

2 Sheets—Sheet 1..

No. 544,858.

Patented Aug. 20, 1895.

Fig. 1.

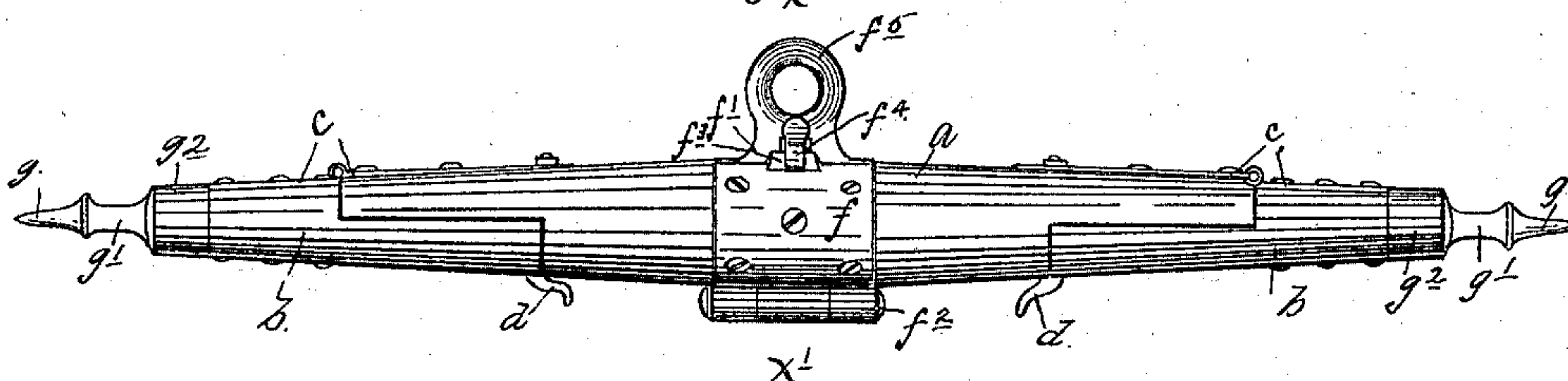


Fig. 2.

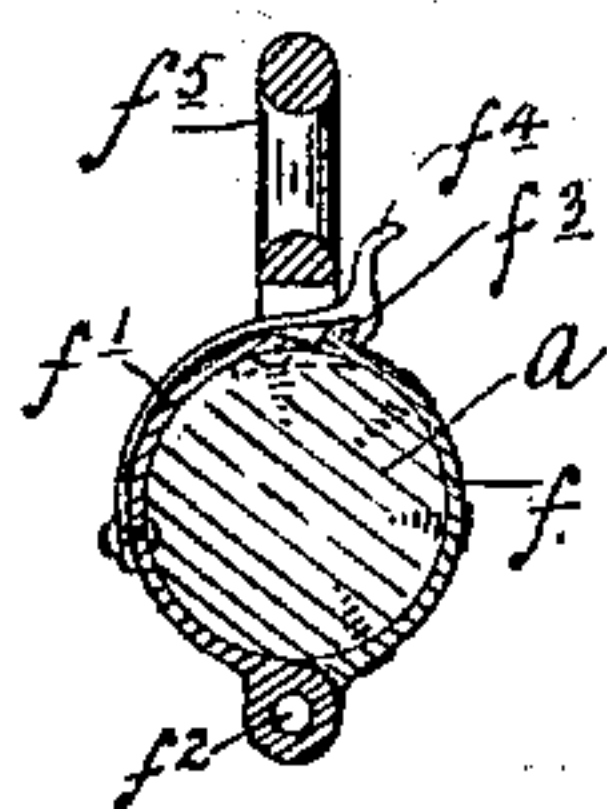


Fig. 3.
 x^2

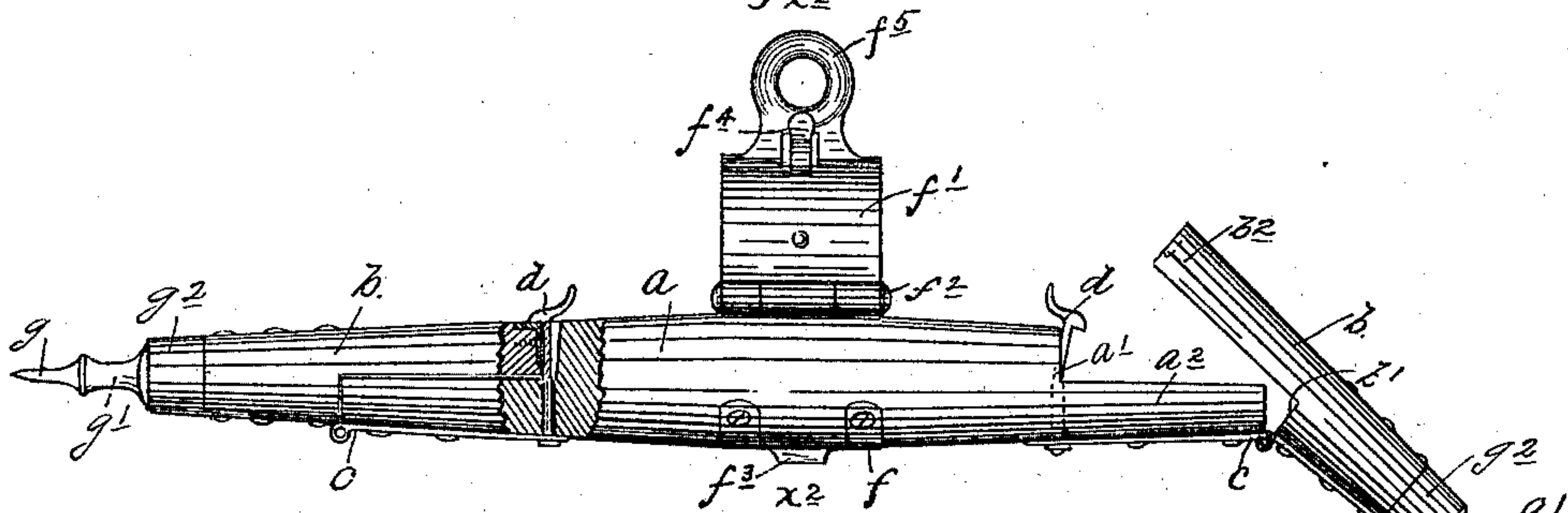


Fig. 5

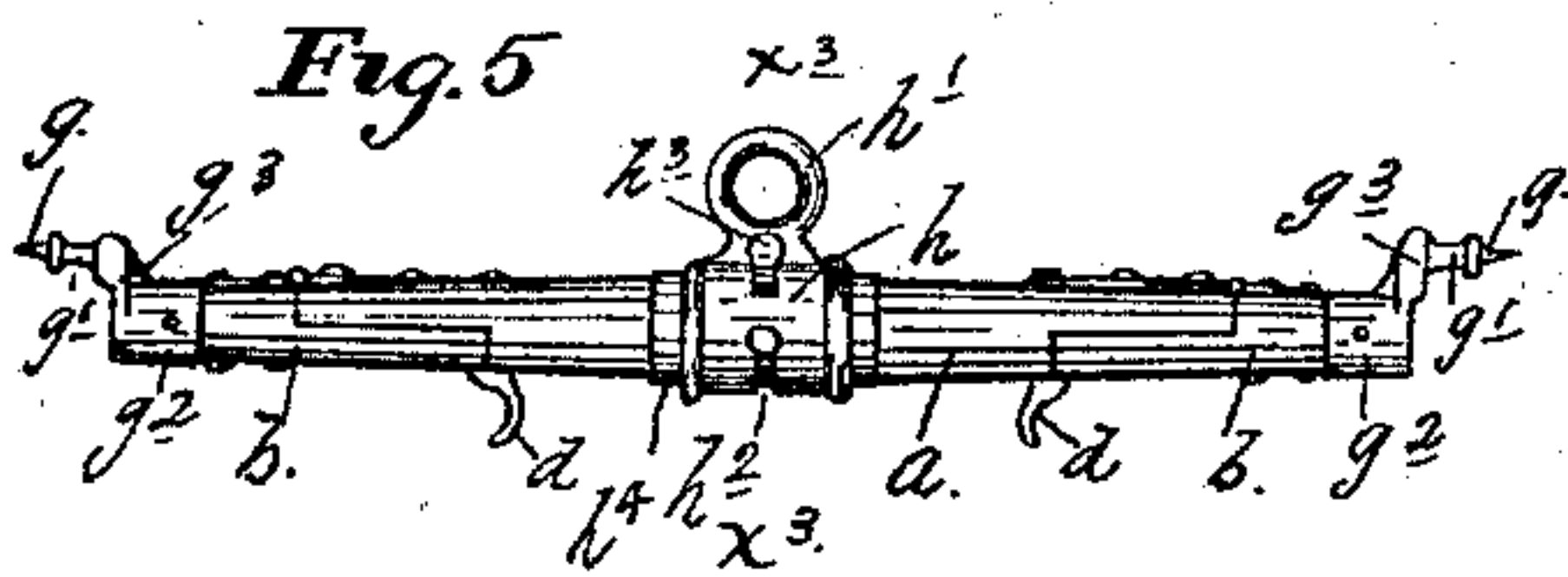


Fig. 4.

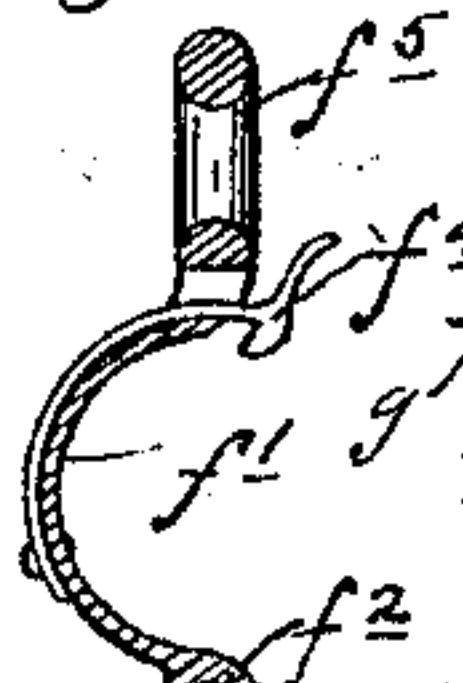


Fig. 7.

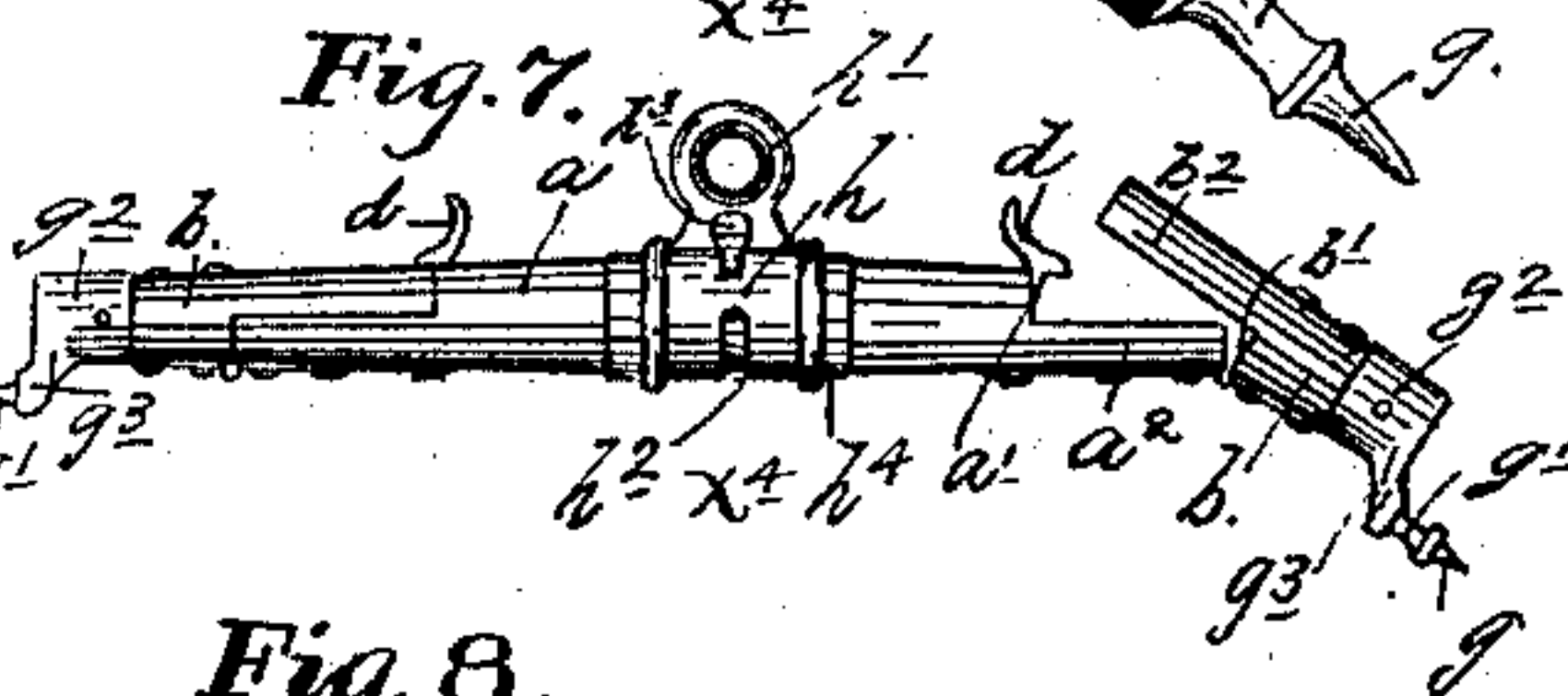


Fig. 6.

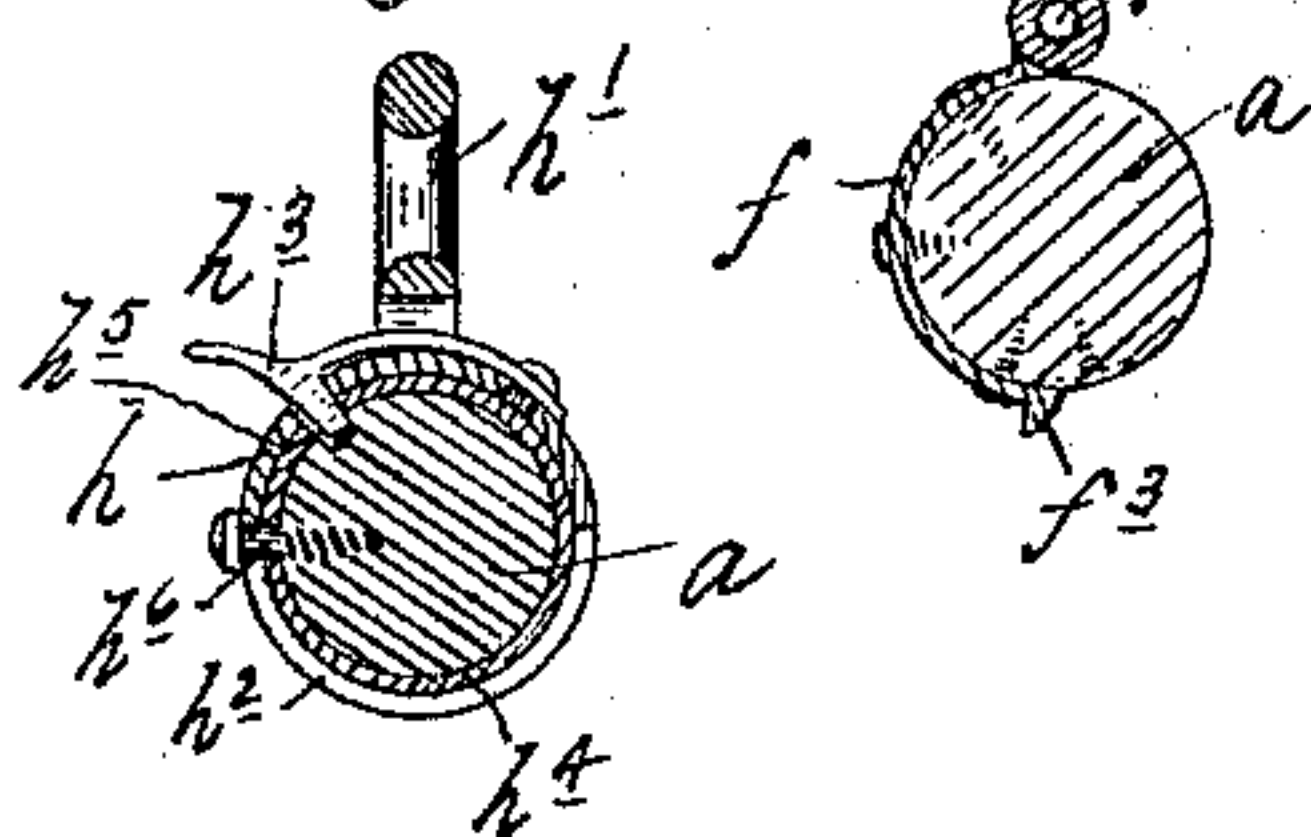
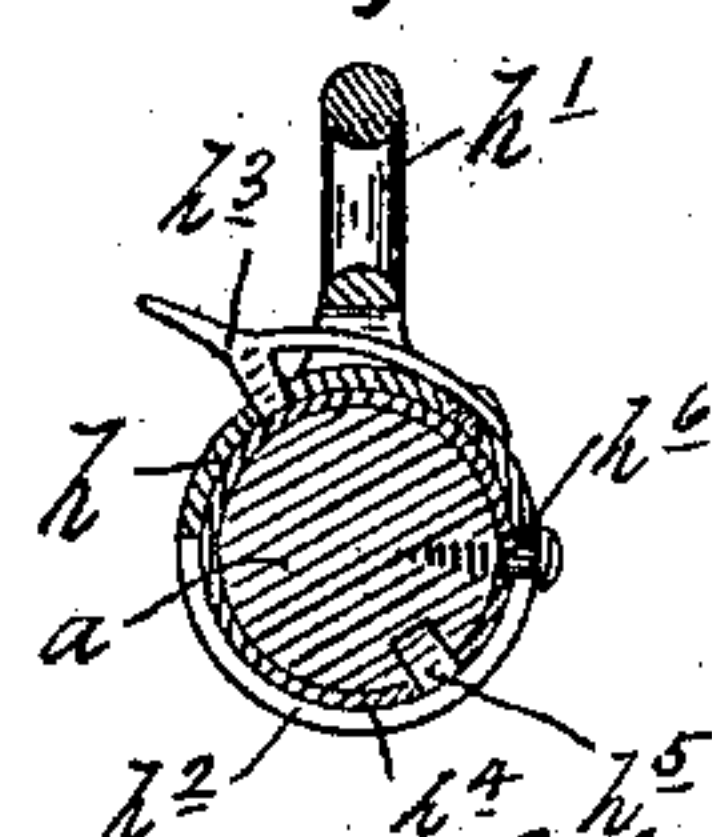


Fig. 8.



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GAMBREL.

No. 544,858.

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Fig. 9.

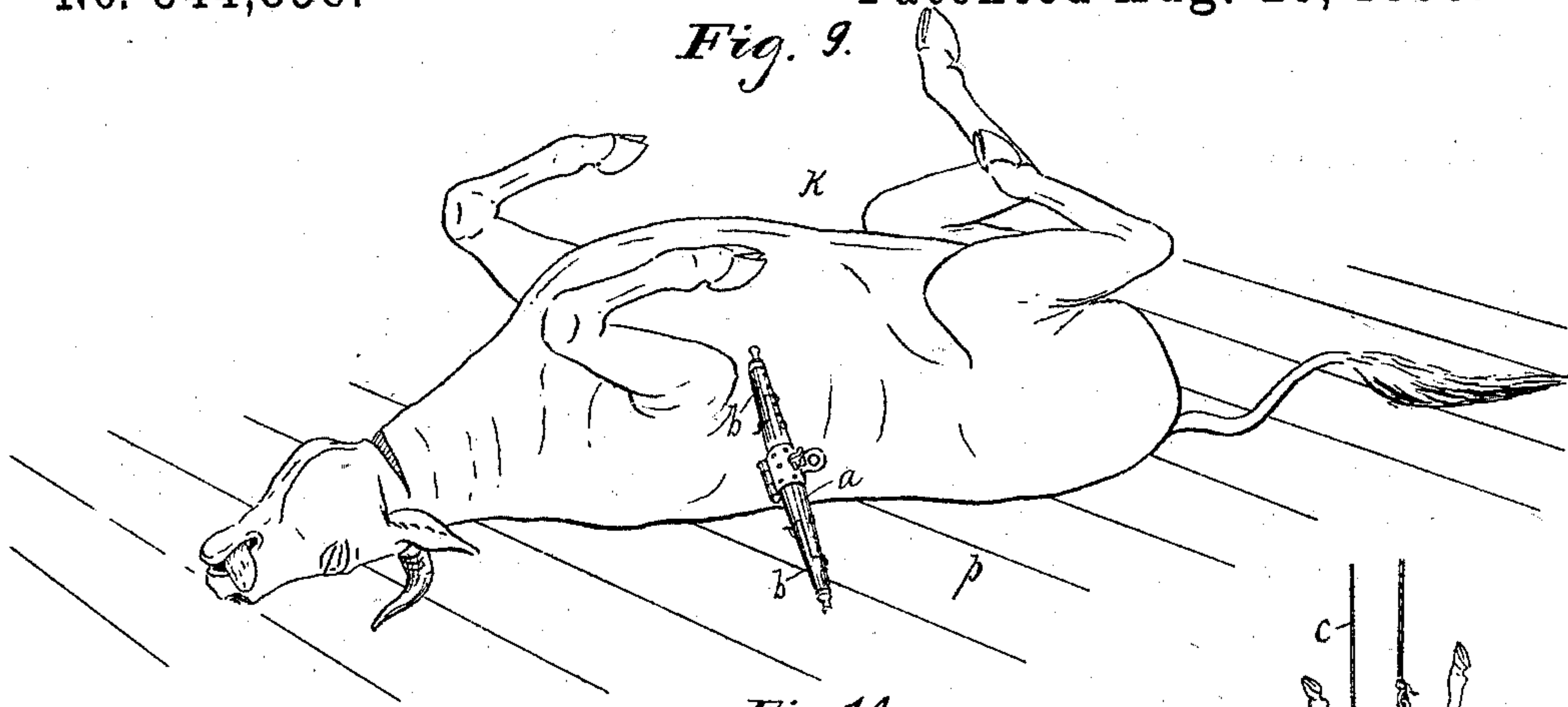


Fig. 14.

Fig. 15.

Fig. 10.

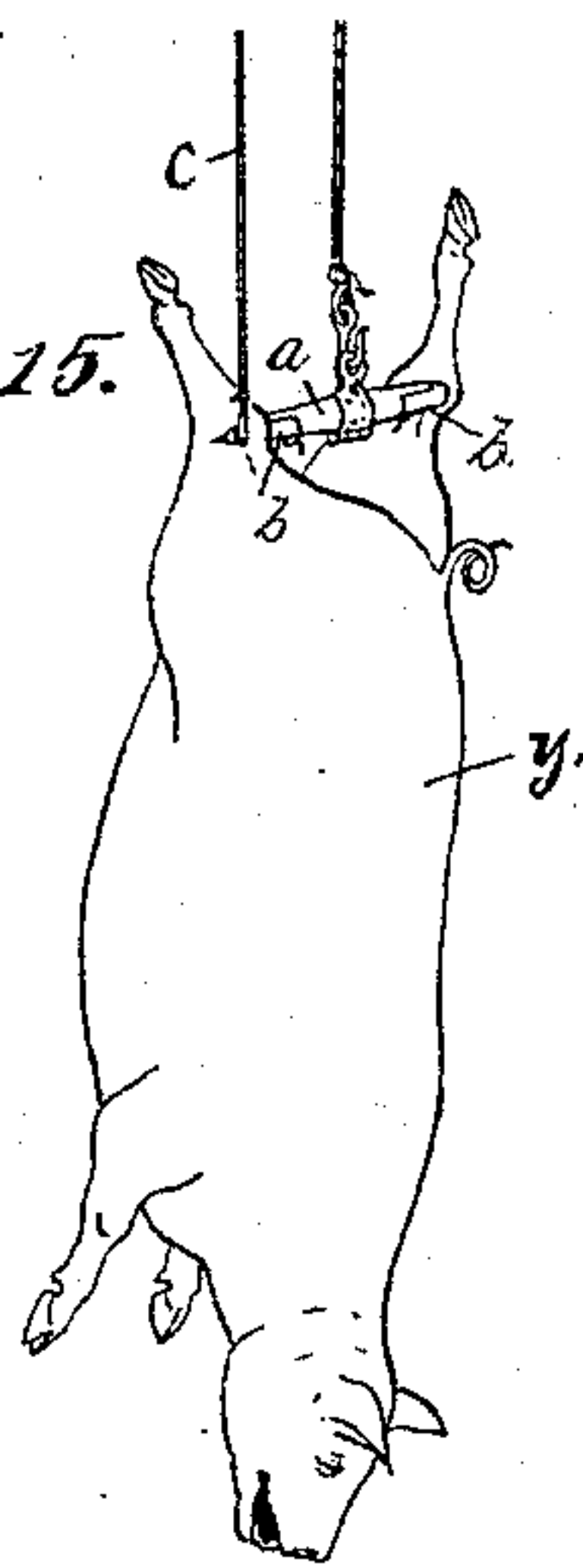
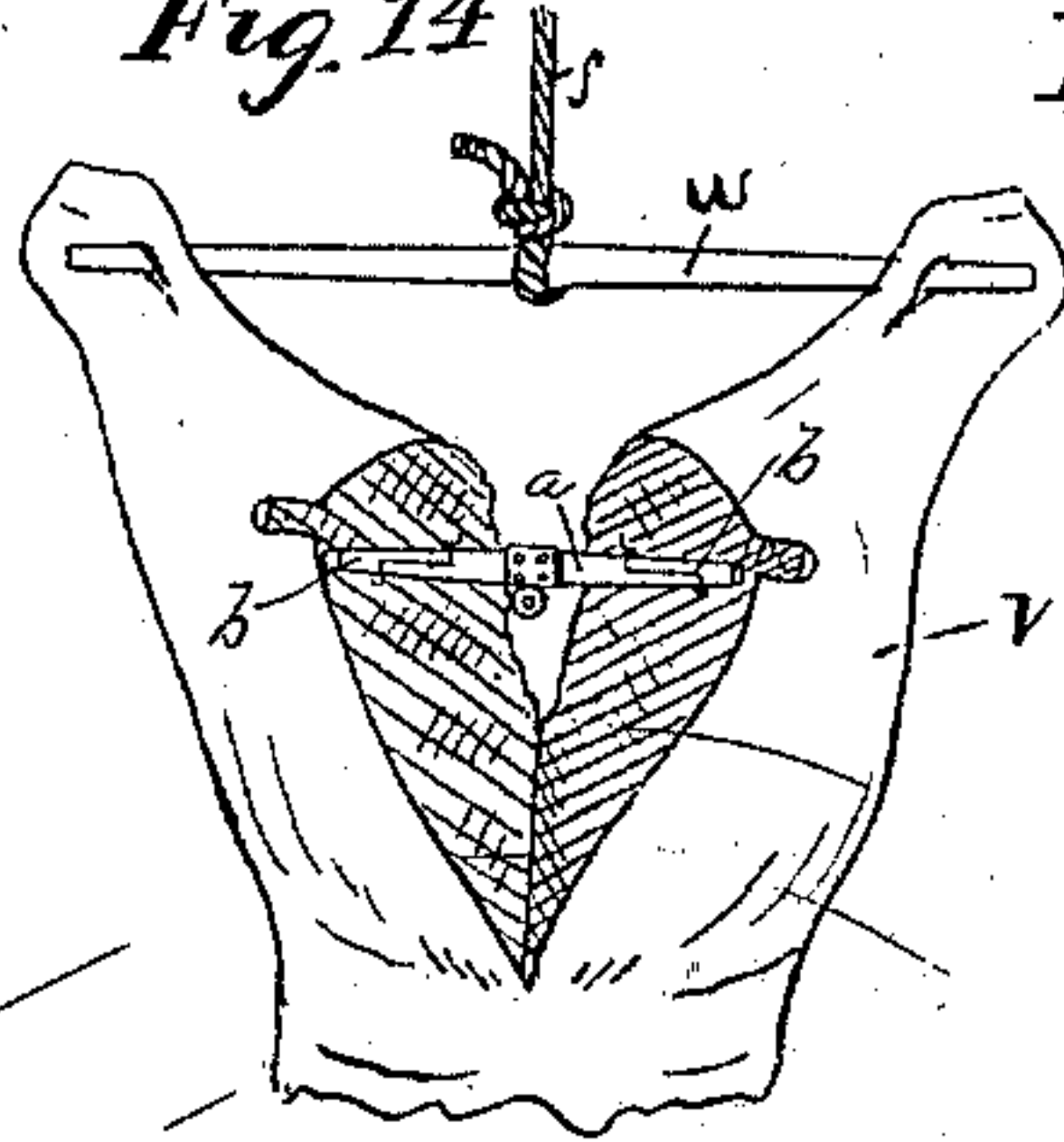
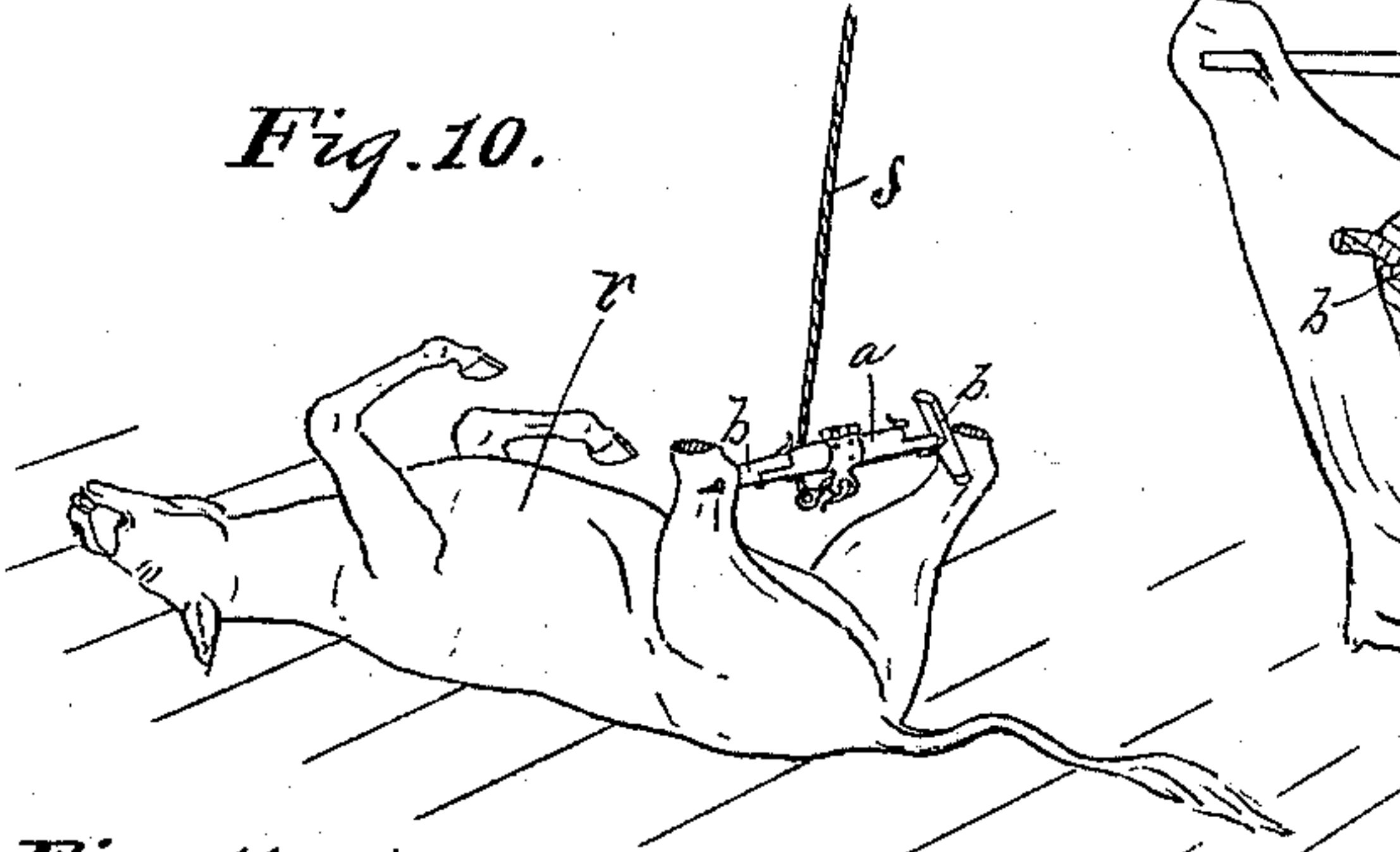


Fig. 11.

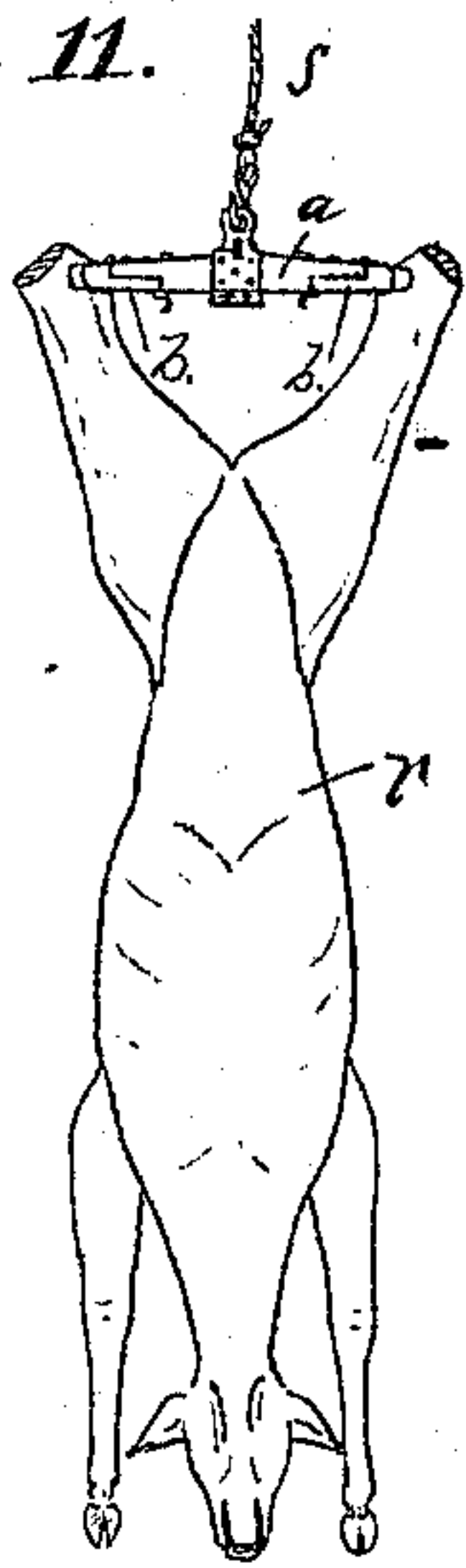
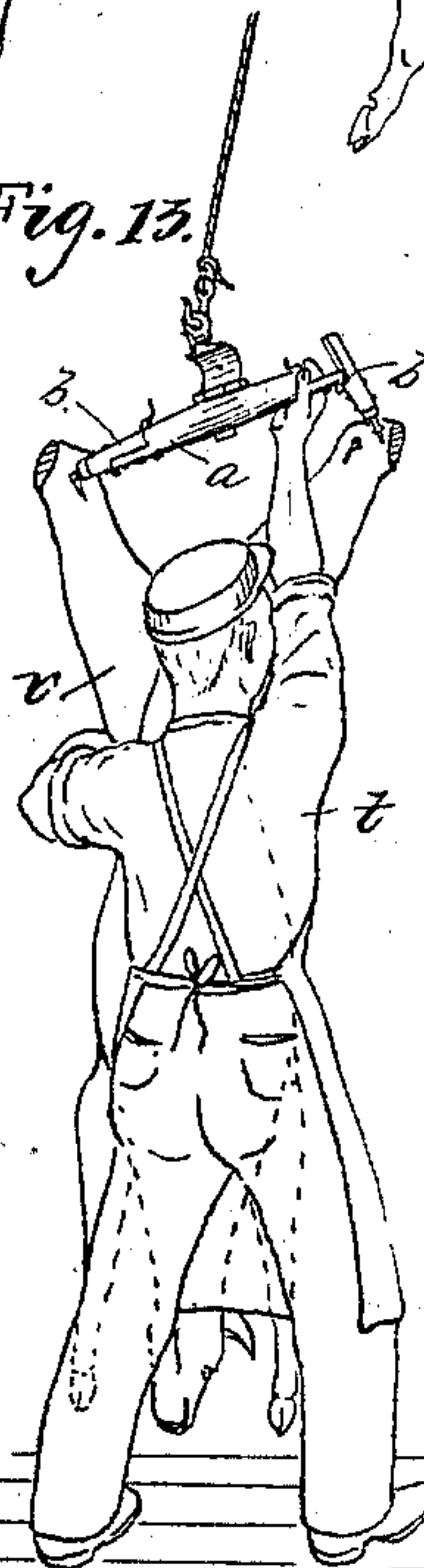


Fig. 12.



Fig. 13.



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GAMBREL.

SPECIFICATION forming part of Letters Patent No. 544,858, dated August 20, 1895.

Application filed April 6, 1895. Serial No. 544,725. (No model.)

To all whom it may concern:

Be it known that I, CHARLES A. LARSON, a citizen of the United States, residing at Stillwater, in the county of Washington and State of Minnesota, have invented certain new and useful Improvements in Gambrels; 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 gambrel for use by butchers and others in dressing and handling carcasses of slaughtered animals.

To this end the invention consists of the novel features of construction hereinafter described and defined in the claims.

The invention is illustrated in the accompanying drawings, wherein like letters refer to like parts.

Figure 1 is a perspective view of my improved gambrel, right side up and with the sections locked together in their straight line and rigid position. Fig. 2 is a cross-section on the line xx' of Fig. 1. Fig. 3 is a perspective view of the gambrel shown in Fig. 1 after it has been given a half-turn to bring the same bottom side up and one of the sections has been unlocked and permitted to turn down or buckle on the central section. Fig. 4 is a vertical section on the line x^2x^2 of Fig. 3. Fig. 5 is a perspective view of a modification, with the gambrel shown right side up and the sections in their straight line and rigidly connected positions. Fig. 6 is a section on the line x^3x^3 of Fig. 5. Fig. 7 is a perspective view of the parts shown in Fig. 5 after the gambrel has been given a half-turn and one of the sections has been unlocked and permitted to buckle or turn down. Fig. 8 is a section on the line x^4x^4 of Fig. 7. Figs. 9 to 15, inclusive, are outline or diagrammatic views, chiefly in perspective, illustrating some of the different uses or ways in which the improved gambrel is applied and manipulated.

The gambrel, as shown, is constructed with a central section a and a pair of end sections b , which are pivotally connected to the central section a by strap-hinges c , so as to splice thereto with lap-joints, which will brace against each other with a trussing action in co-operation with the strap-hinge c when the

gambrel is right side up, as shown in Fig. 1 and in some of the other views. As shown, this splicing and bracing lap-joint between the sections is obtained by cutting away the central section to form the shoulder a' and the reduced portion a^2 , and by reversely cutting away the outer section b to form the shoulder b' and the reduced portion b^2 . Hence when the said sections are united by the strap-hinge c , applied to the top of the gambrel with its pivot directly over the joint between the outer end of the central section and the shoulder b' of the end section, the said parts will brace together with a trussing action, under strain, applied downward to the outer ends of the gambrel, so as to be rigid with each other in a common line so long as the gambrel is held right side up.

To insure the rigid connection between the sections until such a time as it is desired to permit the outer section b to turn or buckle from the central section a , a suitable locking device d is provided, which is shown as secured to the central section, and as adapted to engage over the inner end of the adjacent outer section b when thrown into line with the central section, as shown in Fig. 1. This detent or locking device d is in the form of a spring-catch adapted to automatically assume its locking position and to be released by the thumb or finger of the operator.

For co-operation with the gambrel proper, a hanger is provided which will permit the gambrel to make a half-turn or roll-over to turn the same bottom side up, or from the positions shown in Figs. 1 and 5 to the position shown in Figs. 3 and 7. As shown in Figs. 1 to 4 and the diagram views 9 to 15, this hanger is composed of a pair of sections $f f'$, which are hinged together, as shown at f^2 , and are of semicircular form, adapted to fold together and inclose or embrace the gambrel-section a , to which they are applied. The hanger-section f is fixed to the center of the gambrel-section a and is provided with an upturned lip or lug f^3 . The other section f' of the said hanger is pivoted to the section f , as already noted, and is provided with a spring-catch f^4 , adapted to engage with the lug f^3 to lock the gambrel right side up to the said hanger, as shown, for example, in Fig. 1, and is provided, also, with an eye-lug f^5 , projecting outward radially,

for securing the hanger and gambrel to an overhead rope or other support. The said hanger ff' , &c., is so applied to the central section a of the gambrel that when the said parts are locked together, as shown in Figs. 1 and 2, the eye-lug f^5 will be at the top of the gambrel and directly in line with the median line through the strap-hinges c , which unite the outer gambrel-sections b to the central section a thereof.

The spike-ended tips are formed with the brad or point proper g , the spool-section g' , and the ferrule g^2 , by which the said tips are made fast to the outer end of the body portions of the gambrel-sections b . As shown in Figs. 1 to 4 and 9 to 15, the said tips have their parts $g g'$ in the axial line of the ferrule portions g^2 and the axis of the gambrel. In the modification shown in Figs. 5 to 8, inclusive, however, the said tips have their portions $g g'$ formed integral with an offset part or crank-like projection g^3 of the ferrules g^2 , so as to bring the points g eccentric to the axis of the ferrules and the axis of the gambrel, as is desirable for co-operation with the modified form of hanger shown in the said views. This modified hanger is in the form of a sleeve h , having a radial eye-lug h' , a peripheral slot h^2 , and a spring-catch or locking detent h^3 . The gambrel-section a is provided at its center with a bearing-band h^4 , provided with a lock-notch h^5 and a passage for a screw-bolt h^6 , by which the said parts h and h^4 are secured in working position relative to each other and the gambrel-section a . The band h^4 is of a diameter to fit snugly within the hanger-sleeve h and when thus together the band is slipped over the gambrel to the proper point. The screw h^6 is then applied through the slot h^2 of the sleeve and the passage for the same in the band and screwed into the body of the gambrel-section a . This will hold the band h^4 in a fixed position on the gambrel and co-operate with the slot h^2 of the hanger to limit the rotary movement of the gambrel within the sleeve of hanger h . The band h^4 thus forms a metallic bearing for the hanger-sleeve h , and the notch h^5 thereof will co-operate with the latch h^3 to hold the gambrel right side up, as shown in Figs. 5 and 6. When thus held rightside up, if the latch h^3 be lifted out of the notch h^5 , the strain from the carcass on the crank-like tips of the gambrel will turn the gambrel until the said crank-tips come to their lowermost point, or into the position shown in Figs. 7 and 8. Otherwise stated, this form of hanger, in co-operation with the offset or crank-action tips $g g' g^2 g^3$, will permit the gambrel to take a half-turn under the weight from the carcass the same as with the form shown in Figs. 1 to 4, inclusive, but without the drop at the center of the gambrel, which is incidental to the form of hanger ff' , &c., shown in the said Figs. 1 to 4. Each form of the hanger has

some advantages peculiar to itself. The longer drop afforded by the form shown in Figs. 1 to 4 is in some respects a convenience for taking down the carcass, while, on the other hand, the form of hanger $h h'$ shown in Figs. 5 to 7, inclusive, has the advantage of continuously sustaining the load or weight of the carcass, while permitting the gambrel to make the half-turn and at the same time lower the carcass a distance equal to the throw of the crank-sections g^3 of the tips.

Having regard now to the operation or usage of my improved gambrel, the same is probably obvious from the statements already made and the illustrative diagrams, Figs. 9 to 15, inclusive.

In Fig. 9 the gambrel is shown as applied for upholding the slaughtered animal k on the floor p in proper position for skinning. In Fig. 10 the gambrel is shown as applied to a carcass r with the gambrel bottom side up and one of the sections buckled or in position to spread the legs of the carcass under the leverage action of bringing the gambrel-sections into line with each other. A rope s is also shown as applied to the eye-lug of the hanger, for raising the animal into the position shown in Fig. 11. In Figs. 12 and 13 the action of taking down the carcass by an operator t is illustrated. Fig. 12 shows the operator as in position to take part of the weight of the carcass with his left arm, while using his right hand to release the catch or locking detent f^4 for permitting the hanger and gambrel to make a half-turn, so as to shift from the position shown in Figs. 1 and 2 to the position shown in Figs. 3, 4, and 13. Fig. 13 shows the operator as sustaining most of the weight of the carcass with his left arm, while supporting a part of the gambrel with his right arm, with the right-end section of the gambrel shown as unlocked from the central section, and as buckled or turned down for permitting the release of the carcass. Fig. 14 shows a carcass v , supported by an ordinary wooden gambrel w , with my improved gambrel applied as a spreader, first to spread and then to hold the cleft parts opened up or spread apart, so as to permit the free use of the cleaver for continuing the dividing action. Fig. 15 shows the improved gambrel as applied to support the carcass y , with a flexible connection c , shown as applied to the spool portion g' of one of the tips, external of the part of the animal engaged by the tip, for holding one-half of the carcass after the other half has been severed therefrom.

From the foregoing illustrations it must be obvious that this form of gambrel is capable of a wide range of use as a convenience in dressing and handling the carcasses of slaughtered animals. Of course it will be understood that it is capable of many other uses, in addition to those illustrated. It will also be understood that the details of the con-

struction might be changed without departing from the spirit or principle of my invention.

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

1. A gambrel made up of three sections, the outer or end members of which are pivotally united to the central section by connections constructed to permit the outer sections to be turned downward, with respect to the central section, while the central section is held stationary, and locking devices for locking the outer sections to the central section, when in line therewith, substantially as and for the purposes set forth.

2. A gambrel made up of two or more sections which unite with a lap joint and are pivotally connected by a hinge which cooperates with the lap joint to hold and brace the said sections rigidly together, when the gambrel is right side up, and which permits one section to turn or buckle on the other when the gambrel is turned bottom side up, substantially as described.

3. The combination with a gambrel, of a hanger for the same constructed to permit the gambrel to make a half turn or roll-over for turning the same bottom side up and a detent or locking device for locking the gambrel to the hanger top side up, substantially as described.

4. The combination with a three section gambrel, the center sections of which are connected to the central section by lap joints and hinges which render the sections rigid with

each other when the gambrel is right side up and permit the same to buckle when the gambrel is turned bottom side up, of a hanger applied to the central section of said gambrel and constructed to permit the gambrel to make a half turn and a detent or catch for locking the gambrel to the hanger right side up, substantially as described.

5. The combination with a gambrel, of a roll over or sectional hinged hanger applied thereto and provided with a locking device, for securing the hanger sections in their closed or gambrel embracing positions, and releasing the same to permit the gambrel to make a half turn and effect a drop, substantially as described.

6. The combination with the gambrel, composed of the central section *a* and the end sections *b* connected thereto by the lap joints and strap hinges *c*, as described, of the hanger applied to the central section thereof and consisting of the half clasp *f*, fixed to the gambrel, the half clasp *f'* hinged to the section *f*, the spring-catch *f⁴* on the section *f'* engageable with the lug *f³* on the section *f*, and the eye-lug *f⁵* fixed to the section *f'*, all arranged and operating substantially as and for the purpose set forth.

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

CHARLES A. LARSON.

Witnesses:

JAS. F. WILLIAMSON,

A. M. NELSON.