

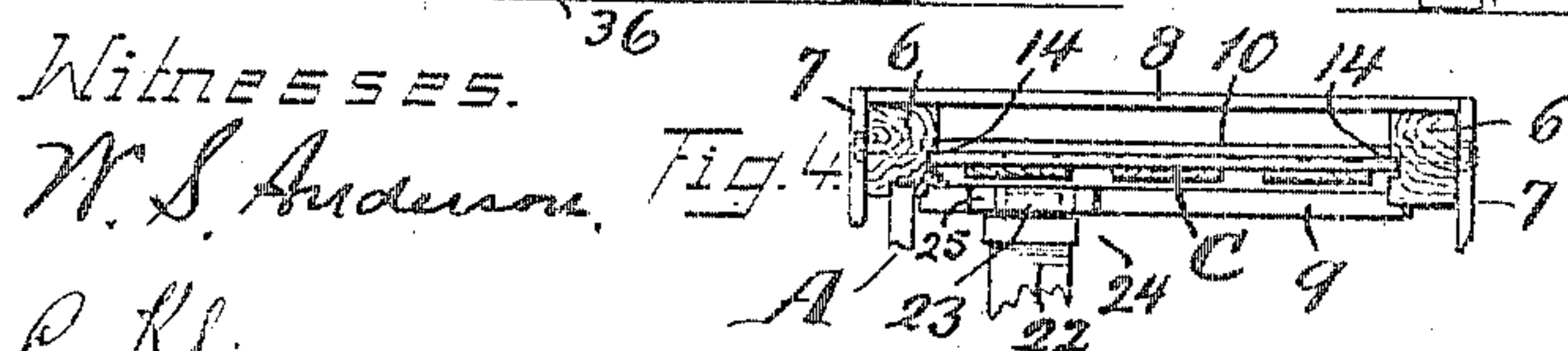
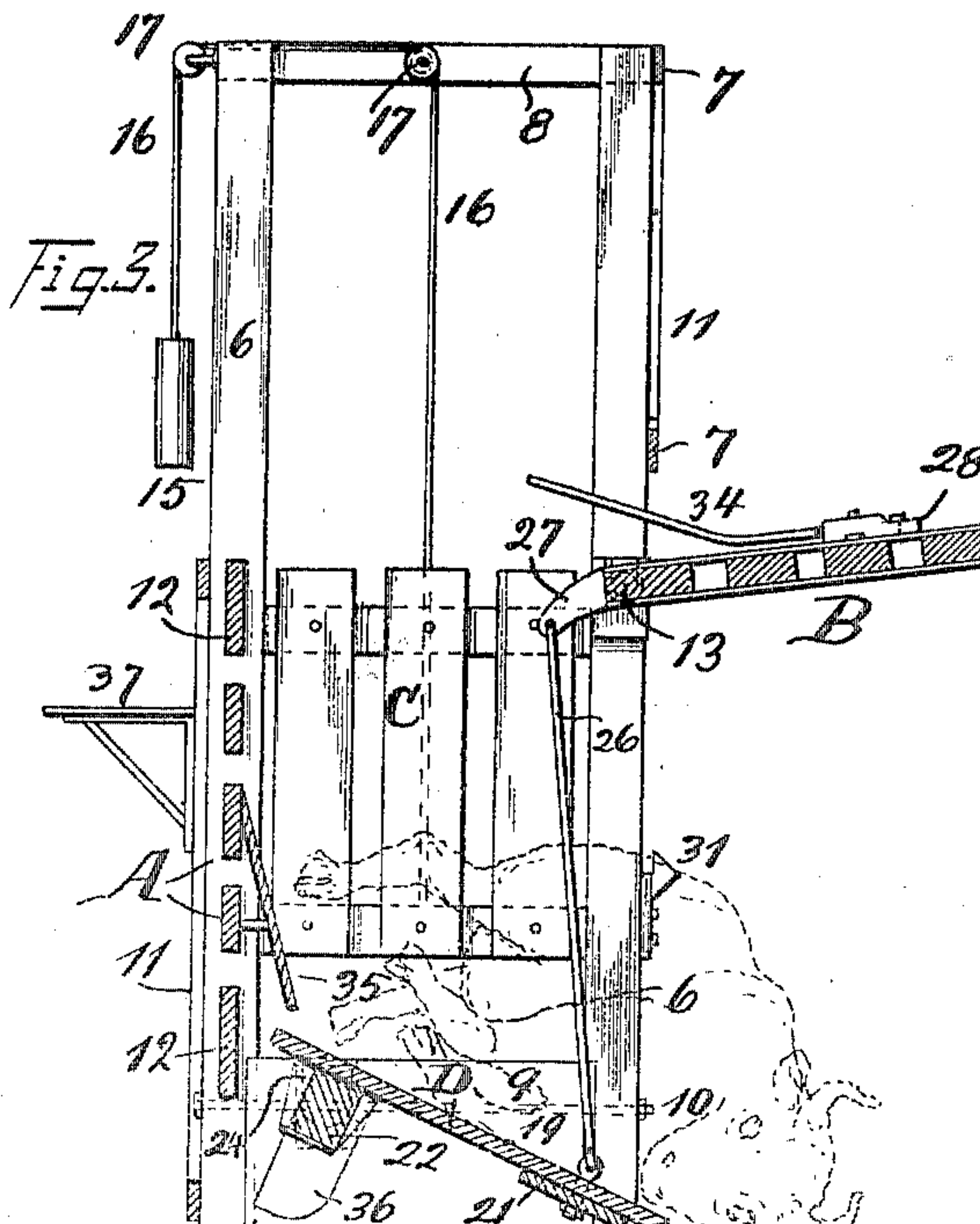
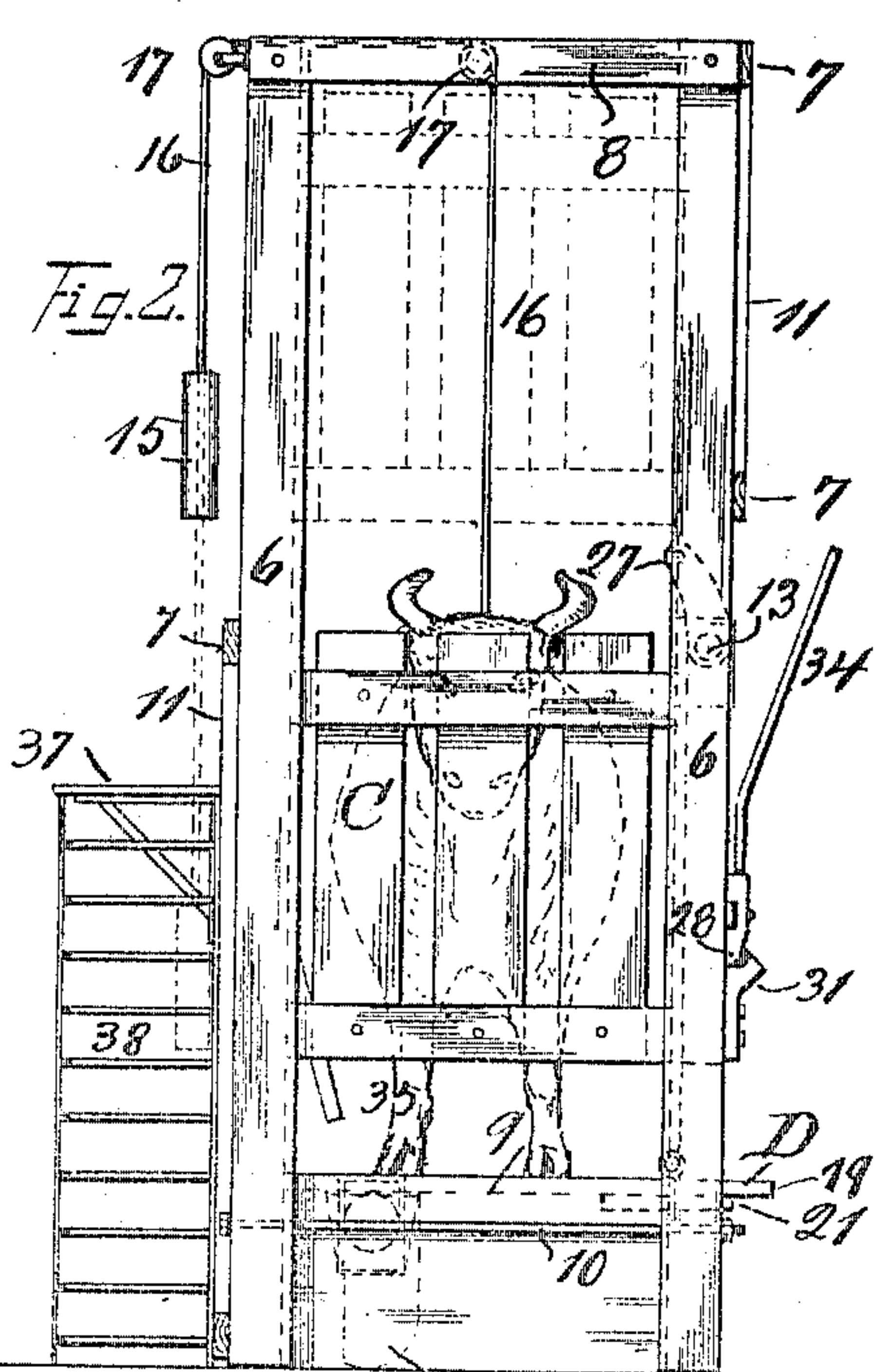
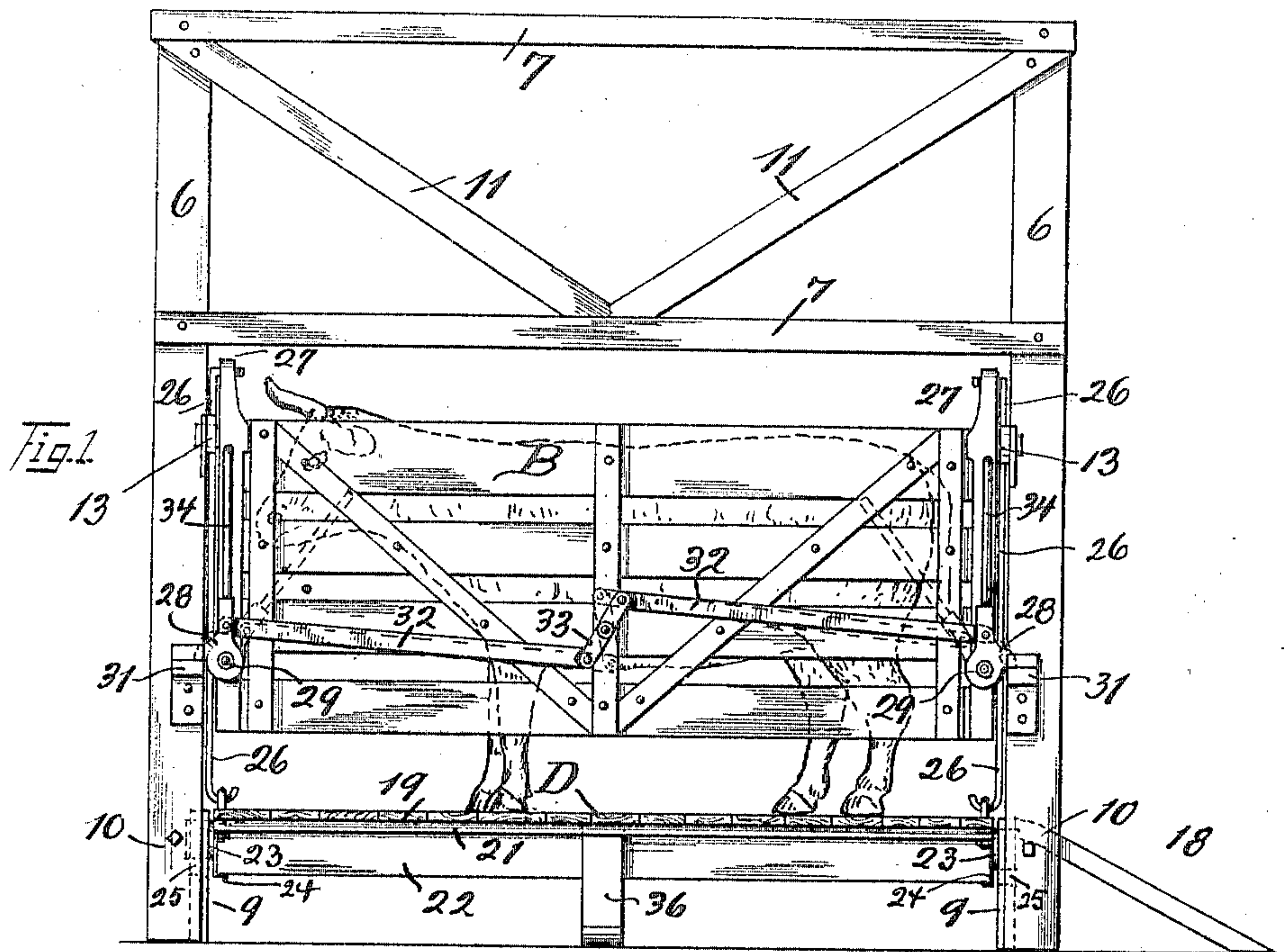
No. 811,958.

PATENTED FEB. 6, 1906.

G. SCHMIDT & F. SCHMIDGALL.

KNOCKING PEN.

APPLICATION FILED JULY 1, 1905.



Witnesses.
W. S. Anderson.
C. Klinger.

Inventors.
Gustav Schmidt
Frederick Schmidgall
by C. Spengel atty.

UNITED STATES PATENT OFFICE.

GUSTAV SCHMIDT AND FREDERICK SCHMIDGALL, OF CINCINNATI, OHIO,
ASSIGNORS TO THE CINCINNATI BUTCHERS SUPPLY COMPANY, A COR-
PORATION OF OHIO.

KNOCKING-PEN.

No. 811,958.

Specification of Letters Patent.

Patented Feb. 6, 1906.

Application filed July 1, 1905. Serial No. 267,900.

To all whom it may concern:

Be it known that we, GUSTAV SCHMIDT and FREDERICK SCHMIDGALL, residing at Cincinnati, Hamilton county, State of Ohio, have
5 invented certain new and useful Improvements in Knocking-Pens; and we do declare that the following is a clear, full, and exact description of the invention, attention being called to the accompanying drawings, with
10 the reference characters marked thereon, which form also a part of this specification.

This invention relates to improvements in knocking-pens, being devices used in slaughter-houses, in form substantially of a limited
15 inclosure, to temporarily confine beeves intended for slaughtering in a certain constrained position to permit an operator called "knocker" to safely and securely strike them. As to size, these inclosures are arranged to
20 hold one animal at a time, which are driven in one after another, and after being "knocked" they are discharged by the opening of one of the surrounding sides and by dropping the bottom into an inclined position, from which
25 the animals slide out onto the surrounding floor to be further disposed of. These manipulations, opening of one of the sides and dropping of the bottom, are now performed each separately, either entirely by hand or some-
30 times aided by mechanical means or machinery.

The object of our invention is to so construct such a device that these two manipulations proceed simultaneously, the weight of
35 the stunned animal after it drops being utilized to perform them—that is, to open the structure to permit it to slide out.

In the following specification, and particularly pointed out in the claims at the end
40 thereof, is found a full description of our invention, its operation, parts, and construction, which latter is also illustrated in the accompanying drawings, in which—

Figure 1 shows a side view of our improved
45 knocking-pen. Fig. 2 is an end view thereof. Fig. 3 is a vertical cross-section of the same between the ends thereof. Fig. 4 is part of a top view near one end.

Such structures are usually constructed of
50 wood, timbers, boards, posts, planks, sills, &c., preferably all open-work, and constitute substantially an inclosure of a size to permit an animal, steer, or bullock to readily enter and stand therein, being limited, however, to

prevent movement in either direction, or
55 jumping, so that the animal is held in a position sufficiently constrained to present a secure mark for the knocker, who stands on the outside and in a position sufficiently elevated for the purpose.

While any particular construction of the general framework has of course no bearing on our invention, a preferable way will be described. In substance the completed structure presents what might be called a narrow
65 "open-work" rectangular box-frame, to which entrance is had through one of the narrow ends, while exit is had through one of the broad sides. 6 designates four uprights or corner-posts, held together by longitudinal
70 timbers 7, by cross-pieces 8 at their upper ends, and by other and broader cross-timbers 9 at their lower ends, tie-rods 10 being also added at these points. Braces 11 are provided on both sides to stiffen this frame. One
75 of the sides A is permanent, and consists of a series of longitudinal timbers or planks 12, connected and supported at their ends between corresponding corner-posts at opposite ends of the structure. The other side B is
80 also built up of open timber-work, as shown, and is in form of a swinging flap, pivotally supported at its upper edge, the pivots being located at opposite ends and seated in the adjacent uprights on that particular side, as
85 shown at 13. The ends C C are also of open woodwork, and one of them at least is arranged to serve as a door to permit opening, since entrance is endwise. For such purpose
90 the particular end is fitted into grooves 14, between two opposite end posts 6 6, so that it may be raised, as shown in dotted lines in Fig. 2, by sliding in these grooves. It is held
at a proper height by a counterweight 15, secured to it by means of a rope 16, which runs
95 over guide-pulleys 17, said rope and weight serving also as a means to aid in the manipulation of this door. By preference we so arrange the pen when building it that the other
end may also serve as a door should it ever
100 become desirable at any time to change the point of entrance or to suit changes in location or position. This we do by fitting such other door in similar grooves, but holding it immovable in its normal position by such
105 means as nails or screws, which may be readily removed at any time. It is then only necessary to change the rope and pulleys.

The upper edges of these four inclosing sides A B C C are about even with each other in normal position and at such height as to preclude attempts of the animal to jump out. This height is again so arranged with reference to the top of the animal's head as to form no obstruction to the knocker. The corner-posts rise above these upper edges of the inclosure to permit attachment of the structural connecting-pieces 7 7, 8 8, and 11 11 and also to furnish support for pulleys 17. The discharge from this inclosure of the animal, after being struck down, is by canting floor D sidewise and by swinging flap B out laterally, all as shown in Fig. 3. Sufficient space must be provided for such purpose below floor D, which is done by supporting said floor as shown. An inclined gang-plank 18 may be provided to induce the animal to walk more readily into the inclosure. The construction of the floor and of its pivotal support to permit it to be dropped into such inclined position is as follows: The short floor-planks 19, arranged transversely, rest on two longitudinal timbers or sills 21 and 22. This latter timber, which is near the inner or permanent edge, is considerably stronger and forms at its ends the pivotal support on which the floor swings, this support being between the lower cross-pieces 9 9. As to details of construction, the pivotal arrangement may be formed in any suitable way—as, for instance, the ends of timber 22 might be merely rounded and fitted into corresponding openings in cross-pieces 9 9. We prefer, however, these pivots to be of iron in form of short journals 23, which project from plates 24, one attached to each end of timber 22. A corresponding metal box 25 is attached to or set into each cross-piece 9 opposite the ends of timber 22.

To support the floor in its normal or raised position, as shown in Figs. 1 and 2, we use two links 26, which with their lower ends attach to timber 21, which is near the outer edge of the floor. Their upper ends attach to arms 27, one at each end of flap B, from the upper pivoted edge of which they project upwardly, turning also slightly inwardly, as shown. It is clear now that as long as flap B is held in its normal closed position floor D will also be held in its normal elevated position, while, on the other hand, a weight sufficient for the purpose if brought upon said floor will tip the same and simultaneously swing the flap laterally, provided this latter is free to move so. To hold the flap normally against this opening movement until the proper time for its release arrives, we provide suitable locking means—as, for instance, latches 28, one pivoted at each end of the flap at 29 and adapted to engage keepers 31, one attached opposite each latch to the adjacent posts 6 6. The latches are preferably connected to each other for simultaneous actua-

tion by links 32 and by an intermediate lever 33, so that only one latch has to be manipulated to release the flap. Handles 34 are provided for such purpose, there being, by preference, one on each latch, so that operation may be from either end to suit the convenience and position of the operator.

It is clear now that as soon as the latches are disengaged from their keepers the weight of the collapsed animal will lower the floor and simultaneously swing out the flap, so that the body is at once precipitated upon the floor outside of the inclosure. To give to this movement a more decided start in the proper direction—that is, outwardly—we provide a bouncing-board 35, which crowds the dropping animal at once toward flap B, so that the weight of the animal acts also simultaneously against the flap.

As an additional support for the floor while in its normal position we provide a leg 36 between the ends thereof and attached in a position in which it cannot interfere with the motion of the floor.

A suitable platform-stage 37 is provided on the outside for the knocker to stand upon and which he may mount by means of a suitable ladder or steps 38.

Since of the two movable parts B and D the positive locking of one of them locks also the other by reason of their connection to each other, it is clear that equivalent locking means might be applied to the floor instead of to the flap, as shown.

For large establishments the width of the pen may be increased to permit more than one animal to occupy the same at one time.

Having described our invention, we claim as new—

1. A knocking-pen forming substantially an inclosure provided with an inlet and an outlet opening, a door to control the inlet, a swinging flap and a tilting floor which control the outlet, locking means to positively hold one of these two latter parts in normal position and means whereby these parts are permanently connected so as to move together for opening as well as for closing.

2. A knocking-pen forming substantially a four-sided box-frame of which one of the ends and a side are movable to permit opening, a floor supported to tilt sidewise, locking devices to hold the movable side in closed position and means to connect this side to the floor to also hold this latter in its normal position and to cause both to move together when the side is unlocked.

3. A knocking-pen forming substantially a four-sided structure of which one of the ends and a side are movable to permit opening, a hingedly-connected floor adapted to tilt transversely, locking-latches to hold the movable side in closed position, operating devices to manipulate them and means to connect this side to the floor to hold this lat-

ter in its normal position and to cause also both to move together when the side is unlocked.

4. A knocking-pen forming substantially
5 a four-sided box-frame of which one of the ends and a side are movable to permit opening, a floor supported to tilt, locking-latches to hold the movable side in its closed position, one at each of its ends, mechanism
10 whereby these latches are connected for simultaneous operation and means to connect the movable side to the floor to cause them to move together.

5. A knocking-pen forming substantially
15 a four-sided box-frame of which one of the ends and a side are movable to permit opening, a floor supported to tilt transversely, locking means to hold the movable side releasably in its closed position, lever-arms
20 projecting from the movable side and links connecting these arms to the floor so that both this latter and the particular side move together.

6. A knocking-pen forming substantially
25 a four-sided box-frame of which one of the ends and a side are movable to permit opening, a floor pivotally supported at its ends

and adapted to tilt sidewise, means to manipulate the movable parts and to hold them in normal positions and a leg below this floor 30 to support the same between its ends when in normal position.

7. A knocking-pen forming substantially a four-sided box-frame, having a movable end to permit entrance, a side supported to 35 swing laterally to permit exit, a bottom adapted to tilt sidewise means to manipulate these parts and a bouncing-board on the inner side of the side opposite the swinging side.

8. A knocking-pen forming substantially 40 a four-sided box-frame of which one of the ends and a side are movable to permit opening, a floor supported to tilt sidewise, means to operate these parts, a platform-stage on the outside of the permanent side and a lad- 45 der to mount the same.

In testimony whereof we hereunto set our hands in presence of two witnesses.

GUSTAV SCHMIDT.

FREDERICK SCHMIDGALL.

Witnesses:

C. SPENGEL,

C. MEYER.