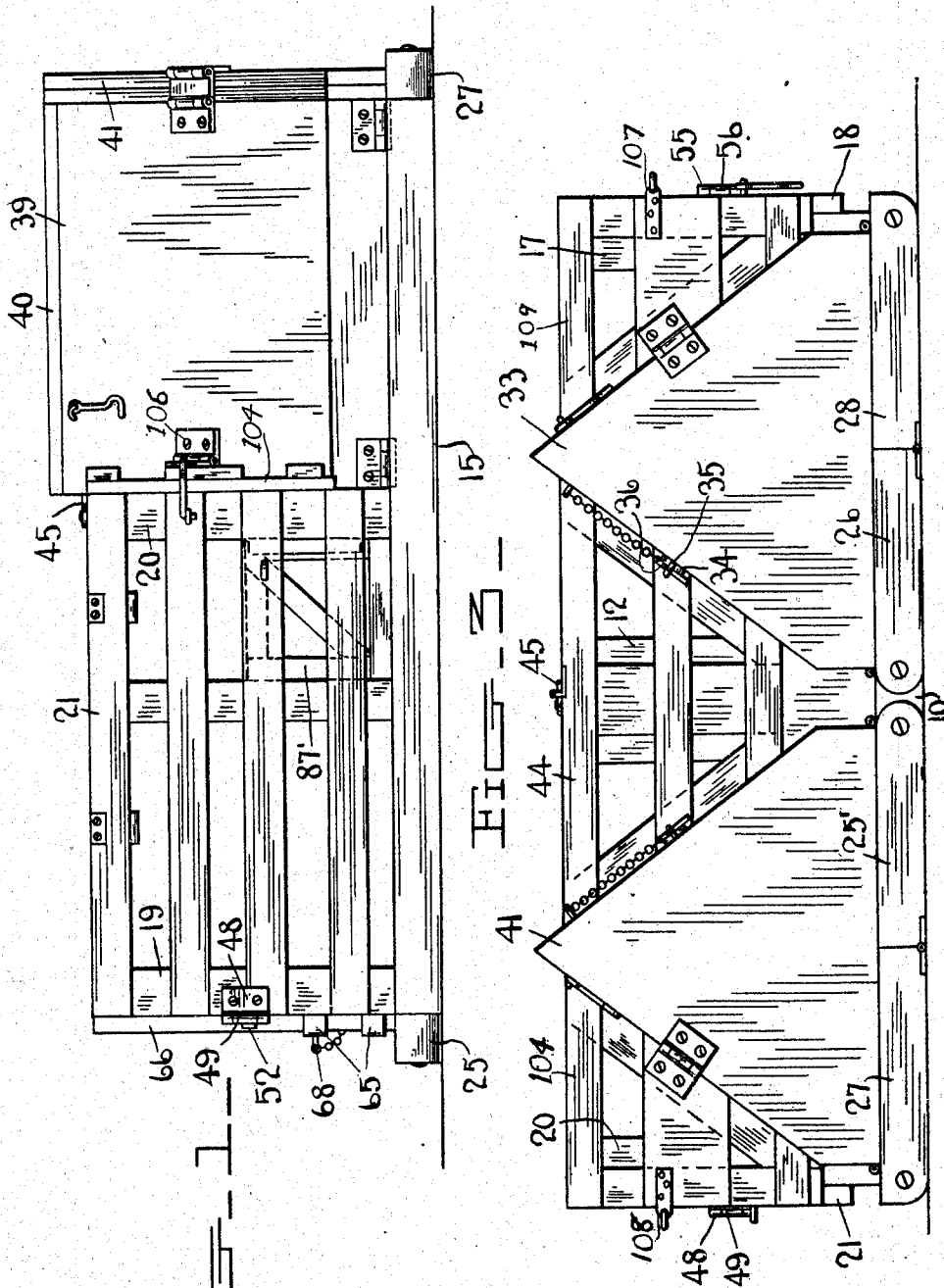


W. C. SMITH.
FOLDABLE AND PORTABLE STOCK PEN.
APPLICATION FILED MAR. 29, 1909.

948,351.

Patented Feb. 8, 1910.

4 SHEETS—SHEET 1.



Inventor

William C. Smith

[Signature]

Attorneys

Witnesses

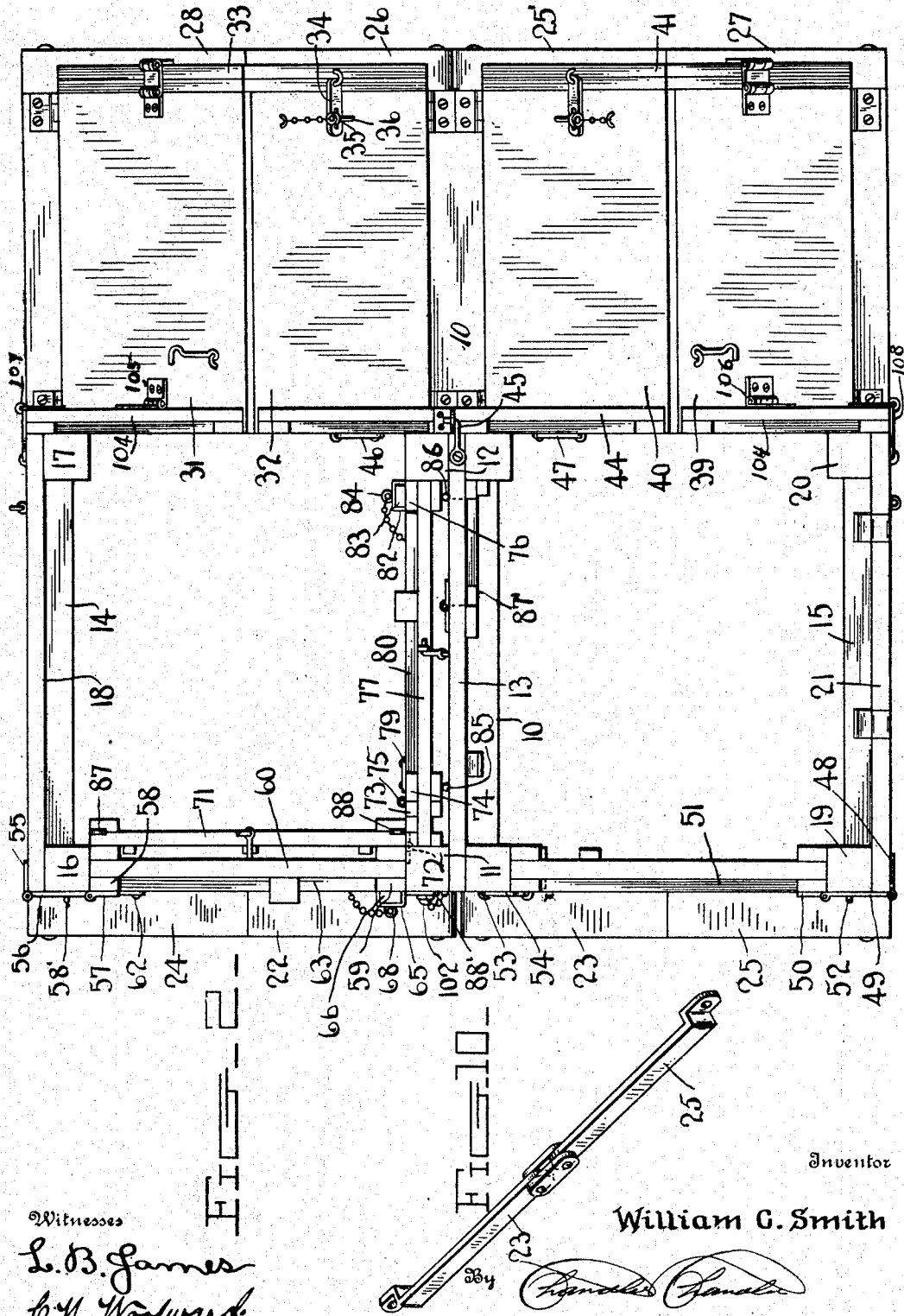
L. B. Garner
C. H. Woodward

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Witnesses

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C. H. Woodward

Inventor

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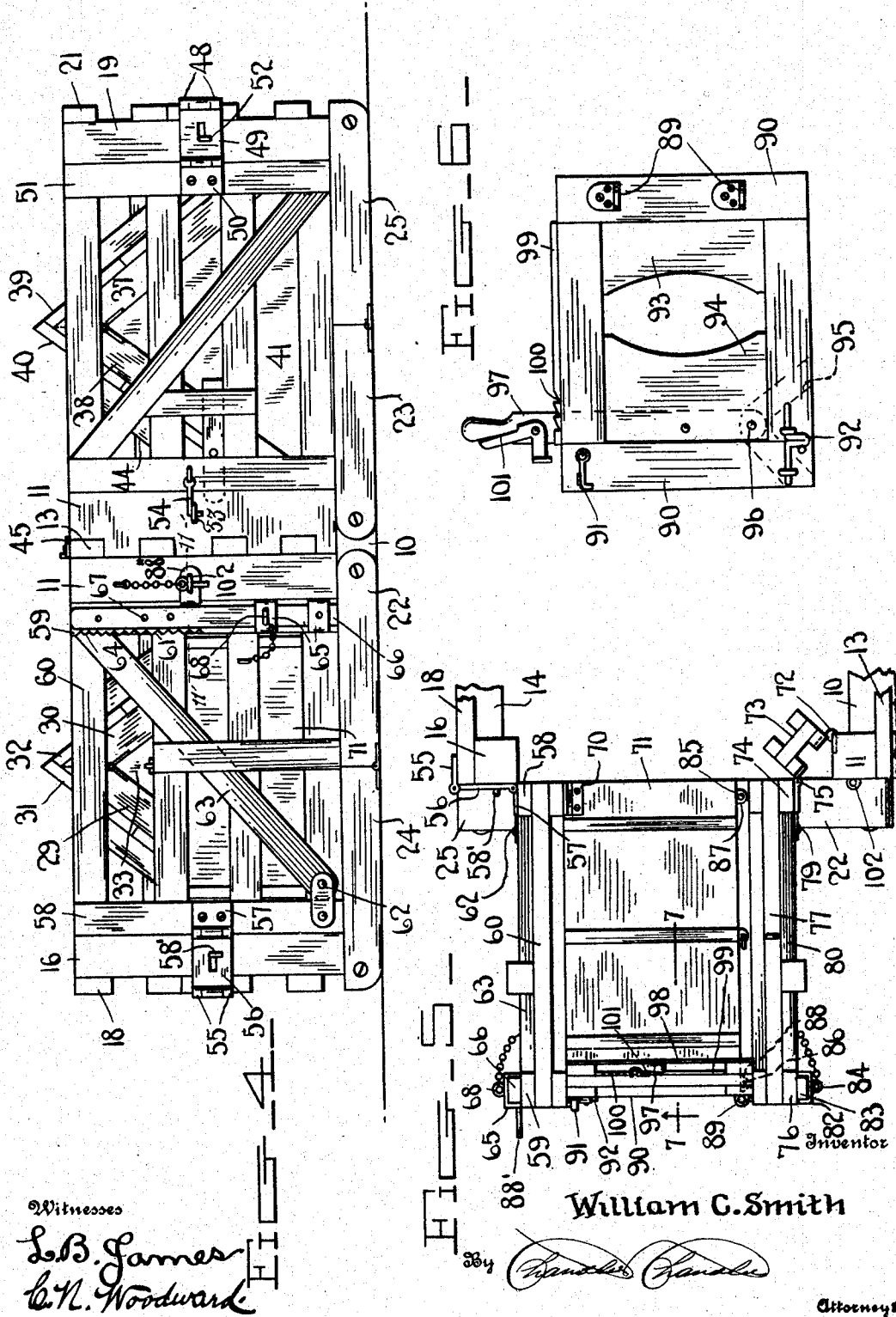
Attorneys

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4 SHEETS—SHEET 3.

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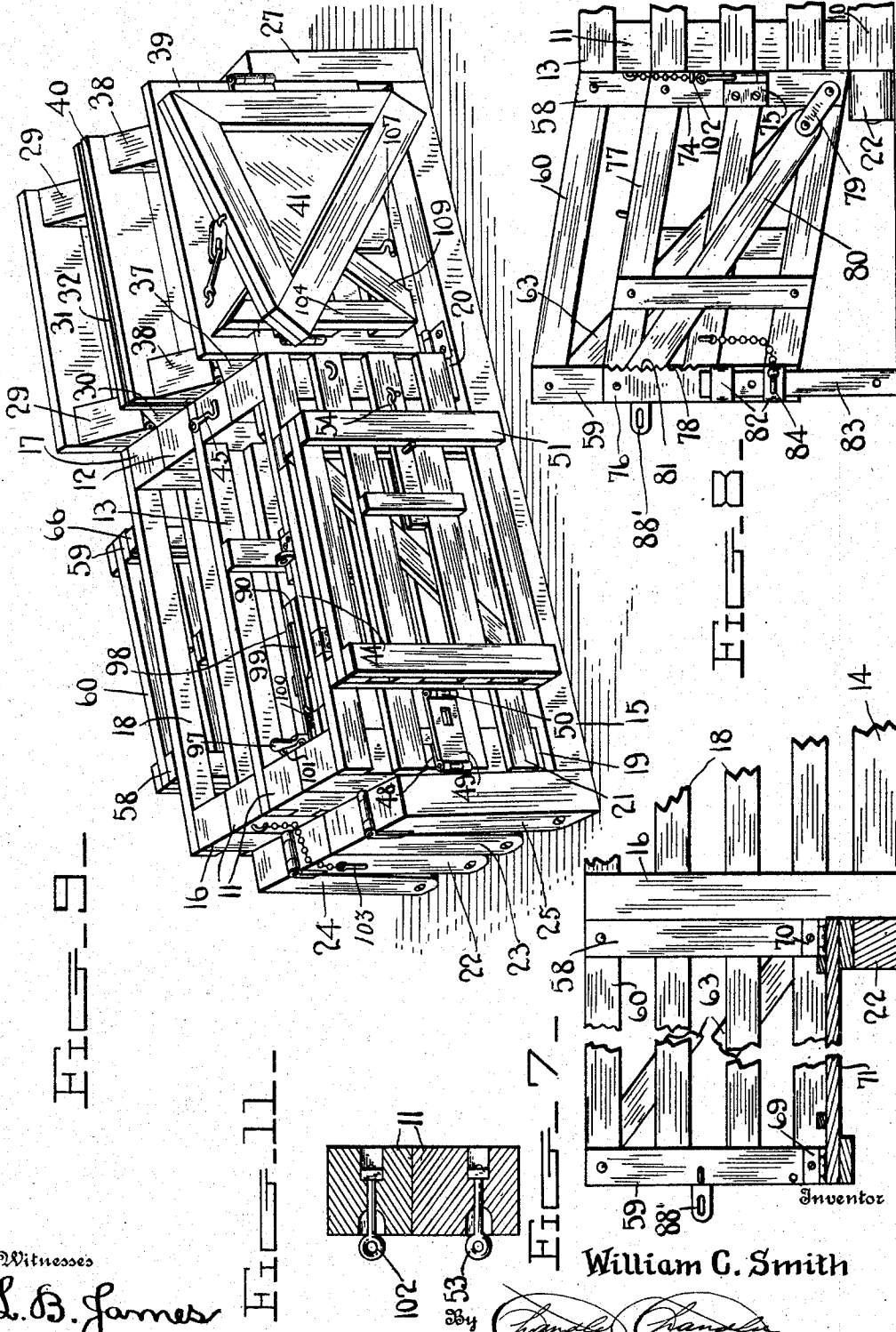


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4 SHEETS—SHEET 4.



Witnesses

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C. H. Woodward

William C. Smith

Attorneys

UNITED STATES PATENT OFFICE.

WILLIAM C. SMITH, OF KEARNEY, MISSOURI.

FOLDABLE AND PORTABLE STOCK-PEN.

948,351.

Specification of Letters Patent.

Patented Feb. 8, 1910.

Application filed March 29, 1909. Serial No. 486,550.

To all whom it may concern:

Be it known that I, WILLIAM C. SMITH, a citizen of the United States, residing at Kearney, in the county of Clay, State of Missouri, have invented certain new and useful Improvements in Foldable and Portable Stock-Pens; 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.

This invention relates to foldable and portable stock pens, more particularly to devices of this character employed for protecting, and restraining and housing hogs, but which may be adapted without material structural changes to stock of different kinds, and has for one of its objects to improve the construction and increase the efficiency and utility of devices of this character.

Another object of the invention is to provide a simply constructed device which may be folded into relatively small space when not in use, or when it is to be transported or stored, and readily extensible for use and adapted to be located at any required point.

Another object of the device is to provide a portable stock pen which may be readily moved from place to place without detaching any of the parts.

With these and other objects in view, the invention consists in certain novel features of construction as hereafter shown and described.

The device may be constructed of any required size or of any suitable material, but will preferably be of wood suitably bolted or otherwise fastened together and comprises in general a yard or inclosure and a shelter house or shed communicating with the yard or inclosure, and preferably arranged in series, or with a number of the yards or inclosures and their shelter sheds foldably connected, and for the purpose of illustration, two of the foldable devices are shown connected, but it will be understood that it is not desired to limit the invention to any particular number of the connected devices.

In the drawings illustrative of the preferred embodiment of the invention, Figure 1 is a side elevation of the improved device in its open or operative position. Fig. 2 is a plan view of the same. Fig. 3 is a rear elevation. Fig. 4 is a front elevation. Fig.

5 is a plan view illustrating the manner of employing the device for holding hogs while rings are being applied to their noses. Fig. 6 is a front elevation of the device for holding the nose of an animal while a ring is being applied. Fig. 7 is a section on the line 7—7 of Fig. 5. Fig. 8 is a side elevation illustrating the manner of employing the device as a chute or runway for loading hogs into a wagon or other receptacle. Fig. 9 is a perspective view of the device in folded position. Fig. 10 is a perspective view of one of the sill coupling links, detached, illustrating a modification in the construction. Fig. 11 is a sectional detail on the line 11—11 of Fig. 4, illustrating the construction of the locking device.

In its simpler form the improved apparatus comprises a central stationary sill and a central stationary division wall or fence extending from the central sill, side sills spaced from the central sill and provided with side walls or fences and foldably connected to the central sill. The fences or division walls extend for a portion only of the lengths of the sills, and the improved shelter sheds are foldably connected to each other and likewise connected to the portions of the sills not occupied by the division walls and fences.

The stationary central sill is represented at 10, and rising from this central sill is a vertical outer post 11 and a vertical inner post 12, the vertical posts being connected by spaced rails 13, the posts and rails thus forming a fencelike structure.

The post 12 is located at some distance from one end of the sill 10, and in practice the fence structure comprised in the posts 12—11 and rails 13 occupies about two-thirds of the length of the sill, but it will be understood that these proportions may be altered as required.

The side rails are represented respectively at 14—15, and are of the same length as the central sill 10. The sill 14 is provided with spaced vertical posts 16—17 connected by rails 18, while the sill 15 is provided with spaced vertical posts 19—20 connected by rails 21. The posts 11—16—19 are arranged at one end of the sills 10—14—15 while the posts 12—17—20 are located intermediate the sills and in alinement transversely. The three fence structures are thus uniform in size and form the side walls of two "yards" or "pens" as hereafter explained.

Pivoted at their adjacent ends to the central sill 10 at one end thereof are links or bars 22—23, and pivoted respectively to the side sills 14—15 at one end are similar links 24—25, the links 22—24 being hingedly united at their confronting ends. Pivoted to the opposite ends of the central sill are links 25'—26, and pivotally united respectively to the side sills 14—15 are links 28—27. The links 25'—27 are hingedly united at their confronting ends, while the links 26—28 are similarly hingedly united at their confronting ends. By this means the side sills together with their fence structures may be moved toward and away from the central sill by folding the links upwardly as shown in Fig. 9, or extended as shown in Figs. 1 to 4.

The shelter structures are associated with the yards or pens which are located respectively between the sills 10 and 14 and the sills 10—15. One of the shelter structures consists of rafters 29—30 hingedly united at their lower ends respectively to the side sill 14 and the central sill 10, and likewise hingedly united at their confronting or upper ends, the rafters being thus arranged when in open position obliquely to the transverse planes of the sills. The rafter members 29—30 are covered by sheathing material 31—32. By this arrangement when the rafters 29—30 and their sheathing or covering members are arranged in their open position, as shown in Figs. 1 to 4, an efficient shelter is provided communicating with the yard or pen which is defined by the fence structures carried by the sills 10—14. Hingedly united to the rafters 29 and its sill member 31 is a closure 33, adapted to close the outer end of the shelter as shown. The closure 33 is provided with a suitable fastening device such as a hasp 34 and staple 35 through which a pin 36 may be passed.

The shelter for the yard or pen which is located between the sills 10—15 is constructed precisely like the shelter just described, and is constructed of rafters 37—38, cover members 39—40 and a hinged closure 41, the latter provided with suitable fastening means as shown. By this arrangement it will be understood that when the closures 33—41 are released the shelter devices will fold together with the inner faces of the rafters bearing against each other when the sill members are moved inwardly or toward each other as before described. The shelter portions of the device are thus foldable together with the sill members and their fences and division members as will be obvious.

Located between the cover portions 32—40 is an angular closure structure 44 to fill the gap which would otherwise occur between the cover members 32—40 and the central fence structure 11—12—13. The closure structure 44 is detachably supported in po-

sition by suitable hooks and staples 45—46—47.

Located between the side structures 18—21 adjacent to the portions 31—39 of the shelter devices are angular shaped closure structures 109—104. These closure structures are hingedly united as shown at 105—106 respectively to the shelter members 39—31, as shown, and are likewise connected by suitable hook devices 107—108 to the side structures 18—21. By this means the closure structures 109—104 are foldable respectively upon the shelter structures 39—31 when the device is arranged in folded position as shown in Fig. 9.

Connected to the posts 19 is a three part hinge formed of three leaves 48—49—50, the leaf 48 being secured by screws or other fastening means to the rails 21 and the posts 19, while the leaf 50 is secured by screws or other fastening means to a gate structure represented as a whole at 51. The gate 51 is designed to close the otherwise open end of the yard or pen which is located between the sills 10—15. The central leaf 49 is provided with an intermediate slot which is arranged to fit over a rotatable hook 52 extending from the post 19. By this means when the gate 51 is closed the hook 52 will project through the slot in the leaf 49, and then by turning the hook one-fourth of a revolution it will form a lock to hold the hinged leaf connected to the post, and thus swingingly couple the gate 51 to the fence structure 19—20—21. When thus arranged the gate 51 forms a movable closure to the yard or pen, as will be understood.

The post 11 is provided with a slidable staple 53 with which a hook 54 on the gate 51 engages to secure the gate in its closed position. The staple 53 is arranged to be withdrawn into the post 11 when not in use to permit the link 23 to fold in close relations to the post as shown in Fig. 11.

When the device is to be folded the hooks 52—54 are released and the gate 51 swung around in parallel relations to the outer face of the fence structure 19—20—21. The triple form of the hinge by which the gate is supported is thus an important feature of the device and enables the gate to be disposed in convenient position when the device is to be folded.

Connected to the rails 18 and the post 16 is another three part hinge formed of three leaves 55—56—57, the leaf 55 being connected by screws or other fastening means to the rails 18 and the post 16, while the leaf 57 is secured by screws or other fastening means to an end member 58 of a gate structure which operates as a closure to the yard or pen which is defined by the sills 10—14, the construction of this latter gate to be hereafter described.

The central hinge leaf 56 is provided with

an intermediate slot adapted to engage over a rotatable hook 58' similar to the hook 52 of the first described gate, and operating in the same manner to hold the hinged leaf 56 in locked position relative to the post 16 when the gate is not closed as shown.

The gate structure which is employed as a closure to the yard or pen which is defined by the sills 10—14 and their fence structures, consists of end posts 58—59 and connecting rails 60, the rails being pivotally connected at their ends respectively to the end members, as shown, so that the rails operate as radius bars to enable the outer end member 59 to be adjusted upwardly and downwardly. The end member 59 is provided with a plurality of spaced notches 61, and swinging at 62 from the end member 58 is a brace 63, the free end of the brace being provided with notches 64 corresponding to and adapted to engage in the notches 61. By this means it will be obvious that by adjusting the brace with its notches 64 engaging in the notches 61 at a higher or lower point, the outer or free end of the gate structure may be adjusted correspondingly.

Connected to the outer gate member 59 are spaced keepers 65, and slidably arranged for operation through these keepers is a standard 66 having a plurality of spaced sockets 67 with which a pin 68 is designed to be engaged through one of the keepers, to adjust the standard vertically as hereafter explained.

Hingedly united at 69—70 to the gate members 58—59 is a runway or foot-board 71. The hinges 69—70 are united by a single bolt to the gate members 58—59 so that when the gate is adjusted vertically as before described, the foot-board 71 will move with the gate, to prevent cramping between the parts when the adjustments are made.

Hinged at 72 to the post 11 is a relatively narrow gate like coupling structure 73 to whose free end the end member 74 of another gate structure is hinged at 75, this last mentioned gate structure comprising the inner end member 74 outer end member 76 and rail members 77. The rail members are each united to the end members by a single bolt, so that the free end of this gate structure may be adjusted vertically. The end member 76 is provided with a plurality of spaced notches 78, and united at 79 to the end member 74 is a brace 80, the free end of the brace having notches 81 adapted to engage with the notches 78 and thus support the gate structure with its free end at any desired point of elevation. Connected to the end member 76 are keepers 82, and slidable through these keepers is a standard 83 provided with a plurality of spaced apertures to receive a pin 84 operating through the keeper. By this means the standard is adapted to be adjusted vertically.

The end members 74—76 are provided with supporting hooks 85—86 over which loops 87—88 engage to couple the foot board 71 to the gate structure 74—76—77.

The adjustable gate and foot board just described when thus coupled form a convenient and efficient chute whereby hogs may be readily discharged singly from the yard or pen.

When it is desired to arrange the chute or discharge portion of the device for its simpler purposes the standards 66—83 will be adjusted vertically with their lower ends bearing upon the ground, and thus effectually supporting the outer end of the chute structure. When it is desired to employ the chute structure for loading hogs into a wagon or other elevated receptacle, the braces 63—80 are adjusted to support the outer ends of the chute structures in an elevated position or with the free end of the foot board level with the floor of the wagon, and at the same time adjust the standards 66—83 to support the structure from the ground, the range of the standards being sufficient to support the face ends of the chute structure at any required point. By this simple means the convenience and efficiency of the device is materially increased.

The division fence structure formed by the posts 11—12 and the rails 13 is preferably formed with a small hinged gate 87', so that hogs may be transferred from one pen to the other as required. The smaller gate also enables all of the hogs to be discharged from both pens through one chute structure.

Formed upon the end member 76 are studs or pintle members 88' over which eyes 89 on a frame 90 are adapted to be disposed to hingedly connect the frame to the end member. At its opposite end the frame 90 is provided with a latch 91 and a bolt 92 by which it may be coupled to the end member 59. The frame 90 thus forms a closure to the outer end of the chute. Connected to the frame 90 is a partial closure plate 93, and slidably arranged within the frame is another partial closure plate 94, the confronting edges of the plates being reversely concaved or hollowed. The two members 93—94 are thus adapted to hold the snout or nose of a hog while a ring is being applied thereto.

Connected to the frame 90 is a bracket 95, and swinging at 96 in this bracket is a lever 97, the lever being pivotally united to the sliding plate 94, so that when the lever is actuated the plate will be correspondingly actuated or moved toward or away from the stationary plate 93. By this means it will be obvious that the member 94 may be forcibly compressed against the nose of the hog when the latter is inserted between the members.

The frame 90 is provided with a guard plate 98 between which and the frame the lever 97 operates. A wear plate 99 is also arranged upon the frame 90 against which the lever works. The wear plate 99 is provided with a plurality of spaced notches 100 with which a latch 101 on the lever engages, to hold the lever in any desired position and thus form a lock device between the lever and the frame. By this means any grip which may be obtained upon the slidable member 94 may be retained, as will be obvious.

By arranging the frame 90 and its attachments across the outlet of the chute and operating the lever to close the slidable plate, a hog may be firmly held in position while the rings are being applied with the usual implements employed for this purpose.

The post 11 is provided with a slidable staple 102 corresponding to the slidable staple 53, to receive a hasp on the gate member 59 and through which a pin or other fastening device may be inserted, to lock the gate in position, the slidable staples providing for the passage of the links 22—23 when the device is arranged in folded position, as will be obvious.

The hooks 47—48 of the closure member 44 will be adapted to engage with slidable staples arranged to be withdrawn into the adjacent rafters of the shelter devices, in the same manner as the staples 53—102 are arranged to be withdrawn, so that the rafters will move in close proximity to post 12 when folded as will be understood.

The sills 10—14—15 rest upon the ground, and when the improved device is to be transported from place to place it is only necessary to hitch a team thereto and drag it to any required point. When it is desired to change the locality of the device for any reason, if the new locality is not too far distant, the device may be dragged over the ground without removing the hogs therefrom, as the hogs will follow the movements of the pens and shelters.

The improved device will be found very convenient for use by farmers who may desire to move their stock pens from one place to another upon the farm, or who may desire to shelter or protect stock for a short time or temporarily.

When it is desired to fold the apparatus the movable gate structures are released and arranged in position parallel to and against the outer fence structures. The closure members 33—41 are then released and folded respectively upon the covers 31—39, the closure structure 44 removed, the closures 33—41 disconnected and folded respectively upon the closures 39—31, and the hinged links buckled or folded upwardly and the sill members moved into relatively close

proximity as shown in Fig. 9. The improved device when in this condition may be readily transported or shipped as required.

Extending from the gate member 59 is a hasp 88' arranged to bear over a staple 102 on the vertical member 11, so that the gate may be locked in position by a pin 103, as shown.

The improved device is simple in construction, can be inexpensively constructed from any suitable material and of any suitable capacity. The shelter structures being pointed or roof like in form effectually shed rain and snow and thus protect the animals.

What is claimed, is:—

1. In a portable stock pen, a central dividing fence structure, side fence structures spaced from the central fence structure, means for coupling said side fence structures to said central structure, and shelter devices connected to said central and side fence structures, said side fence structures being movable toward and away from each other and said shelter structures foldable together.

2. In a portable stock pen, a central dividing fence structure, side fence structures spaced from the central fence structure, means for coupling said side fence structures to said central fence structure for movement toward and away from each other, shelter structures connected to fold between said central fence structure and side fence structures, closures movably connected between said side fence structures and central fence structure, and closures movably connected to said shelter structure.

3. In a portable stock pen, a central longitudinal sill, side sills arranged in parallel relations to said central sill, means for connecting said side sills and central sill for movement toward and away from each other, a dividing fence structure extending vertically from said central sill, side fence structures extending vertically from said side sills, shelter structures connected respectively to said central sill and to said side sills and foldable between the same, closures between said side fence structures and central fence structure, and closures to said shelter structures.

4. In a portable stock pen, a central longitudinal sill, side sills arranged in parallel relations to said central sill, means for connecting said side sills and central sill for movement toward and away from each other, a division fence structure extending from said central sill, side fence structures extending from said side sills, shelter structures movably connected respectively to said central sill and side sills, and foldable between the same, closures between said side fence structures and central fence structure and

movably connected thereto and closures to said shelter structures and foldable over the same.

5. In a portable stock pen, a central longitudinal sill, side sills, arranged in parallel relations to said central sill, means for connecting said side sills and central sill for movement toward and away from each other, a dividing fence structure extending vertically from said central sill, side fence structures spaced from the central fence structure, shelter structures formed of side members movably connected respectively to said sill members and extending obliquely therefrom and hingedly united at their free ends, closures extending between said shelter structures and central fence structure and movably connected thereto, and closures between said side fence structures and central structures.

6. In a portable stock pen a central dividing fence structure, side fence structures, means for coupling said side fence structures to said central fence structure for movement toward and away from each other, shelter structures formed of side members connected respectively to said central fence structure and side fence structures and extending obliquely therefrom, closures connected between said dividing structure and said side fence structures, closures between said side fence structures and said shelter structure, a closure between said shelter structures, and closures connected to said shelter structures at their outer ends.

7. In a portable stock pen, a central dividing fence structure, side fence structures, means for coupling said side fence structures to said central fence structure for movement toward and away from the same, shelter structures connected to said central and side fence structures, closures to said shelter structures, and closures extending between said dividing fence structures and said side fence structure.

8. In a portable stock pen a central dividing structure, side structures, means for coupling said side structures to said central structure for movement toward and away from the same, shelter structures formed of side members connected respectively to said central structure and side structures, and extending obliquely therefrom, closures connected between said dividing structure and side structures, closures between said side fence structures and said shelter structure, a closure between said shelter structures, and closures connected to said shelter structures at their outer ends.

9. In a portable stock pen, a central longitudinal sill, side sills arranged in parallel relations to said central sill, means for connecting said side sills and central sill for movement toward and away from each other, a dividing fence structure extending

from said central sill, side fence structures extending from said side sills, shelter structures comprising rafter members hingedly united at their outer ends to said sill members and hingedly united to each other at their confronting ends, cover members engaging over said rafters, closures connected between said central dividing fence structure and said side fence structures, closures connected to the outer ends of said shelter structures, and movable closures between said shelter structures and said dividing fence structure and side fence structures.

10. In a portable stock pen, a central dividing fence structure having a transverse opening, a closure for said opening, side fence structures, means for coupling said side fence structures to said central structure, shelter structures connected to said central and side fence structures, closures connected to said shelter structures, closures connected to said side fence structures, a runway connected to one of said closures, a guard structure mounted to swing from said central dividing fence structure, means for coupling said guard structure to said runway, and means arranged to support the free end of said runway.

11. In a portable stock pen a central dividing fence structure, side fence structures, means for coupling said side fence structures to said central fence structure for movement toward and away from the same, a closure swinging from one of said side fence structures and comprising end members and a plurality of spaced rails, the rails being connected to the end members by a single bolt and one of the end members provided with a plurality of notches, a brace connected to swing from the other end member and engaging at its free end in said notches, a runway connected to said end members, a guard device mounted to swing from the central dividing fence structure, said guard device consisting of end members and a plurality of spaced rails each rail being coupled at each end respectively to the end members by a single bolt, and one of the end members of the guard device being provided with a plurality of notches, a brace connected to swing from the other end member of the guard device and engaging at its free end in the last mentioned notches, means for coupling the end members of said guard device to said runway, and standards connected respectively to said movable closure and movable guard device.

12. In a portable stock pen a central dividing fence structure, side fence structures, means for movably coupling said side fence structures to said central fence structure for movement toward and away from the same, shelter structures connected to said central and side fence structures, closures

connected to said side fence structures, a
runway connected to one of said closures, a
guard device mounted to swing from said
central dividing fence structure, means for
5 coupling said guard structure to said run-
way, a frame detachably connected above
said runway, a stationary member within
said frame, a slidable member within said
frame, the confronting edges of said slidable
10 and said stationary members being reversely
concaved, means for actuating said slidable
member, closures between said dividing
fence structure and said side structures, and
closures for said shelter structures.
15 13. In a portable stock pen, a central
dividing fence structure, side fence struc-
tures, means for coupling said side fence
structures to said central fence structure for
movement toward and away from the same,
20 shelter structures connected to said central
and side fence structures, closures for said
shelter structures, movable closures between
said central fence structure and side fence

structures, three part hinges connected re-
spectively to said side fence structures and 25
to said closures, means for locking said
hinges to said side fence structures, and
means for detachably connecting said clo-
sures to said central dividing fence struc-
ture. 30

14. In a portable stock pen, a central
dividing structure, side structures spaced
from the central structure, closures between
said central structure and said side structure,
35 means for coupling said dividing structure
to said central structure for movement to-
ward and away from each other, shelter de-
vices connected to said central and side
structures, closures for said shelter devices,
said shelter devices being foldable together. 40

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

WILLIAM C. SMITH.

Witnesses:

H. S. MOORE,
ALLEN M. BATES.