

(No Model.)

2 Sheets—Sheet 1.

A. RUSS.  
HARNESS.

No. 445,840.

Patented Feb. 3, 1891.

Fig. 1-

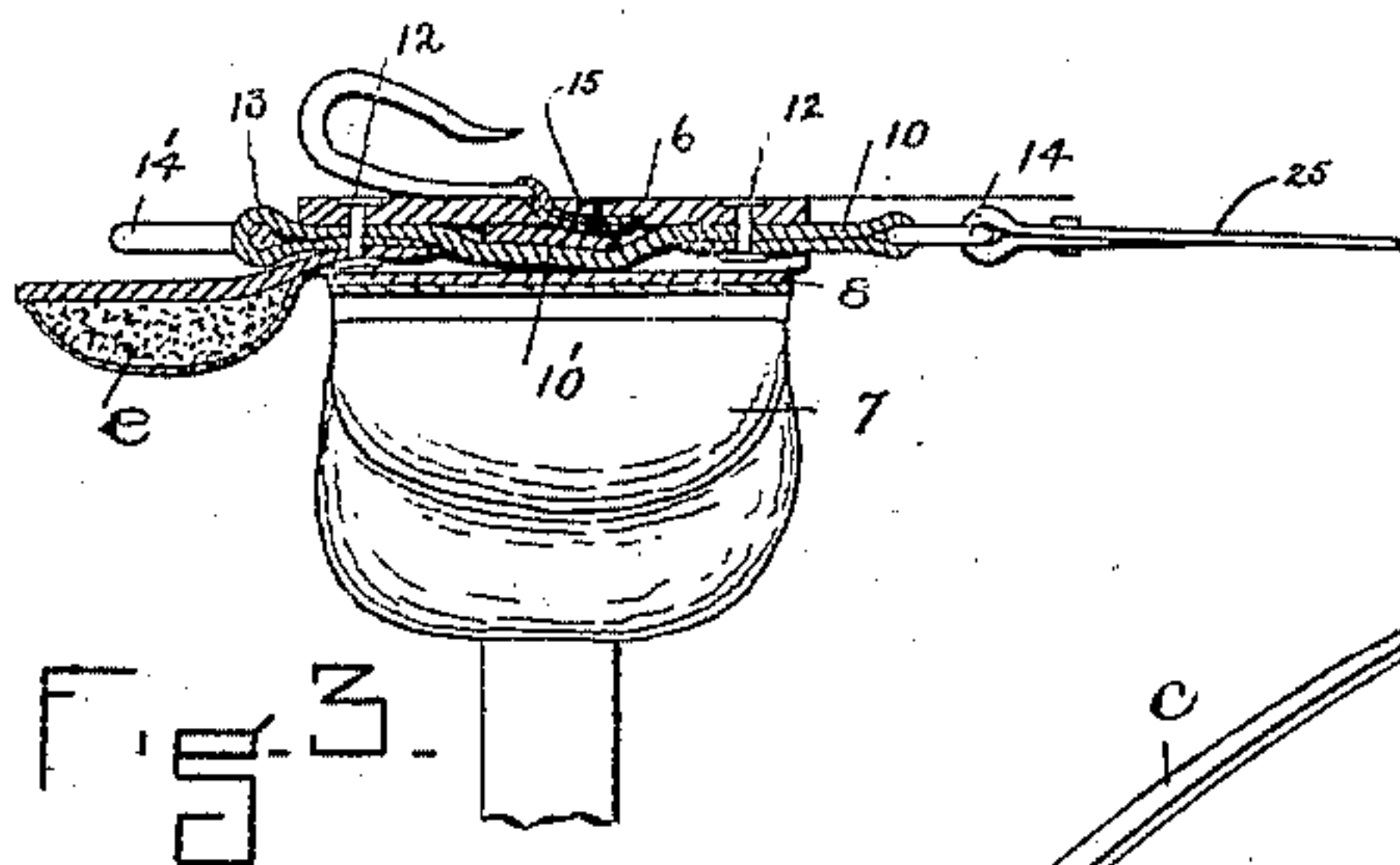
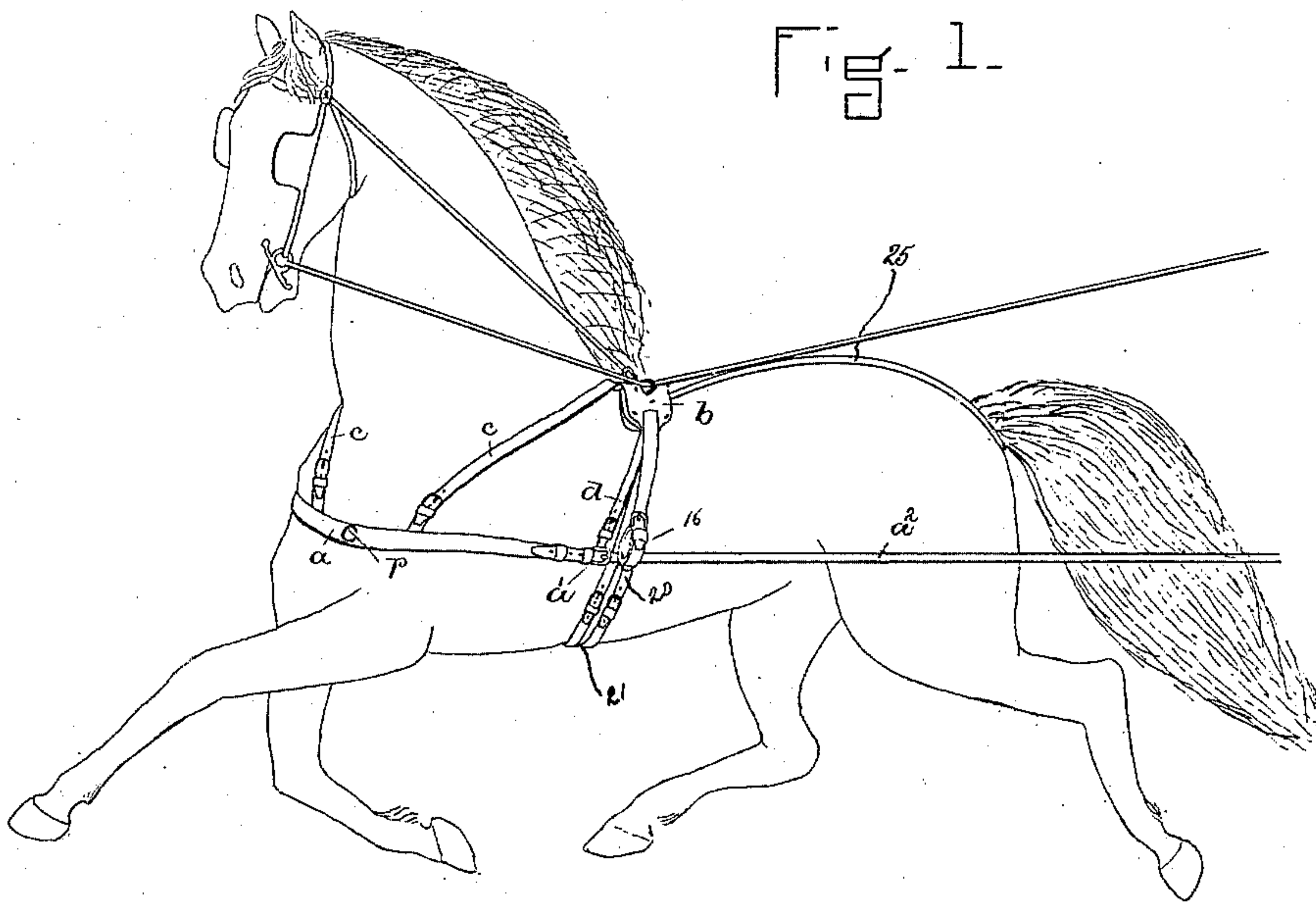


Fig. 3-

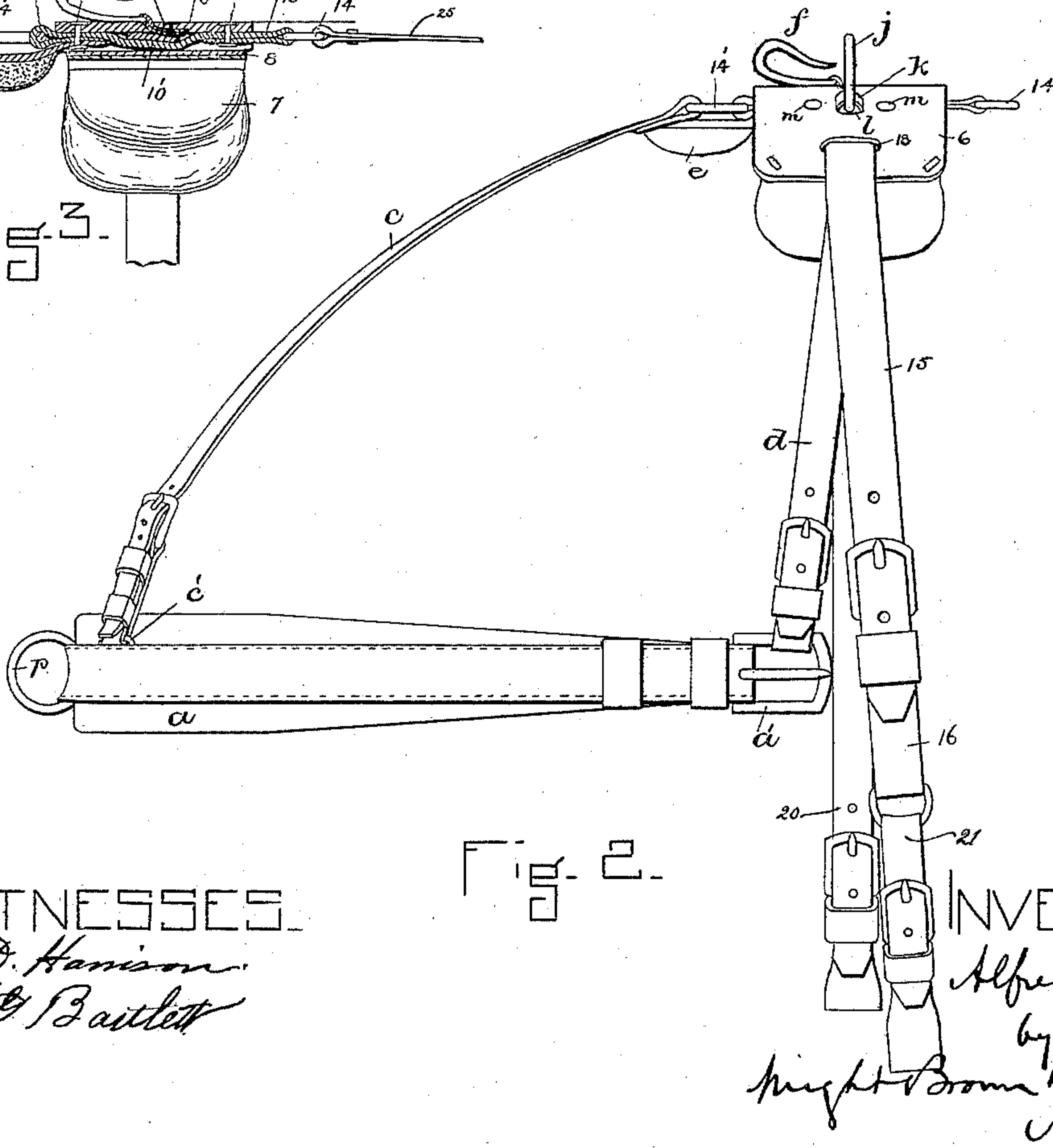


Fig. 2-

WITNESSES  
A. D. Harrison  
C. B. Bailett

INVENTOR  
Alfred Russ  
by  
NIGHT BROWN & COMPANY  
Attors.

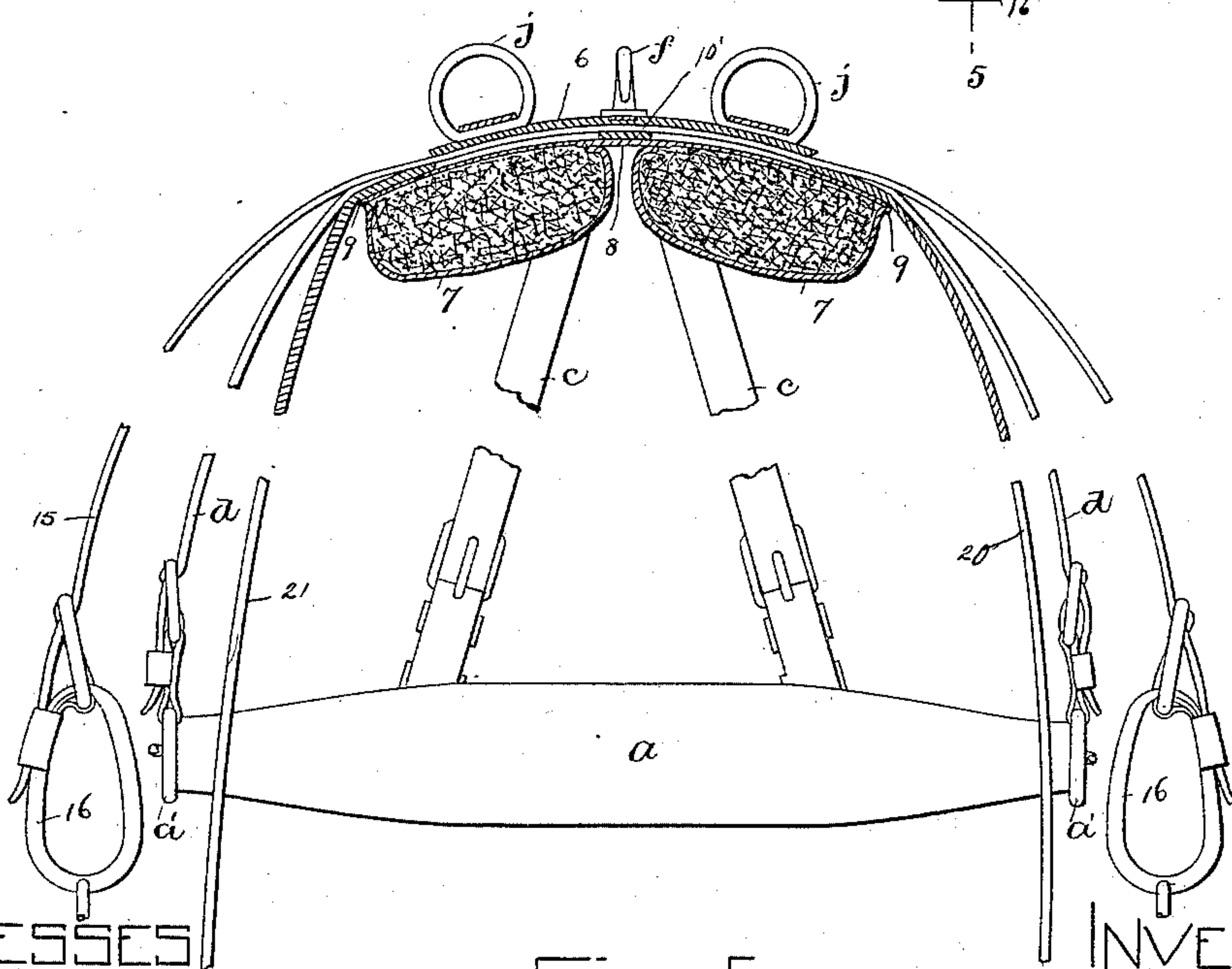
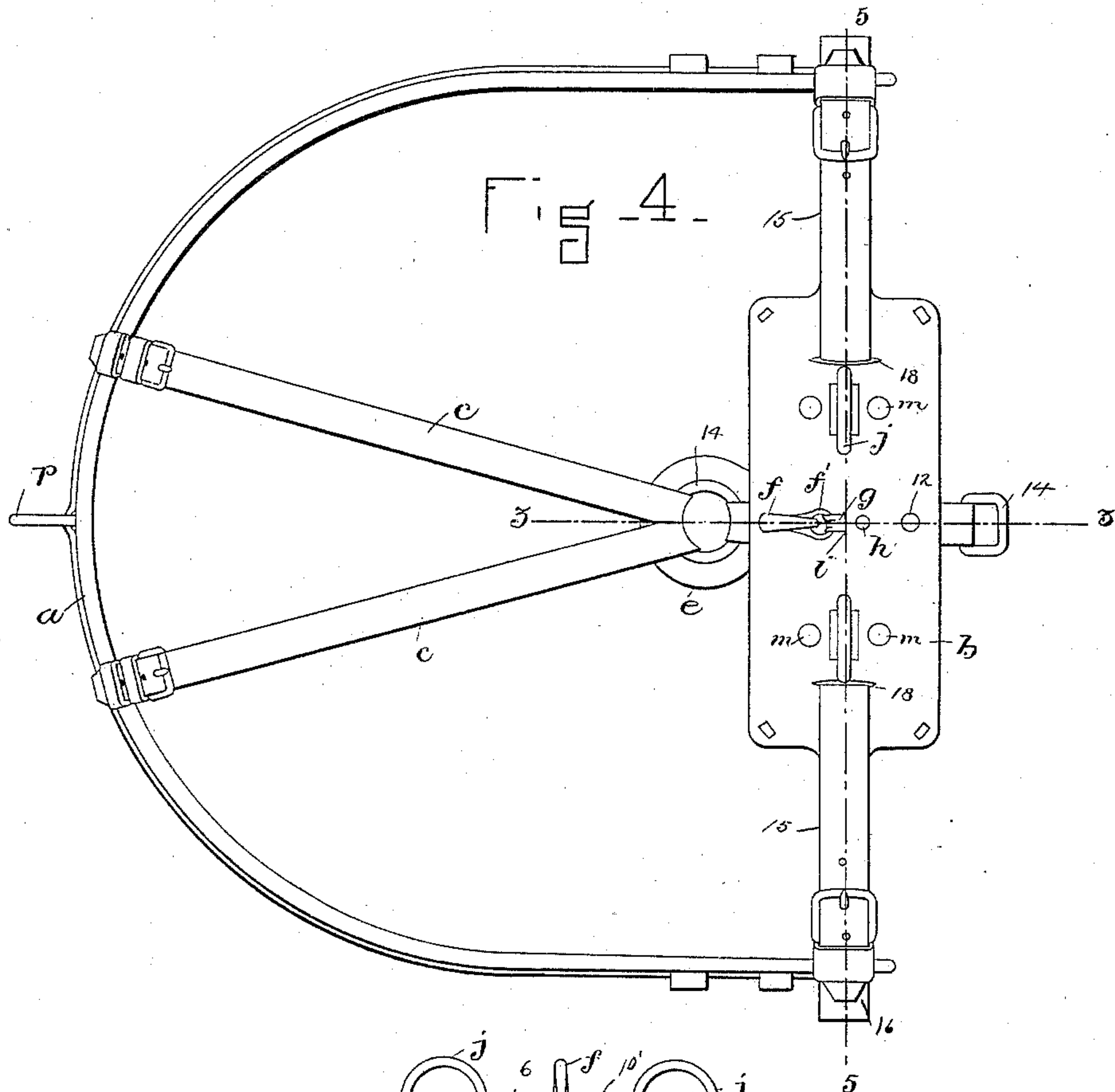
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WITNESSES  
A. D. Harrison.  
C. E. Bartlett.

Fig. 5.

INVENTOR  
Alfred Russ  
by Wright & Son, Counselors  
Atty



# UNITED STATES PATENT OFFICE,

ALFRED RUSS, OF EAST BOSTON, MASSACHUSETTS, ASSIGNOR OF ONE-HALF  
TO JULIUS WESSEL, OF SAME PLACE.

## HARNESS.

SPECIFICATION forming part of Letters Patent No. 445,840, dated February 3, 1891.

Application filed October 13, 1890. Serial No. 367,931. (No model.)

*To all whom it may concern:*

Be it known that I, ALFRED RUSS, of East Boston, in the county of Suffolk and State of Massachusetts, have invented certain new  
5 and useful Improvements in Harnesses, of which the following is a specification.

This invention relates to breast-plate harnesses, and has for its object to combine in one  
10 part a breast-plate and a saddle in such an arrangement as that both of said parts shall be permanently connected, so as to be applied and removed together, the saddle occupying the usual position of a saddle upon  
15 the animal, while the breast-plate is connected to the central portion of the saddle in such a manner as that the sawing or wearing of the horse's mane at the base of the neck, where the usual neck-strap which is used in the  
20 breast-plate now in common use is located, will be avoided.

The invention consists in the improvements in harnesses which I will now proceed to specifically describe, and point out in the  
25 claims following this specification.

Of the accompanying drawings, forming a part of this specification, Figure 1 represents a perspective view of my improved combined  
30 saddle and breast-plate in position on a horse. Fig. 2 represents a side view of the same removed from the horse. Fig. 3 represents a section on line 3 3 of Fig. 4. Fig. 4 represents a top view of the saddle and breast-plate. Fig. 5 represents a section on line 5 5,  
35 Fig. 4, looking toward the left in that figure. The same letters of reference indicate the same parts in all the figures.

In the drawings, *a* represents the breast-plate, which is formed to extend around the  
40 breast of the animal, and is provided at its ends with buckles *a'* or other suitable means for the attachment of the breast-plate to the traces *a*<sup>2</sup>.

*b* represents a saddle, which is preferably of the improved construction hereinafter described, although for the general purposes of  
45 my invention the saddle may be of any usual or suitable construction.

*c c* represent straps which are connected at their upper ends with a ring 14' or other  
50 suitable device securely attached to the sad-

dle, and extend downward and forward from said ring to points near and at opposite sides of the center of the breast-plate, the lower and forward ends of said straps being suitably secured to rings or eyes *c'* secured to the  
55 breast-plate.

*d d* represent straps which extend downwardly from the ends of the saddle, and are secured to the ends of the rear portions of the breast-plate in any suitable way—as, for  
60 example, by being connected to the frames of the buckles *a'*, as shown in Figs. 1, 2, and 5.

It will be observed that the straps *c c* and *d d*, connecting the breast-plate to the saddle, support the breast-plate in its proper position upon the animal's body, and enable the  
65 two parts—viz., the saddle and the breast-plate—to be treated as one in harnessing and unharnessing the horse. The straps *c c* that support the front of the breast-plate, by being extended backwardly to the saddle, as  
70 shown, are entirely removed from contact with the animal's mane at the lower portion of the neck, so that there is no wearing or sawing of the mane when my improved har-  
75 ness is used, as there is when the ordinary breast-plate is used, having an independent neck-strap passing over the neck of the animal at a point in front of the saddle.

To prevent the chafing or galling of the  
80 animal's back immediately in front of the saddle by the straps *c* at the point where they connect to the saddle, I provide a pad *e*, Figs. 2, 3, and 4, which is attached to the saddle and projects forward therefrom under the  
85 ring 14', to which the straps *c c* are secured, and under the upper ends of said straps said pad presenting a soft under surface, which rests on the animal's back.

The saddle is preferably composed of a  
90 flexible top piece 6, of sole-leather or other suitably strong and flexible material, and two pads 7 7, attached to a flexible piece 8, the ends of which are attached at 9 9 to the top piece 6, the pad-supporting piece 8 being free  
95 and unattached to the top piece excepting at its ends.

10 represents a transverse strap attached to the under side of the top piece 6 by rivets  
12 12, said strap having at one end a loop 13, 100



which receives the ring 14', to which the breast-plate straps *c c* are attached, and at its other end a loop or eye 14, which in single harness receives the usual back or breeching strap 25, at the rear end of which is the crupper. The central portion of the strap 10 is offset from the under side of the top piece 6 to form a loop 10', Figs. 3 and 5, through which passes the continuous strap 15, to the ends of which the shaft-tugs 16 are attached. The strap 15 passes through slots 18 18 in the top piece 6, and is adapted to slide lengthwise through said slots and through the loop 10', so that the shaft-tugs are free to move up and down by the sliding of said strap. Hence if there is an abrupt upward movement of one shaft and a downward movement of the other, caused by inequalities of the track, the strap 15, by sliding freely through the saddle, will permit one of the tugs 16 to rise and the other to fall correspondingly, so that there will be no side pressure or strain on the saddle and no tendency from this cause to chafe or gall the horse's back.

I am aware that it is not new to attach the tugs to a strap which is free to slide in the direction of the length of the saddle across the horse's back; hence I do not claim this feature broadly.

The water-hook *f* is not rigidly attached to the saddle, but is provided with a ring *f'*, which is engaged with a loop *g*, composed of a piece of leather doubled upon itself and secured by a rivet *h* to the top piece 6 of the saddle, said piece passing through a slit *i* cut in the top piece. This connection of the water-hook to the saddle enables the water-hook to be turned freely in any direction and affords a secure connection between it and the top piece 6, so that no saddle-tree is required.

The terret-rings *j j* are secured by loops *k*, composed of leather straps riveted at *m m* to the top piece 6 and curved outwardly through slots *l l*, cut in said top piece, the terret-rings being thus flexibly mounted and firmly secured to the top piece.

It will be seen that by the described construction of the saddle I obtain a light and flexible saddle, in which no saddle-tree or other rigid part is required. I thus avoid the excessive weight of saddles usually employed for draft purposes, thus greatly enhancing the comfort of the horse and decreasing the liability to injure his back.

It is obvious that the described improvements may be applied to light as well as heavy harness and to both single and double harness. When used in single harness, the back or breeching strap will be attached to the ring or eye 14 on the rear of the saddle, and when used in double harness the said back-strap will be removed and a pole-strap will be attached to a ring *p*, attached to the central portion of the breast-plate.

It will be seen that the terret-rings are at-

tached only to the top piece of the saddle and that no screws or downwardly-projecting rigid parts are used in securing said rings. Hence the saddle is free from liability to injure the animal's back, particularly when the pads become worn.

The saddle is secured to the animal's body by the usual belly-straps 20 21, which are suitably attached to the saddle and extend downwardly to pass under the animal's body.

I claim—

1. The combination of the saddle having the usual straps 20 21, and a ring attached to the front part of the center of the saddle, the breast plate or strap, the neck-strap *c c*, extending from the forward portion of the breast-strap diagonally backward and upward to the front edge of the upper or central portion of the saddle and secured to the forwardly-projecting ring, and the independent straps *d d*, connecting the ends of the breast-strap to the saddle, as set forth.

2. The combination of the saddle, the breast-plate, the straps *c c*, connected with the forward edge of the saddle at the upper or central portion thereof and extending therefrom diagonally forward and downward to the forward portion of the breast-plate, and a pad secured to the saddle and projecting from the forward edge thereof under the upper ends of the straps *c c* to protect the horse's back from injury by said straps, and the device that connects the same to the saddle, as set forth.

3. In a harness-saddle, the combination of the flexible top piece 6, the pads 7 7, located under said top piece, the flexible piece 8, secured to the upper sides of said pads and attached at its ends to the end portions of the top piece 6, and the belly-straps 20 21, extending downwardly from the saddle, as set forth.

4. In a harness-saddle, the combination of the flexible top piece 6, the strap 10, extending across the under side of said top piece and secured thereto, said piece having at the front of the saddle a ring or eye for attachment to the breast-plate-supporting straps and at the rear end of the saddle a ring or eye for attachment to a back-strap, and the belly-straps 20 21, extending downwardly from the saddle, as set forth.

5. In a harness-saddle, the combination of the flexible top piece 6, the transverse strap attached thereto and having at its ends the eyes 14 and 14' and at its central portion the loop 10', the tug-supporting strap 15, passing through the loop 10' and through slots 18 18 cut in the top piece, pads secured to the top piece below the strap 15, said strap being adapted to slide between the top piece and the pads, and the belly-straps 20 21, extending downwardly from the saddle, as set forth.

6. The improved saddle comprising the flexible top piece 6, the pads located below the top piece and secured thereto, the flexible



loop *g*, attached to the central portion of the  
top piece, the water-hook having a ring en-  
gaged with said loop, the loops or strips *k k*,  
attached to the top piece at opposite sides  
5 of the water-hook and projecting partially  
through slots *l l*, cut in the top piece, and the  
terret-rings *j j*, engaged with said loops *k k*,  
as set forth.

In testimony whereof I have signed my name  
to this specification, in the presence of two 10  
subscribing witnesses, this 8th day of October,  
A. D. 1890.

ALFRED RUSS.

Witnesses:

C. F. BROWN,  
A. D. HARRISON.