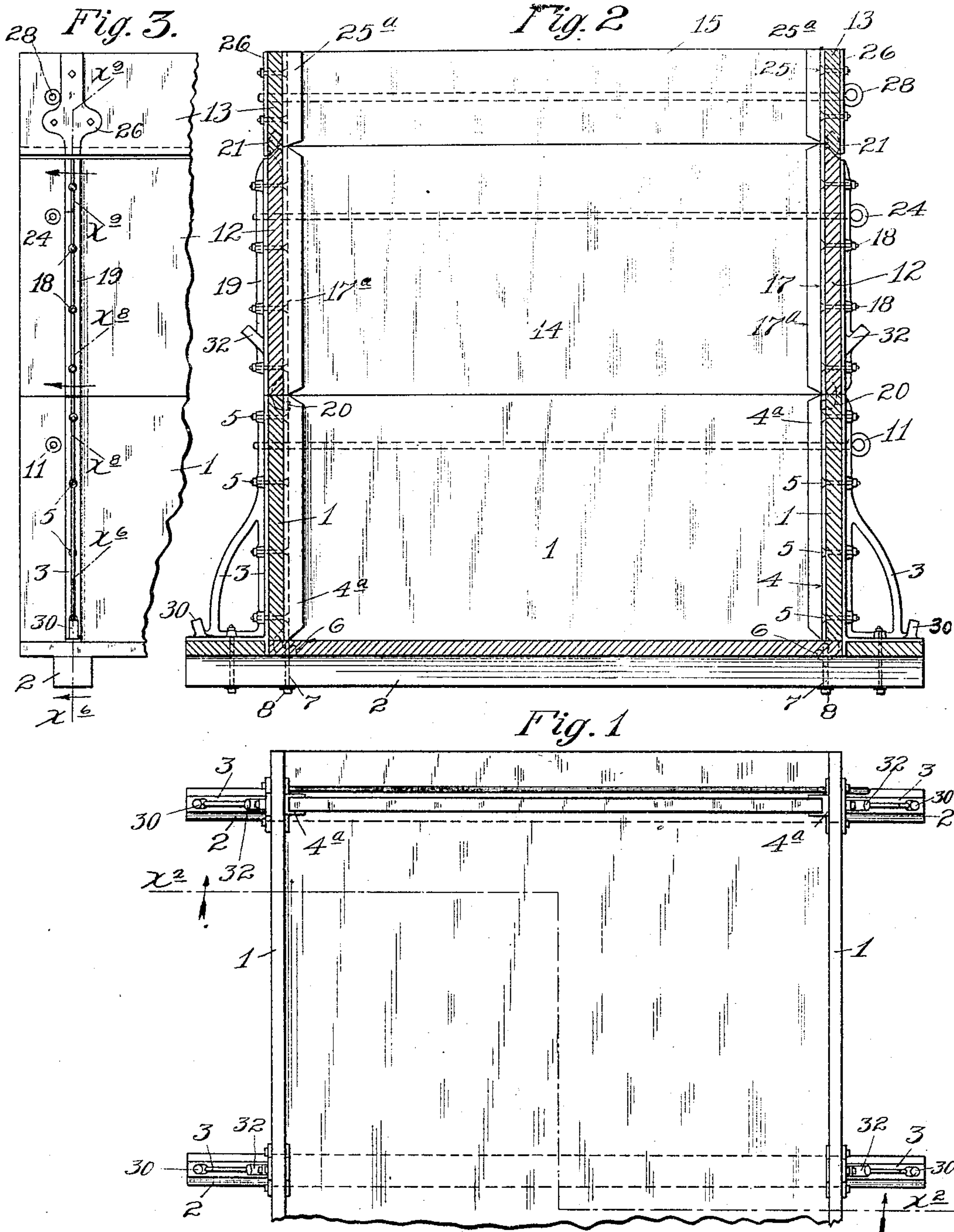
PATENTED JULY 12, 1904.

S. C. PAULSON.
 CONVERTIBLE WAGON BOX.

APPLICATION FILED MAR. 26, 1904.

NO MODEL.

3 SHEETS—SHEET 1.



Witnesses.
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 H. P. Kilgore.

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 Soren C. Paulson.
 By his Attorneys
 William M. Merchant

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3 SHEETS—SHEET 2.

Fig. 5.

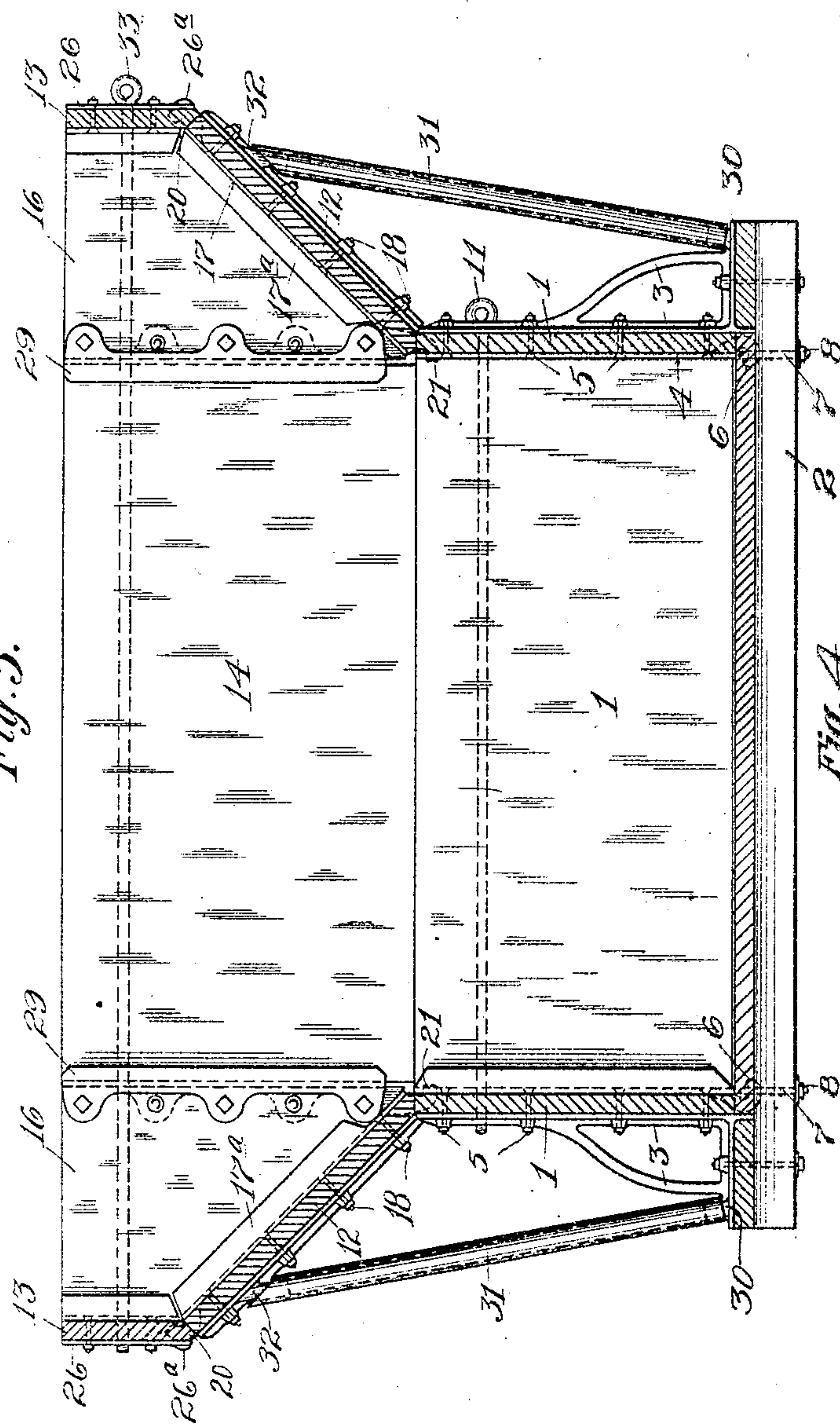
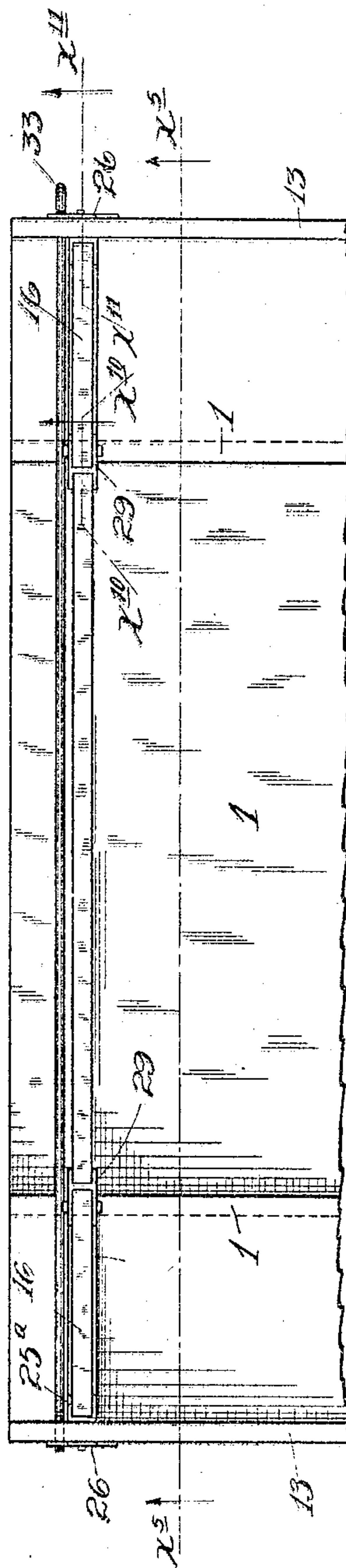


Fig. 4.



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3 SHEETS—SHEET 3.

Fig. 7.

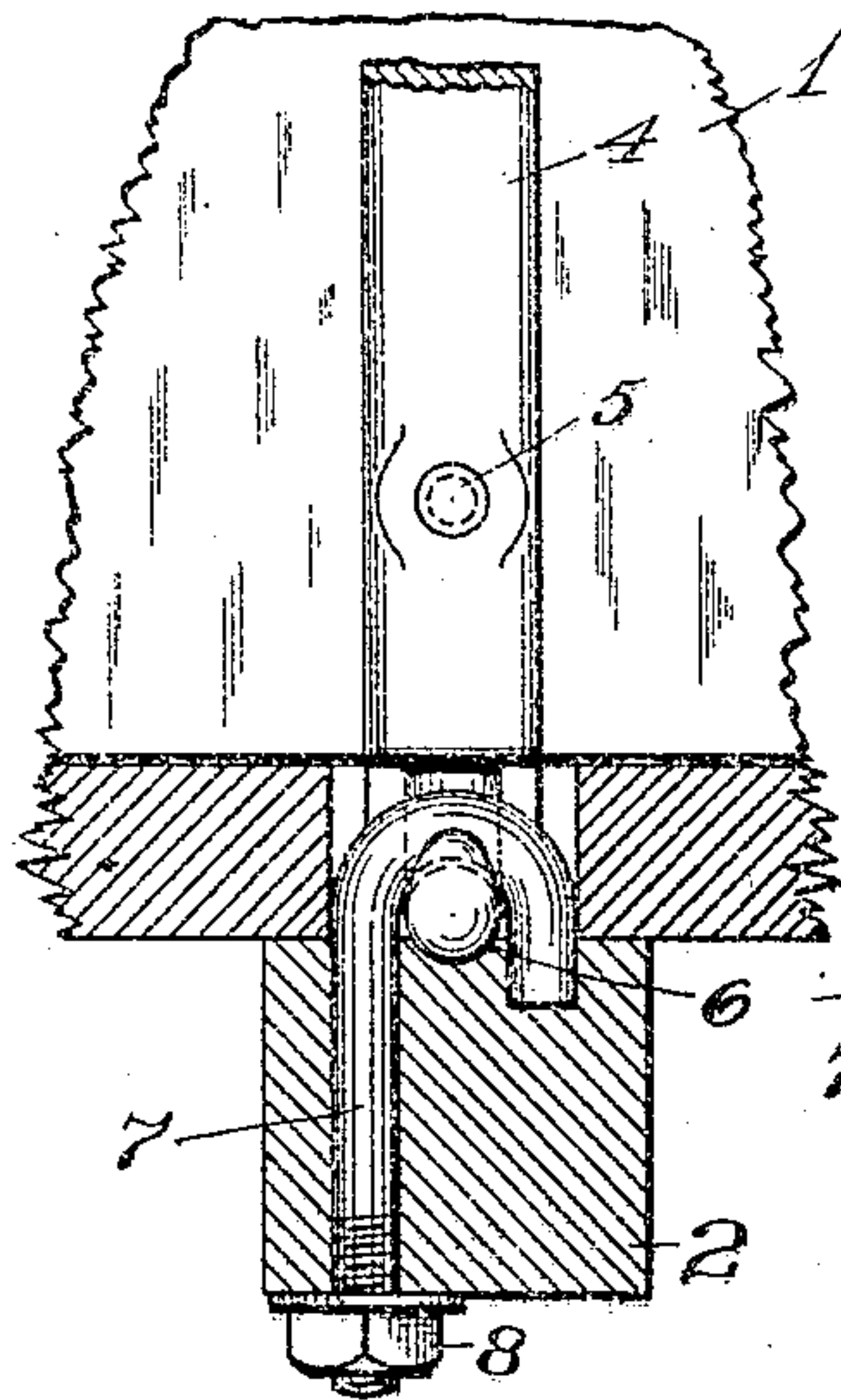


Fig. 6.

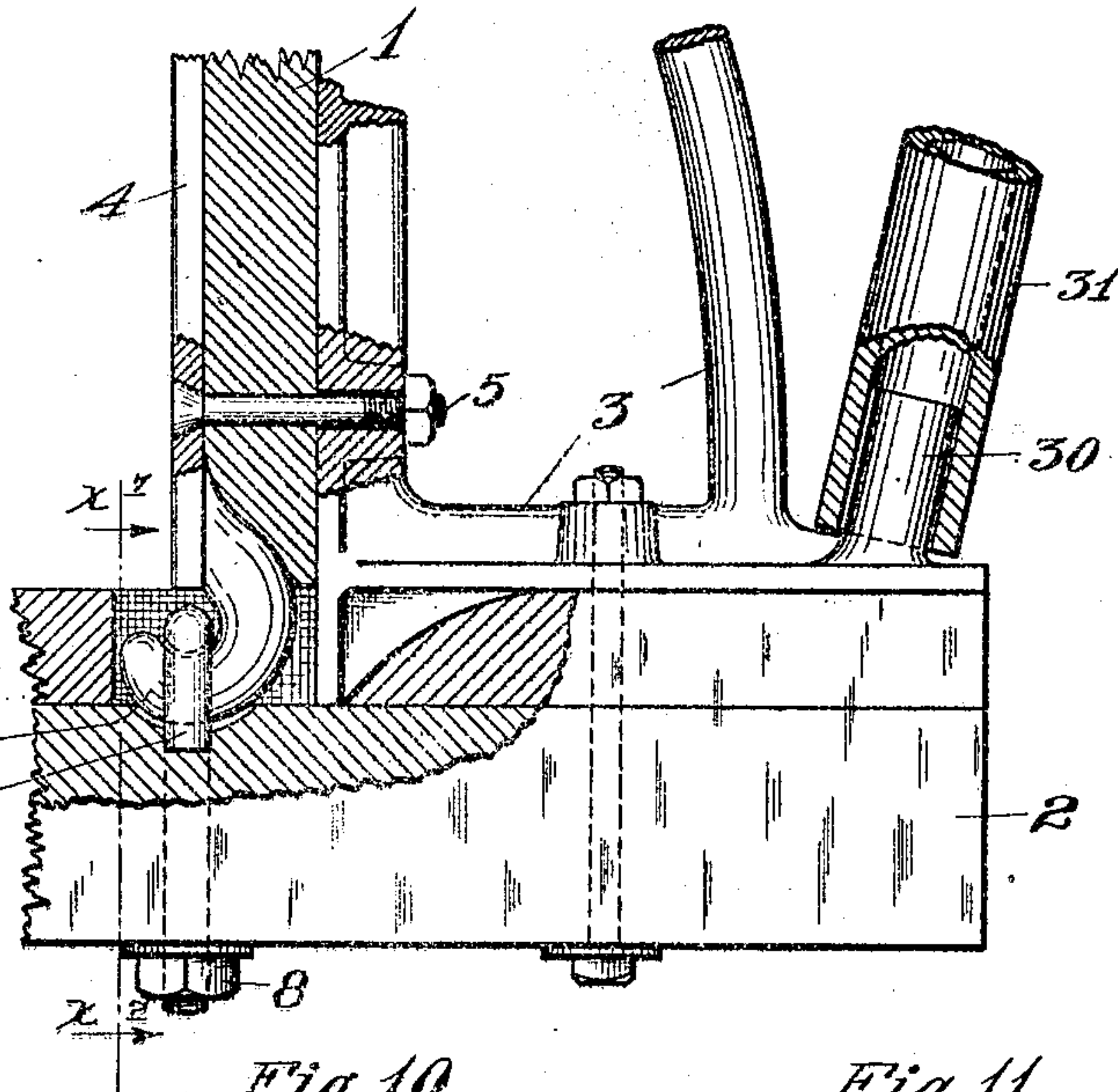


Fig. 8.

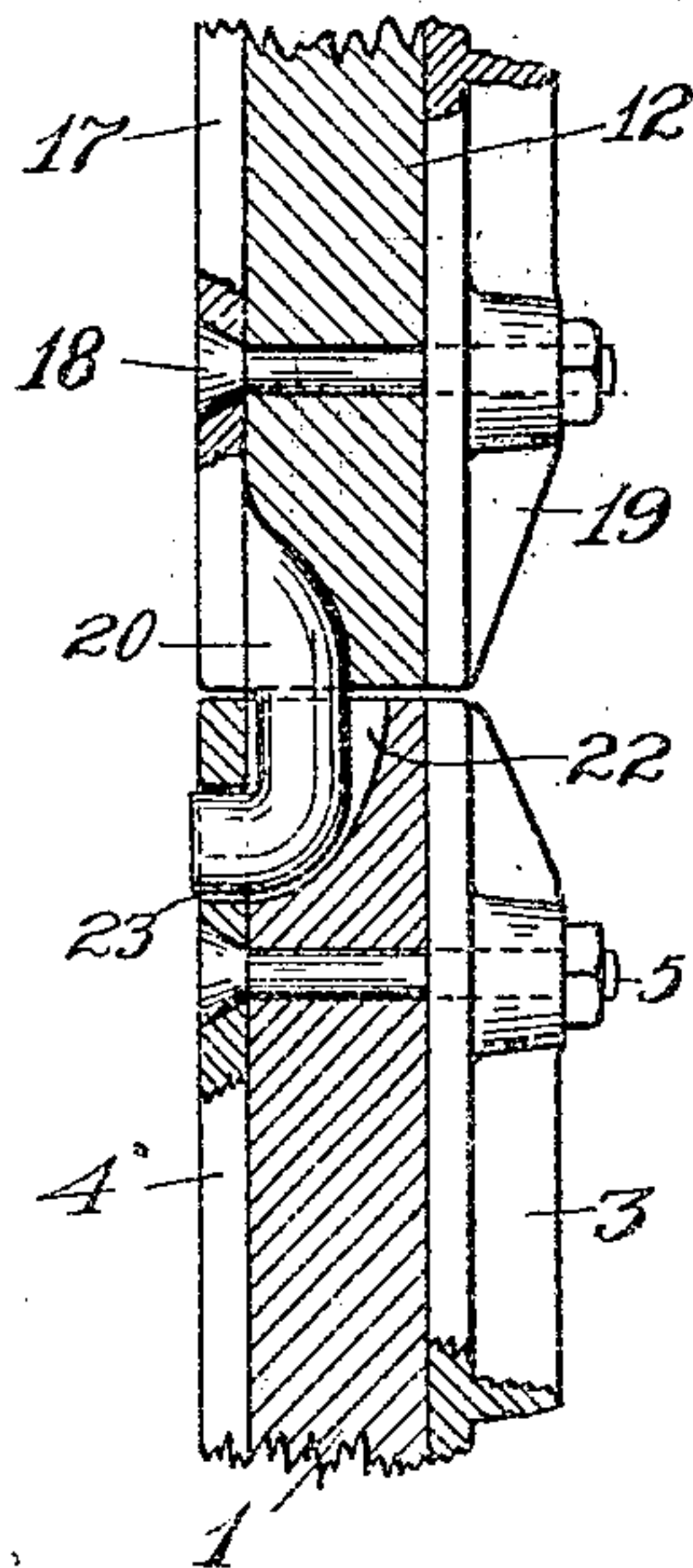


Fig. 10.

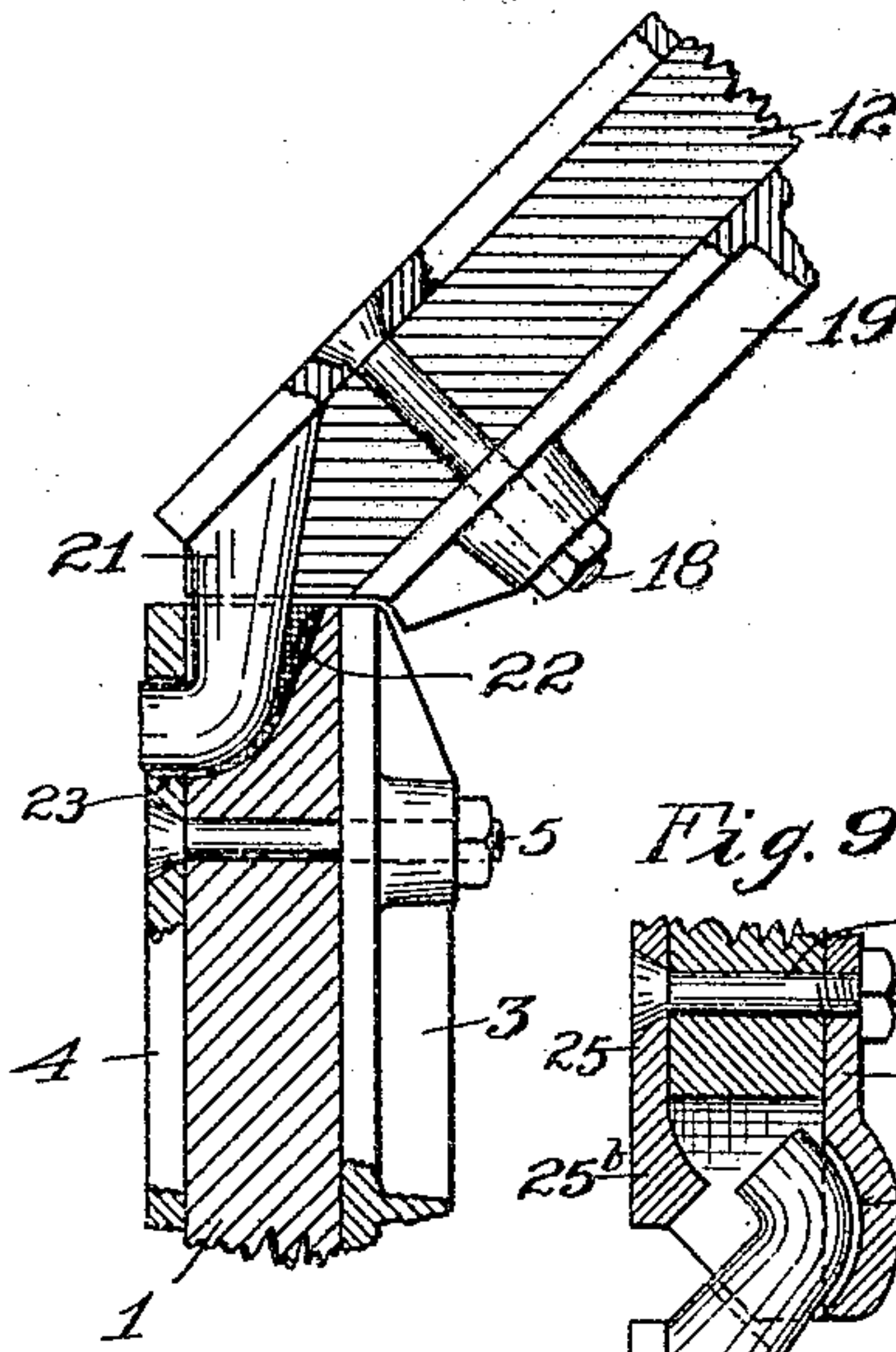


Fig. 11.

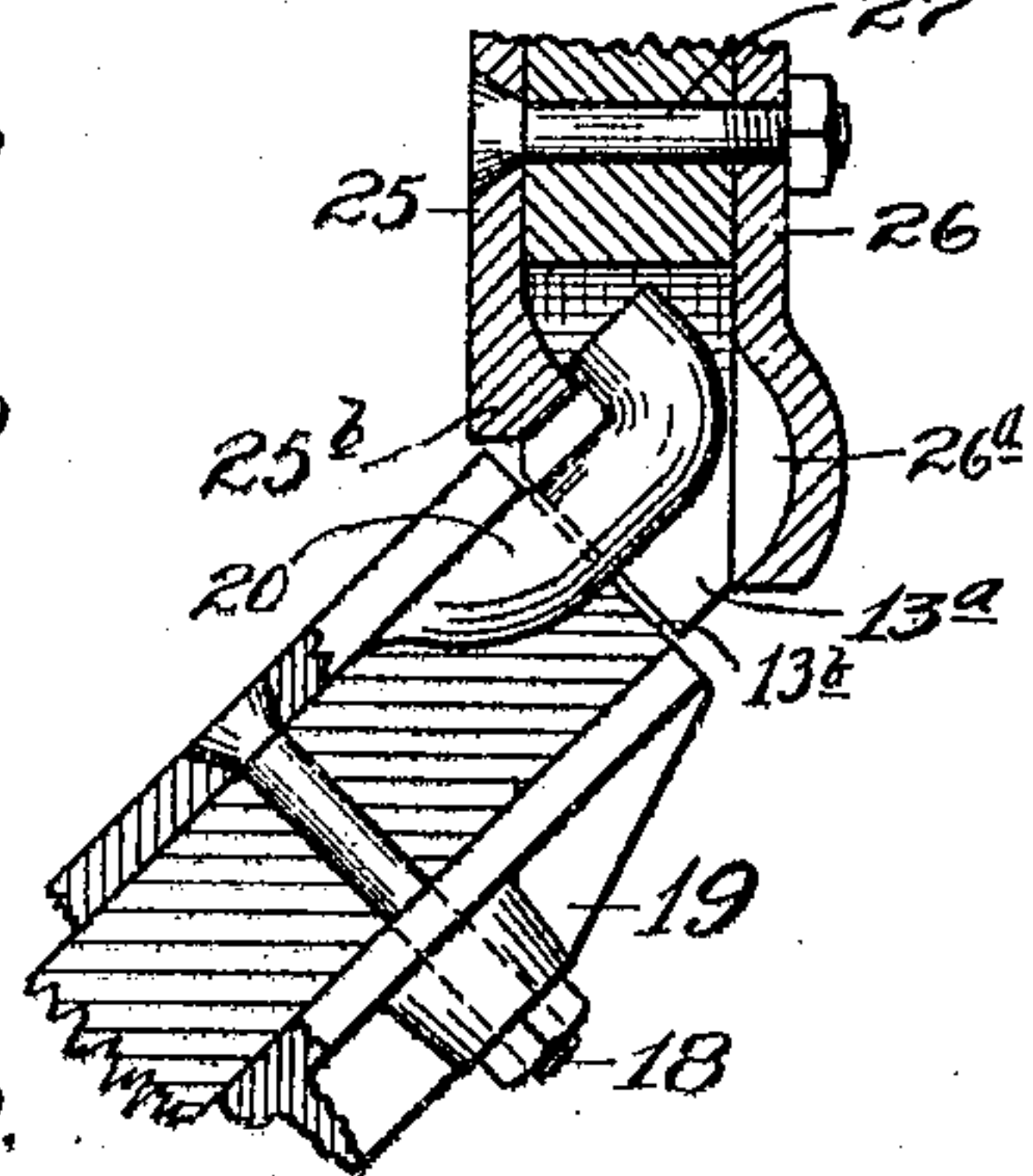
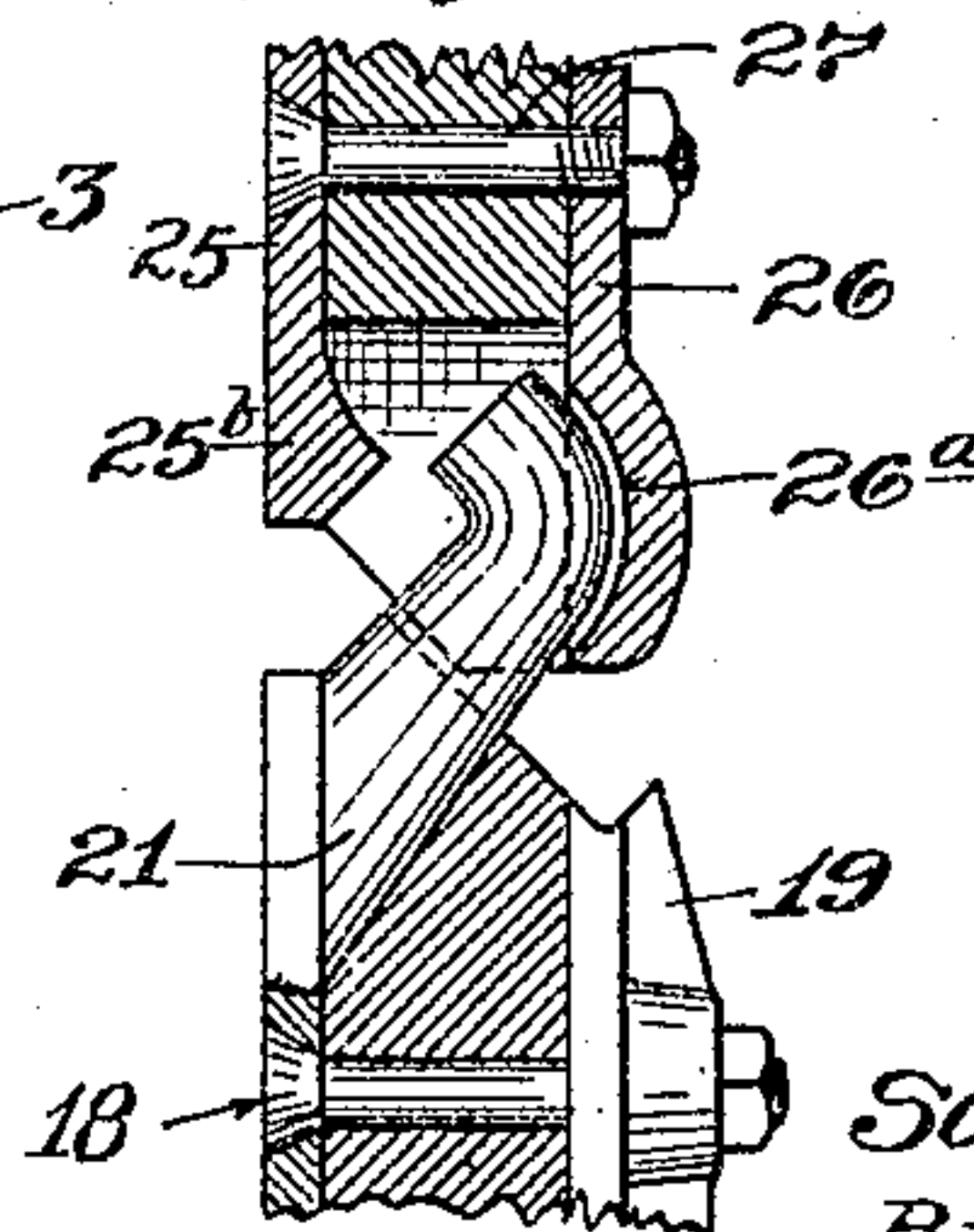


Fig. 9.



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UNITED STATES PATENT OFFICE.

SOREN C. PAULSON, OF BRECKENRIDGE, MINNESOTA.

CONVERTIBLE WAGON-BOX.

SPECIFICATION forming part of Letters Patent No. 764,672, dated July 12, 1904.

Application filed March 26, 1904. Serial No. 200,082. (No model.)

To all whom it may concern:

Be it known that I, SOREN C. PAULSON, a citizen of the United States, residing at Breckenridge, in the county of Wilkin and State of Minnesota, have invented certain new and useful Improvements in Convertible Wagon-Boxes; 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.

My invention has for its object to provide an improved wagon-box of simple, strong, and efficient construction which is adapted to be quickly converted into different forms for different uses; and to this end it consists of the novel devices and combinations of devices hereinafter described, and defined in the claims.

The invention is illustrated in the accompanying drawings, wherein like characters indicate like parts throughout the several views.

Figure 1 is a plan view showing a portion of a wagon-box designed in accordance with my invention. Fig. 2 is a transverse vertical section taken on the irregular line $x^2 x^2$ of Fig. 1. Fig. 3 is a side elevation showing a portion of the wagon-box with the parts thereof adjusted as shown in Figs. 1 and 2. Fig. 4 is a plan view corresponding to Fig. 1, but illustrating a different adjustment of the adjustable parts of the wagon-box. Fig. 5 is a transverse vertical section on the line $x^5 x^5$ of Fig. 4. Fig. 6 is a detail in vertical section on the line $x^6 x^6$ of Fig. 3, some parts being broken away and some being shown in full. Fig. 7 is a vertical section approximately on the line $x^7 x^7$ of Fig. 6. Fig. 8 is a transverse section approximately on the line $x^8 x^8$ of Fig. 3. Fig. 9 is a transverse section approximately on the line $x^9 x^9$ of Fig. 3. Fig. 10 is a vertical section approximately on the line $x^{10} x^{10}$ of Fig. 4, and Fig. 11 is a section approximately on the line $x^{11} x^{11}$ of Fig. 4.

The numeral 1 indicates the body of the wagon-box proper, which body is shown as bolted to transverse body-beams 2. Angle-brackets 3 are bolted to the projecting ends of the beams 2 and to the sides of the box 1 to brace the sides against outward spreading

movements. Metallic straps 4 are bolted to the inner surfaces of the sides of the box 1 by means of nutted bolts 5 passed through the said parts and through the vertical portions of the angle-brackets 3, as best shown in Figs. 6 and 7. At their lower ends the straps 4 are formed with hooks 6, that interlock with staple-bolts 7, which bolts are passed downward through the beams 2 and are provided at their lower ends with nuts 8. The bottom of the wagon-box is cut away to afford clearance for the hooks 6, as best shown in Figs. 6 and 7.

The front and end boards of the wagon-box 1 are slid downward into working position in channels formed by parallel flanges 4^a, formed on the end members of the straps 4. The usual tie-rods 11 are passed through the sides of the wagon-box at its ends to assist in holding the side-boards of the box against spreading movements. When the end-boards, the tie-rods, and the bolts 5 are removed, the side-boards of the box may be detached by turning them inward, so as to disengage their hooks 6 from the staple-bolts 7. When the said hooks and staple-bolts are engaged, as shown in Figs. 6 and 7, they assist in tying together the sides and bottom of the box.

To form extensions to the box described and to render the same convertible to different forms, I provide supplemental side-boards 12 and 13, supplemental end-boards 14 and 15, and so-called "filling-boards" 16. The supplemental side-boards 12 are provided in vertical line with the straps 4 of the body-box 1 with metallic straps 17, secured thereby by nutted bolts 18, passed through said boards 12 and, as shown, also through outside stiffening-straps 19. (See Figs. 8 and 10.) At one end said straps 17 are formed with projecting hooks 20, and at their other ends they are formed with projecting hooks 21. The said hooks 20 and 21 are adapted to be inserted into recesses 22, formed in the sides of the box 1, and their ends are adapted to be interlocked with perforations 23, formed in the upper ends of the straps 4, as shown in Figs. 8 and 10 and as will hereinafter more fully appear. The bodies of the hooks 20 project parallel with the straps 17, while the bodies of the

hooks 21 project at an angle of approximately forty-five degrees to the said straps, so that when the parts are interlocked as shown at Fig. 8 the side-boards 12 will stand in a vertical position, while when the parts are interlocked as shown in Figs. 5 and 10 said boards 12 will stand at an incline of approximately forty-five degrees. Figs. 2 and 8 show the side-boards 12 turned with one edge up, while Figs. 5 and 10 show the said side-boards with their other edge turned up, and it will be noted that that edge of the board shown in Fig. 8 is cut at a right angle to the face of the board, while that edge shown at Fig. 10 is beveled. It will also be noted that the ends of the so-called "stiffening-straps" 19 in both positions of the boards 12 engage as stops with the upper ends of the brackets 3 and cooperate with the interlocked hooks and straps 4 to limit the outward lateral movements of the said side-boards 12.

The end straps 17, like the end straps 4, are provided with inwardly-projecting parallel flanges 17^a, which form channels that are adapted to receive the end-boards 14. Tie-rods 24 are preferably passed through the ends of the side-boards 12 to further tie them together when the parts are adjusted as shown in Figs. 1, 2, 3, and 8.

The side-boards 13 are provided with inner straps 25 and outer straps 26, which are bolted thereto by short nutted bolts 27. These straps 25 and 26 are adapted to aline vertically with the straps 17 and 19, respectively, of the side-boards 12, and the end members of said straps 25, like the end members of the straps 4 and 17, are formed with inwardly-projecting parallel flanges 25^a, which form channels adapted to receive the ends of the end-boards 15 when the parts are adjusted as shown in Fig. 2. The lower edges of the side-boards 15 are notched at 13^a to form seats adapted to receive the hooks 20 when the parts are adjusted as shown in Figs. 5 and 11 and to receive the hooks 21 when the parts are adjusted as shown in Figs. 2 and 9. Furthermore, the lower edges of the said side-boards 13 are beveled, as shown at 13^b, so as to form tight joints with the engaged edges of the side-boards 12 under both adjustments of said parts.

The lower ends of the straps 25 are formed with shoulders 25^b, adapted to interlock with the ends of the hooks 20 when the parts are adjusted as shown in Figs. 5 and 11, and the depending ends of the straps 26 are formed with sockets 26^a, adapted to interlock with the hooks 21 when the parts are adjusted as shown in Figs. 2 and 9. When the parts are adjusted as shown in Figs. 1, 2, 3, 8, and 9, tie-rods 28 are advisably passed through the ends of the side-boards 13 to tie them together. When the parts are adjusted as shown in Figs. 4, 5, 10, and 11, the outer edges of

the filling-boards 16 are adapted to fit into the channels formed by the flanges 17^a and 25^a, respectively, of the end straps 17 and 25. At their inner edges the filling-boards 16 have bolted or otherwise rigidly secured thereto channel-irons 29, which are adapted to brace and hold the ends of the end-boards 14.

At their bases the angle-brackets 3 are formed with projecting studs 30, over which are adapted to be telescoped the lower ends of tubular posts or struts 31, the upper ends of which when the parts are adjusted as shown in Fig. 5 are adapted to be inserted over depending studs 32, formed on the outer straps 19 of the side-boards 12. These posts or struts 31 support the greater part of the load put upon the inclined side-boards 12.

When the parts of the wagon-box are adjusted as shown in Figs. 1, 2, 3, 8, and 9, a very high wagon-box with vertical sides and ends is provided. Such a box is desirable for a great many different purposes—such, for instance, as for carrying pigs, sheep, and cattle, or for hauling grain in sacks. For many other purposes, however—such, for instance, as hauling grain in bulk—a wide-top box or grain-tank of greater carrying capacity is desired, and this, as is evident, is afforded by adjusting the parts as shown in Figs. 4, 5, 10, and 11. When the parts are adjusted as shown in the views just noted, long tie-rods 33 are passed through the ends of the upper side-boards 13.

From what has been said it will be understood that the box is capable of being very quickly adjusted from one form to the other, and it will also be understood that under either of the adjustments described a very strong box is provided. It is of course evident that the supplemental side and end boards may be very quickly removed from the box proper, leaving the wagon with an ordinary box. It will be further understood that the box described is capable of modification within the scope of my invention, as herein set forth and claimed.

What I claim, and desire to secure by Letters Patent of the United States, is as follows:

1. The combination with a wagon-box proper, of intermediate supplemental side-boards and end-boards, additional upper supplemental side-boards and end-boards, and angular filling-plates, which parts are constructed to interlock in different adjustments, said filling-plates being used as supplemental end-boards, when said intermediate supplemental side-boards are turned into inclined positions, substantially as described.

2. The combination with a wagon-box proper having vertical straps 4 with upper end perforations 23, of the supplemental side-boards 12, provided at one edge with hooks 20, and at their other edge with the hooks 21, the said boards 12 being beveled at 12^a, and the said hooks 20 and 21 being engageable with

the said perforations 23 according to which edge upwards said boards are turned, substantially as described.

3. The combination with a wagon-box proper, of intermediate supplemental side-boards 12 and end-boards 14, and the top supplemental side-boards 13 and end-boards 15, and the filling-boards 16, which supplemental side and end boards have interlocking parts and are adapted to be adjusted, substantially as described.

4. The combination with a wagon-box proper having vertical straps 4 with upper end perforations 23, of the reversible supplemental side-boards 12, the end-boards 14, the upper side-boards 13, the upper end-boards 15, the angular filling-plates 16, the straps 17, bolted to said side-boards 12 and terminating at their ends in the hooks 20 and 21, which

hooks are engageable with the perforations 23 or said box-strap 4, depending straps 25 and 26 bolted to said side-boards 13 and engageable with said hooks 20 and 21, the end members of said straps 17 and 25 having respectively flanges 17^a and 25^a for embracing the ends of the end-boards 14 and 15 or the outer edges of the filling-plates 16, said filling-plates having, at their inner edges, channel-strips for engaging the ends of said end-boards 14, and detachable posts or struts 31 for bracing the boards 12 from the body of the box, substantially as described.

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

SOREN C. PAULSON.

Witnesses:

H. L. SHIRLEY,

T. E. KNUDSON.