

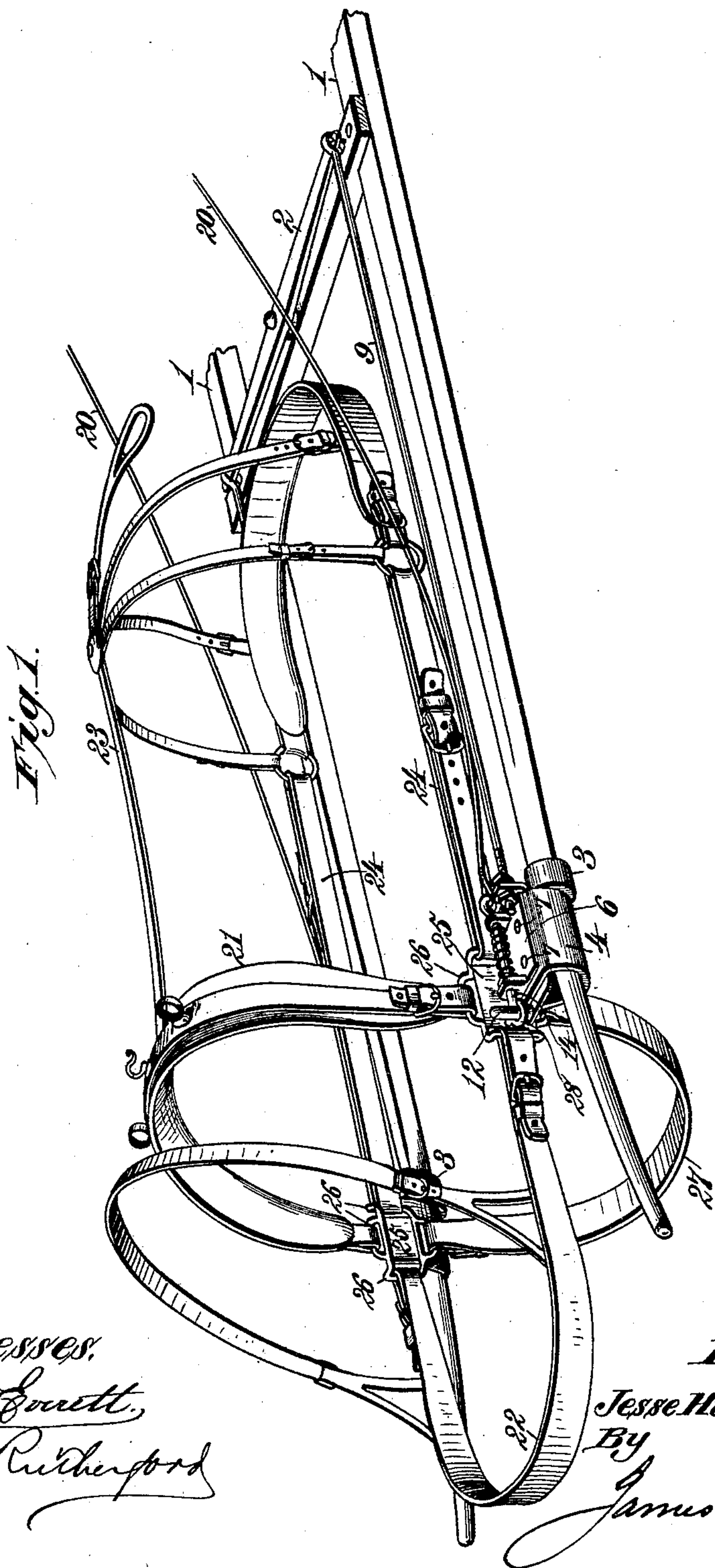
(No Model.)

2 Sheets—Sheet 1.

J. HUTCHINSON.
HARNESS.

No. 451,381.

Patented Apr. 28, 1891.



Witnesses:
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J. A. Rutherford

Inventor:
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By
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(No Model.)

2 Sheets—Sheet 2.

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Fig. 2.

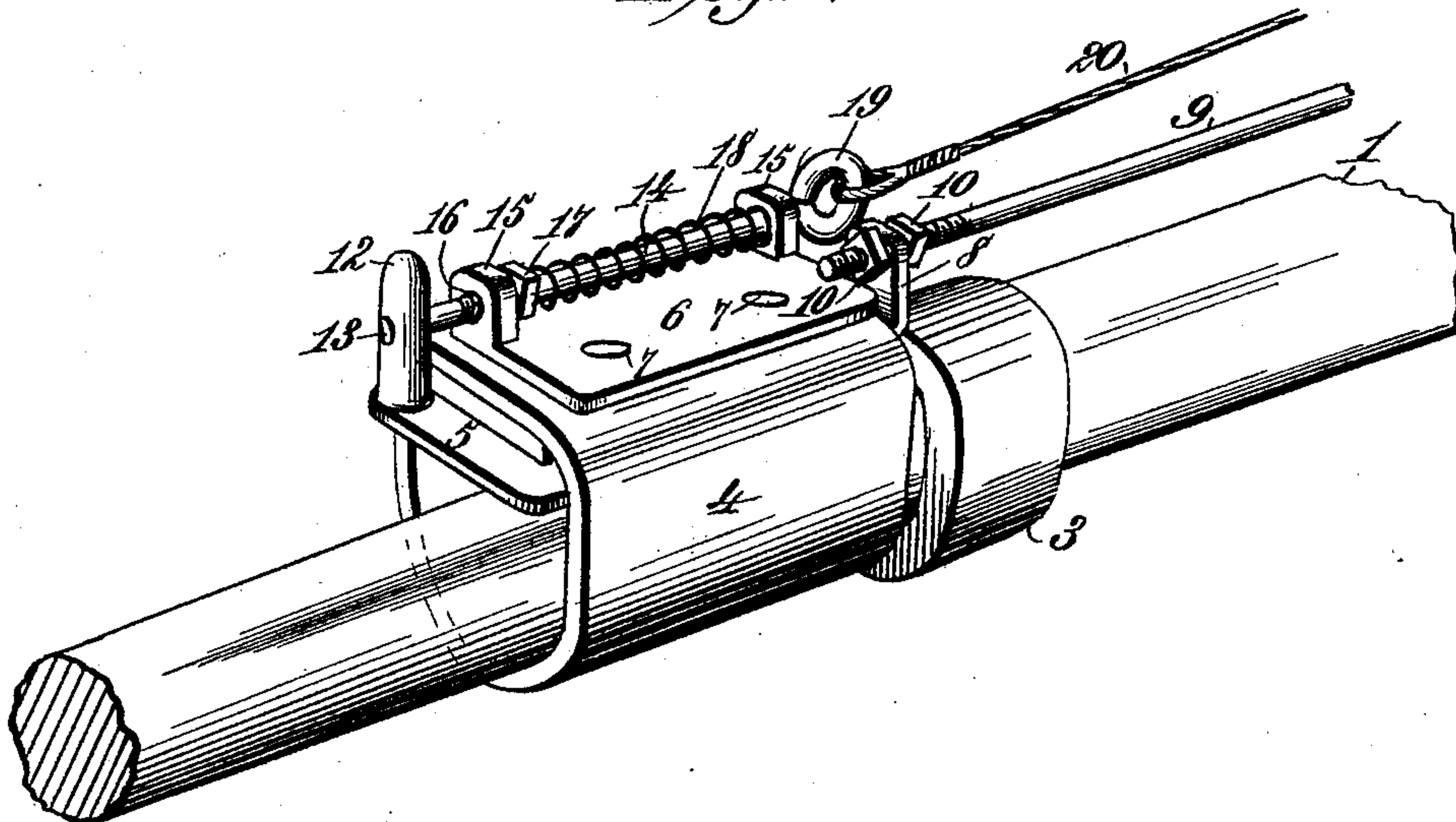


Fig. 3.

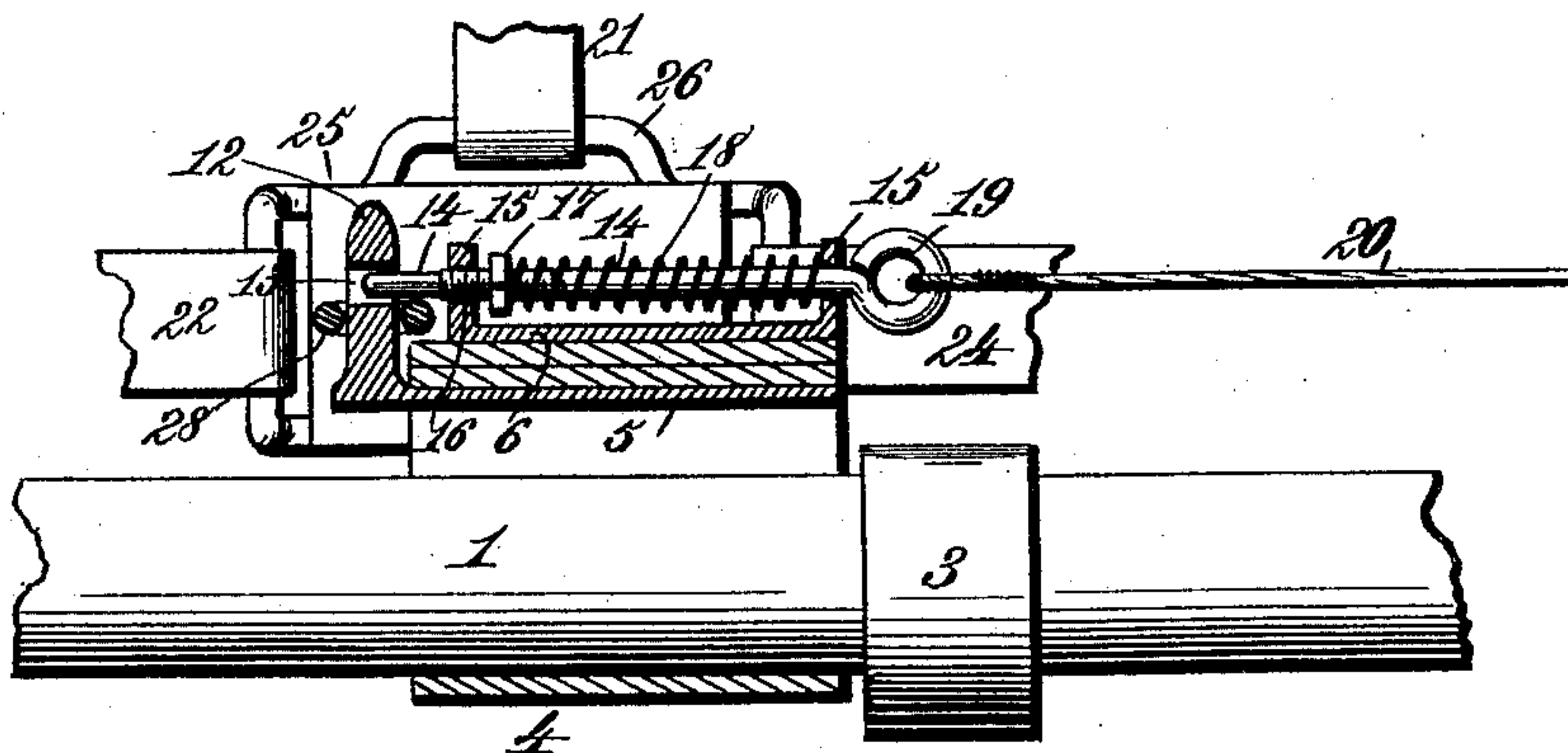
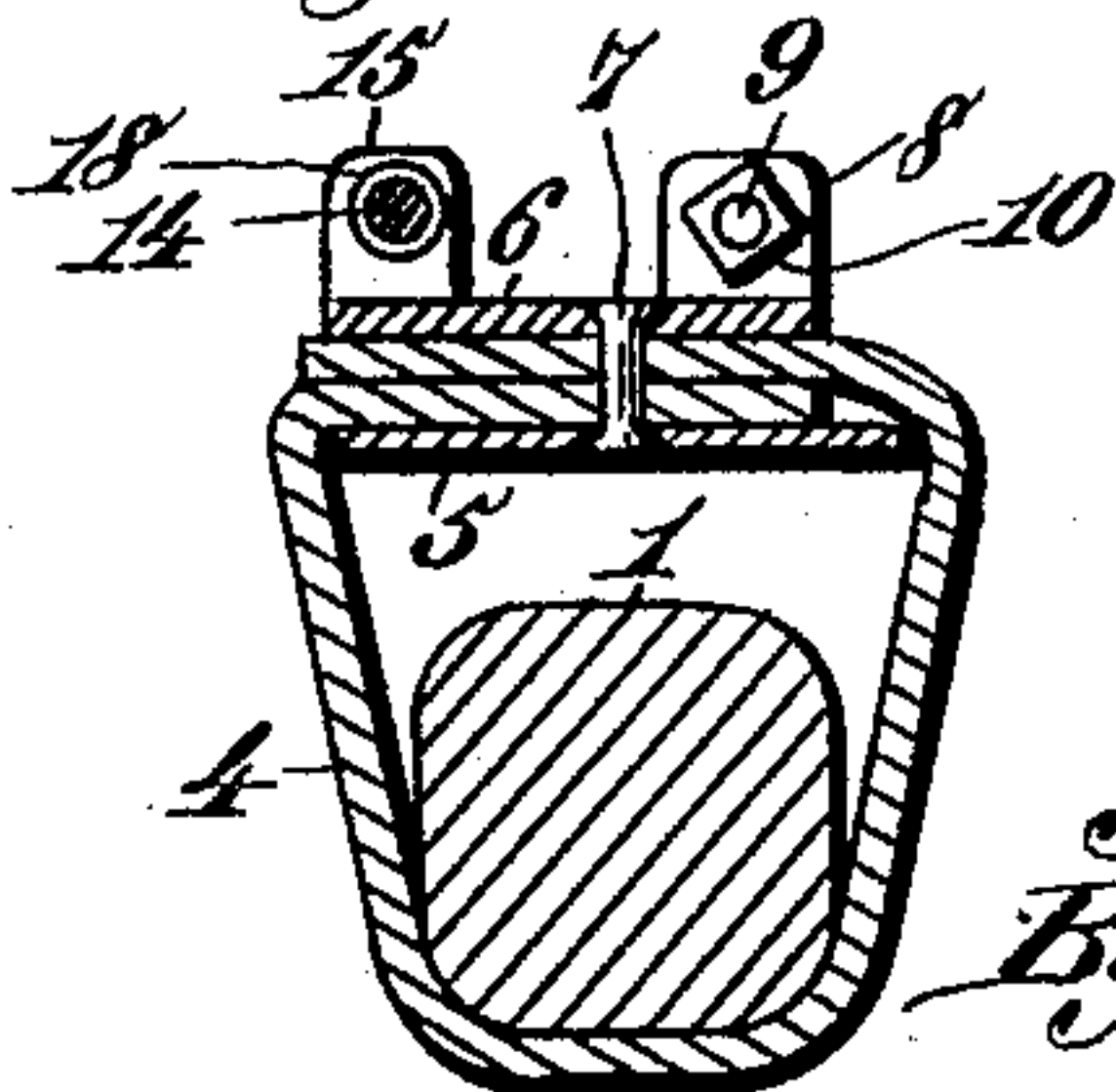


Fig. 4.



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UNITED STATES PATENT OFFICE.

JESSE HUTCHINSON, OF MIDDLETOWN, VIRGINIA.

HARNESS.

SPECIFICATION forming part of Letters Patent No. 451,381, dated April 28, 1891.

Application filed January 17, 1891. Serial No. 378,144. (No model.)

To all whom it may concern:

Be it known that I, JESSE HUTCHINSON, a citizen of the United States, residing at Middletown, in the county of Frederick and State of Virginia, have invented new and useful Improvements in Harness, of which the following is a specification.

This invention relates to that type of single harness wherein the shafts are provided with horizontal spring bolts or pins to enter eyes on opposite sides of the harness-saddle in such manner that the animal can be hitched or unhitched by sliding the spring bolts or pins into or out of engagement with the eyes on the saddle. In prior harness of this character it is usual to employ ordinary flexible traces of leather, which are made in sections to connect with the whiffletree and the breast-strap, by which the draft strain is transmitted to the vehicle. This construction necessitates the employment of holdback - straps, which connect with the breeching with holdback-lugs on the shafts, and such renders the construction complicated and expensive, while requiring the use of somewhat complicated buckle connections between the trace-sections for separating the latter in unhitching or detaching the animal. In another instance the flexible leather traces have each been made in a single piece, provided with an eye to engage a spring bolt or pin on the hames or on the draft breast-strap; but such requires the employment of holdback-straps connected with holdback-loops on the shafts, and also requires peculiar spring-rings for connecting such holdback straps with the breeching, so that the spring-rings must open to unhitch or detach the animal. This construction is also expensive and complicated, and therefore objectionable. In another instance a pair of loops engaging the shafts have been riveted to flexible leather traces and provided with eyes to engage spring bolts or pins mounted in metallic frames, which connect with the saddle and with the draft breast-strap, so that by releasing the spring bolts or pins the draft breast-strap is disconnected from the flexible traces and the animal can move from the shafts. In this construction the holdback strain is thrown

able, in that the saddle is soon rendered unfit for use.

The objects of my invention are to improve that type of harness having spring-bolt and eye connections with the saddle, to avoid the employment of holdback-straps secured to the shafts; to relieve the saddle from strain in holding back the vehicle by throwing the holdback pressure on rigid draft-rods which connect the spring-bolt-carrying loops with the whiffletree; to avoid the employment of holdback-straps which require peculiar detachable connections with the breeching, and to provide novel, simple, and economical harness whereby an animal can hold back the vehicle by rigid draft-rods, while rendering it possible to unhitch or detach the animal by merely sliding a pair of spring bolts or pins from engagement with eyes on the saddle.

To accomplish all these objects my invention involves the features of construction and the combination or arrangement of parts hereinafter described and claimed, reference being made to the accompanying drawings, in which—

Figure 1 is a detail perspective view of a single harness and the shafts of a vehicle sufficient to illustrate my invention. Fig. 2 is a detail perspective view on a larger scale, showing one of the shaft-engaging loops with its spring bolt or pin. Fig. 3 is a longitudinal sectional view taken on a line coincident with the axis of the spring bolt or pin, and Fig. 4 is a transverse sectional view of one of the shaft-engaging loops.

In order to enable those skilled in the art to make and use my invention, I will describe the same in detail, referring to the drawings, where the numerals 1 indicate the shafts, and 2 the whiffletree, of a vehicle of any desired type, such as a buggy, sulky, or wagon. The shafts are each provided with a rigidly-attached collar or abutment 3 to receive the holdback-pressure of sleeves or loops 4, through which the shafts extend. The sleeves or loops are each composed of a flexible strip of leather or other suitable material, which is bent into approximately circular form and secured between a metallic base-plate 5 and a metallic top plate 6, such plates being con-

needed together by rivets, pins, or other suitable devices, as at 7, in such manner as to clamp the ends of the leather strap between the plates.

5 The base-plate 5 of each sleeve or loop is provided at its rear end with an upwardly-projecting lug 8, having an eye, through which extends the forward end of a rigid draft-rod 9. The forward end of each rigid draft-rod is
10 provided with a screw-thread and carries two screw-nuts 10, arranged, respectively, at opposite sides of the lug 8 in such manner that the sleeve or loop can be adjusted back and forth relatively to the draft-rod to suit the
15 conditions required for using the harness with horses of varying sizes.

The front end of each base-plate 5 is formed or otherwise provided with an upright post 12, provided with a socket or orifice 13, adapted
20 to receive the front end of a horizontal sliding bolt or pin 14, which is mounted in front and rear upright guides 15, formed or otherwise provided on the top plate 6. The bolt or pin is screw-threaded for a portion of its
25 length, as at 16, to receive an adjustable nut 17, by which the tension of a spiral or other suitable spring 18 on the bolt or pin can be increased or diminished, as may be required.

The rear ends of the horizontally-sliding
30 spring bolts or pins are provided with heads or eyes 19, to which are connected a pair of cords or straps 20, adapted to run back to the vehicle and be within convenient reach of the driver to render it possible to actuate the
35 spring-bolts while sitting in the vehicle, and thereby release or detach the draft-animal, as will more fully hereinafter appear.

The harness exhibited in Fig. 1 comprises a saddle or saddle-strap 21, draft breast-strap
40 22, breeching 23, and adjustable connecting-straps 24 between the breeching and the saddle or saddle-strap. A loop-plate 25 is introduced at the adjacent ends of the saddle-strap, the breast-strap, and the adjustable connecting-straps, such plate having at each one of
45 its four edges a loop 26, which respectively engages the saddle-strap 21, the breast-strap 22, the adjustable connecting-strap 24, and the girth or belly-band 27, so that by tightening the girth or belly-band the several parts
50 are caused to closely hug the body of the animal. The loop-plates 25 are each provided near the forward end with a laterally-projecting eye, which is rigidly attached to or formed
55 with such plate in such relation that when the animal is placed between the shafts the upright posts 12 of the shaft-engaging sleeves or loops 4 can be caused to pass through the eyes, and then by releasing the spring bolts
60 or pins the latter enter the sockets or orifices 13, and thereby retain the posts in locked engagement with the eyes of the loop-plates. The animal is now properly hitched for driving and obviously the draft strain is transmitted to the whiffletree through the medium
65 of the rigid draft-rods 9, while any holdback pressure is thrown upon the rigid draft-rods

for the purpose of holding back the vehicle. If, however, I omit the rear pair of nuts 10 on the draft-rods 9, it will be obvious that the
70 draft strain will be thrown by the loops 4 against the holdback-lugs 3 of the shafts, and therefore I do not limit myself to the employment of the rear pair of adjustable nuts 10, as they may be omitted for the purpose of
75 permitting the shaft-engaging loops 4 to slide backward on the draft-rods and come to rest against the holdback-lugs 3 on the shafts.

The animal can be unhitched by simply sliding the spring bolts or pins backward to
80 release the posts 12 from their locked engagement with the eyes 28, and conversely the animal can be quickly and conveniently hitched to the vehicle by merely engaging the posts 12 with the eyes 28 and permitting
85 the spring bolts or pins to shoot into engagement with the posts, as before explained.

By the construction and arrangement of parts described and shown I provide a simple and economical single harness, by means of
90 which a draft-animal can be speedily hitched and unhitched and can also be released from the vehicle in case of danger arising from a runaway.

The adjustable connecting-straps 24 between the breeching 23 and the loop-plate 25
95 constitute holdback-straps, which, however, have no direct connection with the shafts, but, on the contrary, operate through the loop-plates upon the upright posts of the shaft-engaging loops 4. This provides very simple and economical means for holding back the vehicle, and enables me to avoid the use of
100 peculiar detachable connections for the holdback-straps.

By constructing the shaft-engaging loops of leather or like flexible material rigidly secured between plates that connect with the draft-rods and carry the spring bolt or pin I
105 entirely avoid rattling and also the chafing and damaging the wooden shafts which occur where metallic loops engage the shafts.

In my invention the draft and holdback are so combined and relatively arranged as to render the harness extremely simple, safe,
115 and effective.

Having thus described my invention, what I claim is—

1. The combination, with a saddle provided with a loop-plate having a laterally-projecting eye, the breeching, and the adjustable connecting-straps between the breeching and the loop-plate, of the shaft-engaging loops having rigid draft-rods and each provided with an upright post having a socket or orifice, and a
120 horizontally-sliding spring bolt or pin to enter the socket or orifice of the post and to lock the latter in engagement with the eye of a loop-plate, substantially as described.

2. The combination, with the saddle provided with loop-plates, each having a laterally-projecting eye, the breeching, and the adjustable connecting-straps between the
130 breeching and the loop-plates, of the shaft-

engaging loops, each comprising upper and lower plates between which the loop is clamped, the lower plate having at its rear end a lug connected with a rigid draft-rod and at its front end an upright post having a socket or orifice and the upper plate having guides, and a horizontally-sliding spring bolt or pin to engage the socket or orifice of the post and lock the latter in engagement with the eye of a loop-plate, substantially as described.

3. The combination of the rigid draft-rods adapted to connect with a whiffletree and having screw-threaded front extremities, the shaft-engaging loops, each having an upwardly-projecting lug and post, with the lug engaging and adjustable along the length of a draft-rod, and a horizontally-sliding spring-bolt mounted in bearings on each shaft-engaging loop and adapted to enter a socket or orifice in the post thereof for locking the post to the eye on a harness-saddle, substantially as described.

4. The combination, with rigid draft-rods adapted to connect with the whiffletree and having screw-threaded front extremities provided with adjustable nuts, of shaft-engaging loops, each composed of a flexible strip and upper and lower plates, between which the strip is clamped and rigidly secured, the lower plate having at its rear end a lug which engages and is movable along the length of a draft-rod and at its front end an upright post, and the upper plate carrying a horizontally-sliding spring bolt or pin to engage a socket or orifice in the post for locking the latter in an eye on the harness-saddle, substantially as described.

In testimony whereof I have hereunto set my hand and affixed my seal in presence of two subscribing witnesses.

JESSE HUTCHINSON. [L. S.]

Witnesses:

T. W. HARRISON,
R. E. BYRD.