

No. 647,438.

Patented Apr. 10, 1900.

B. F. BOOTH.
HARNESS AND THILL SAFETY ATTACHMENT.

(Application filed Oct. 9, 1899.)

(No Model.)

Fig. 1

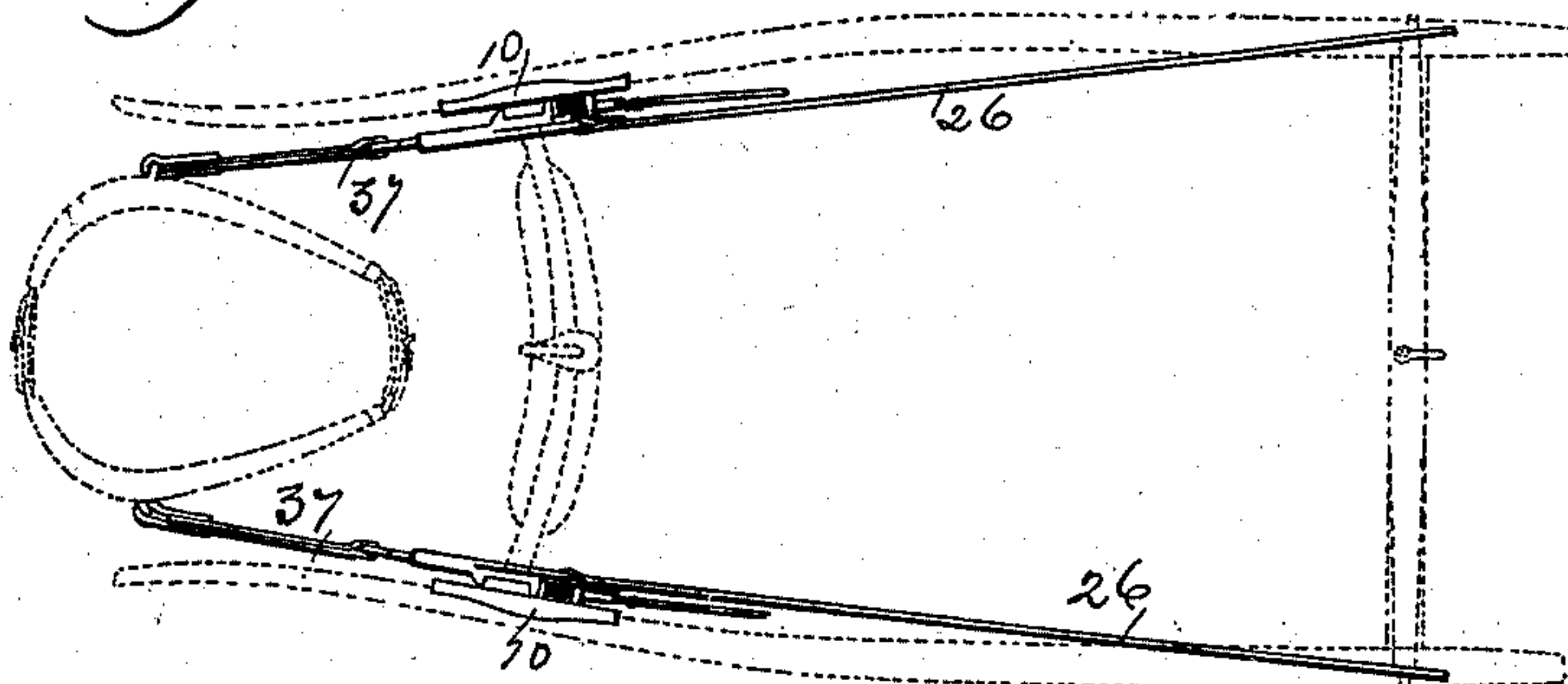


Fig. 2

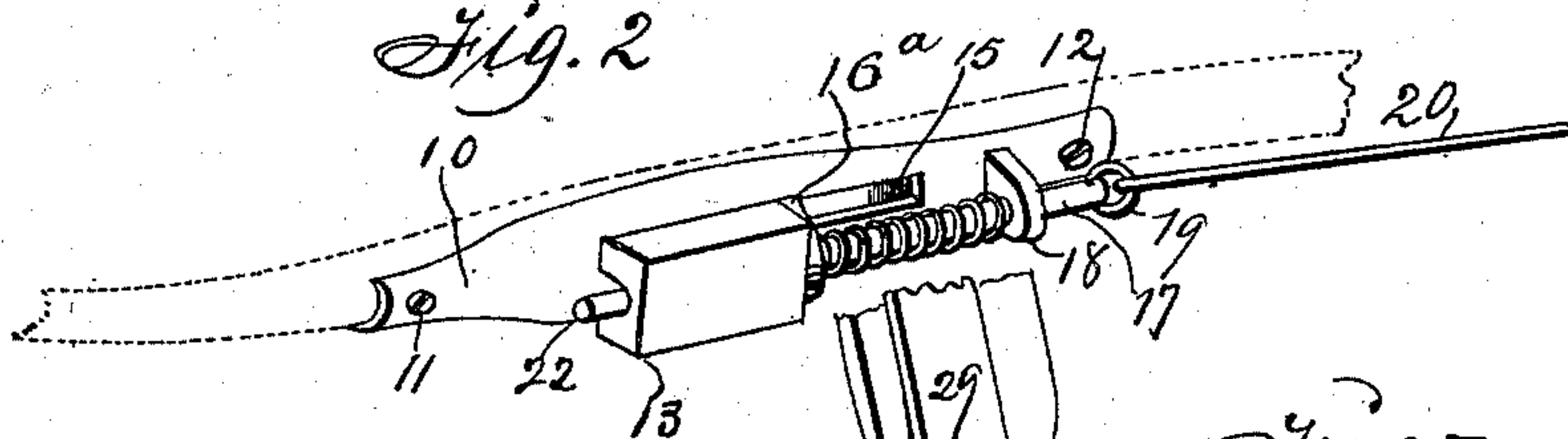


Fig. 3

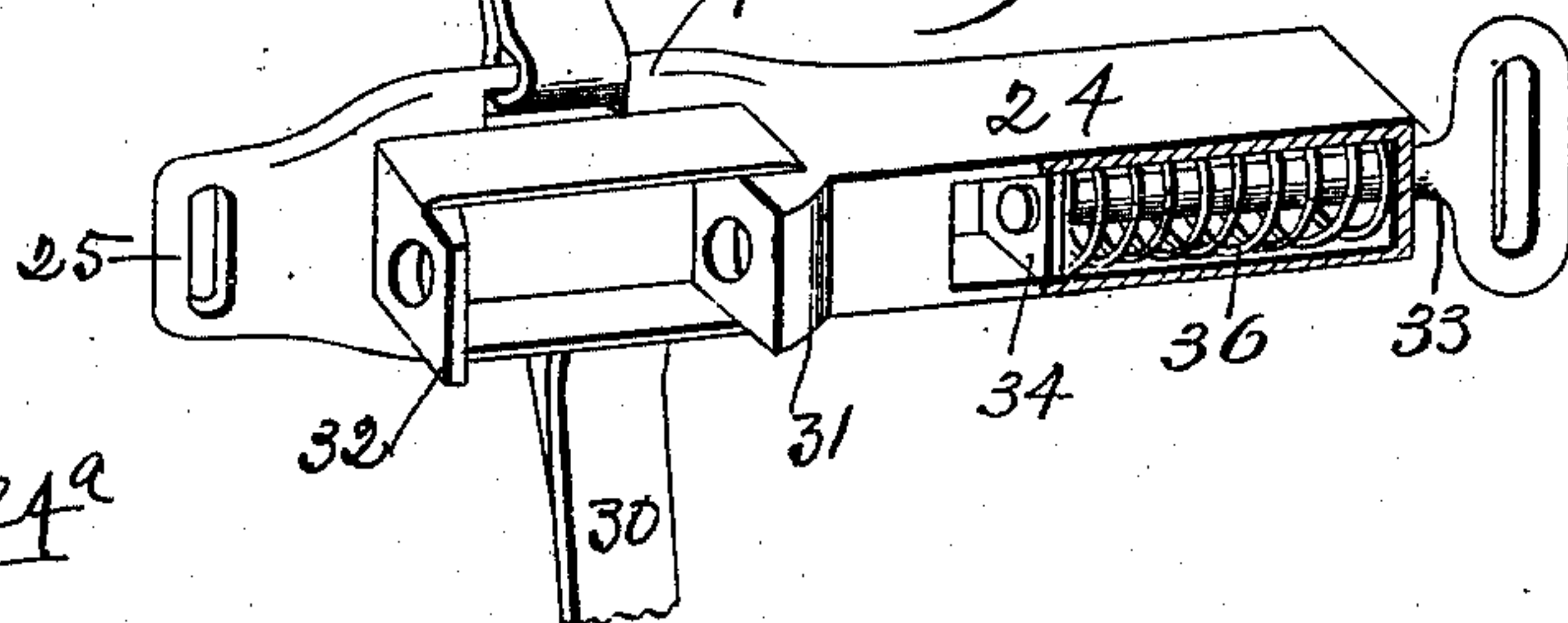


Fig. 6

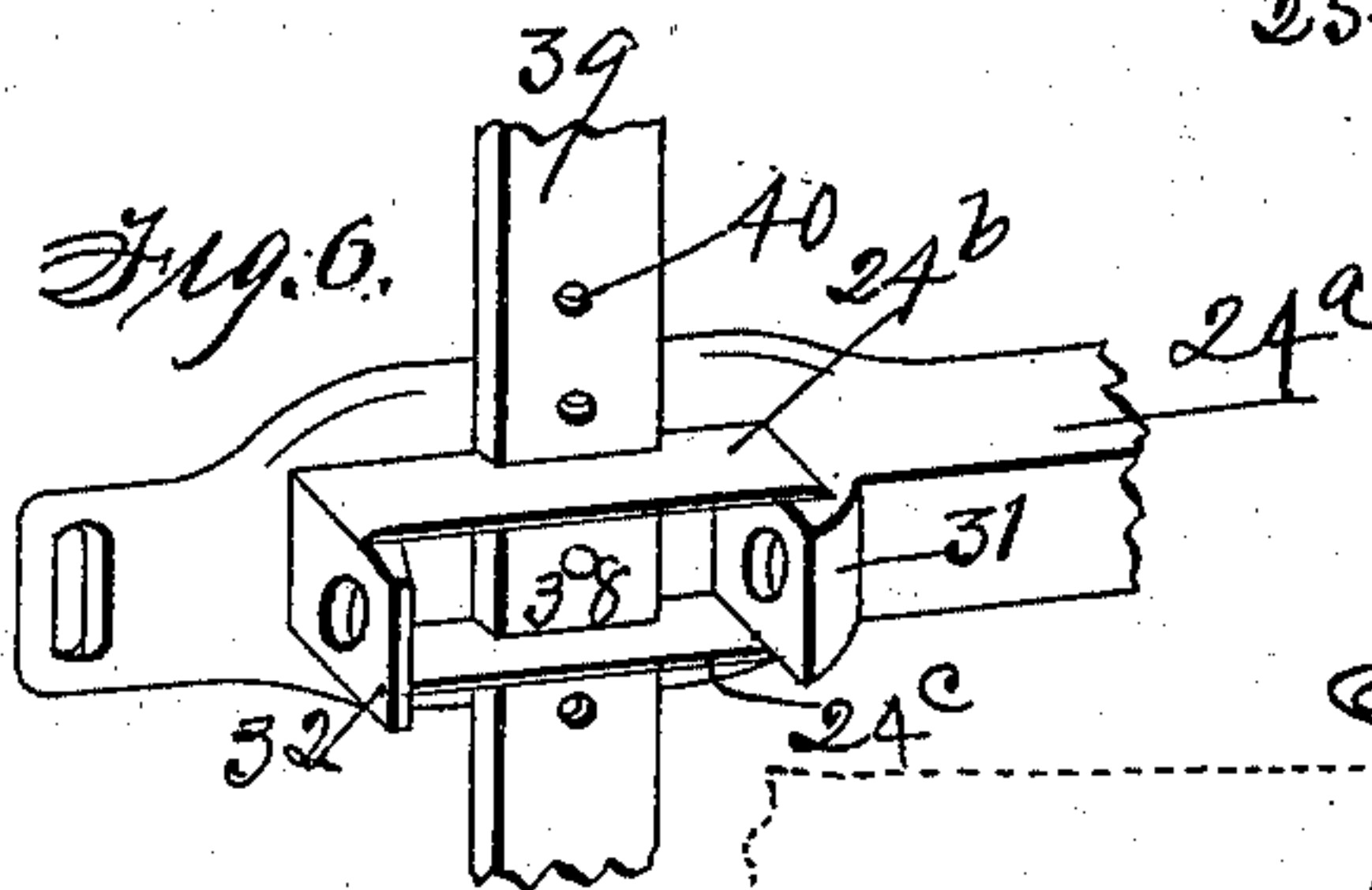


Fig. 4

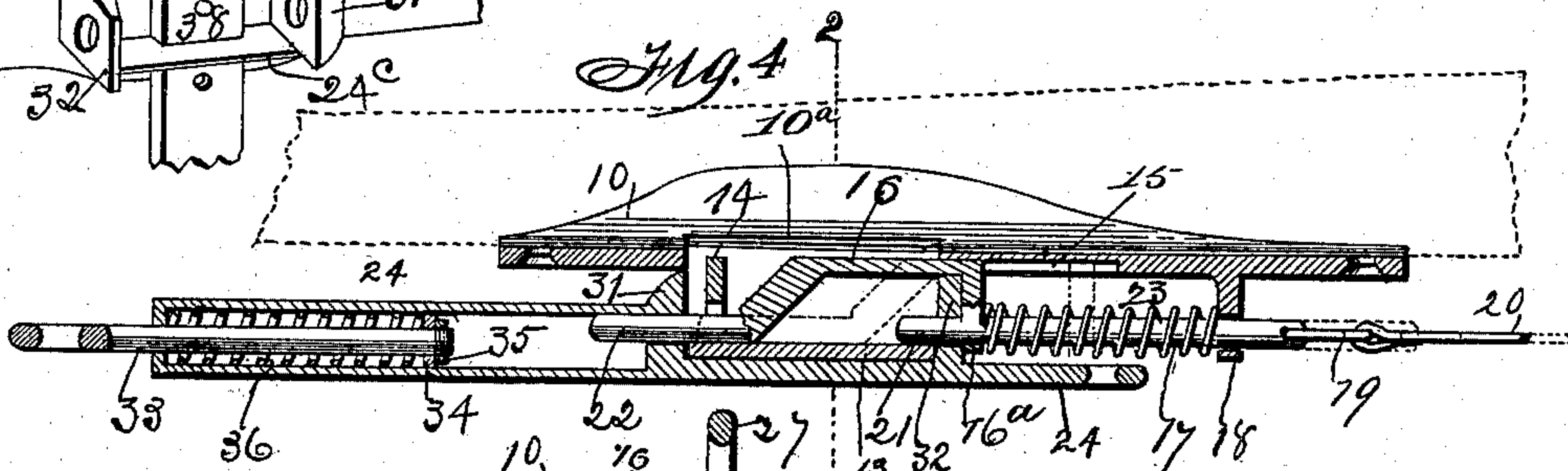
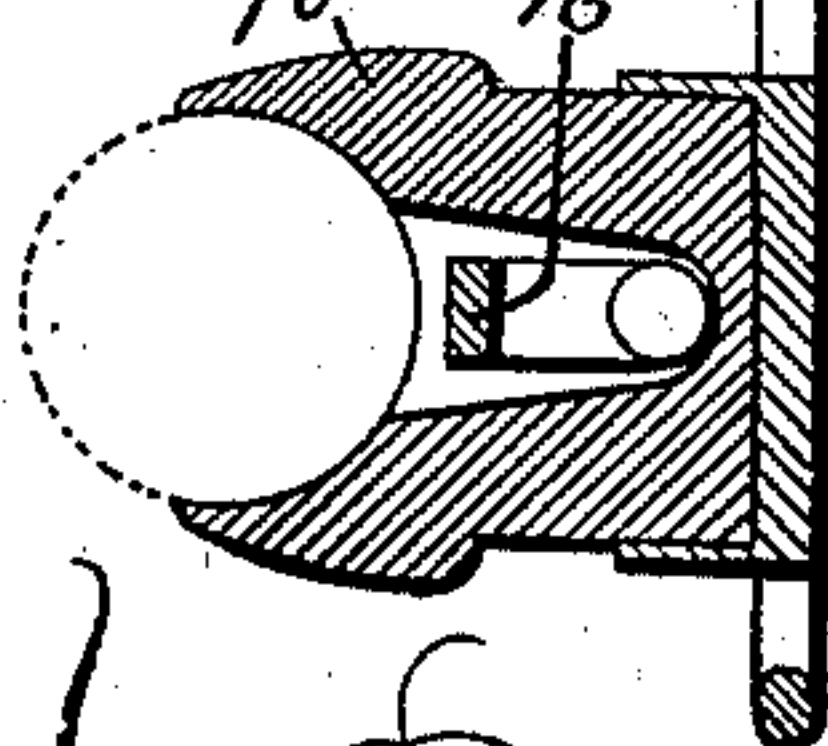


Fig. 5



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HARNESS AND THILL SAFETY ATTACHMENT.

SPECIFICATION forming part of Letters Patent No. 647,438, dated April 10, 1900.

Application filed October 9, 1899. Serial No. 733,118. (No model.)

To all whom it may concern:

Be it known that I, BENJAMIN F. BOOTH, a citizen of the United States, residing at Indianola, in the county of Warren and State of Iowa, have invented a new and useful Harness and Thill Safety Attachment, of which the following is a specification.

The object of this invention is to provide improved means for attaching and detaching a harness relative to a thill or thills.

My invention consists in the construction, arrangement, and combination of elements hereinafter set forth, pointed out in my claims, and illustrated by the accompanying drawings, in which—

Figure 1 is a plan illustrating the means employed and the positions thereof in attaching thills to a harness. Figs. 2 and 3 are perspectives of separable portions of the device, Fig. 3 being reversed relative to Fig. 2 in order that the views may show the mean or approximate faces of the members. Fig. 3 is shown partly in section, a portion being broken away to expose the interior thereof. Fig. 4 is a longitudinal section of the complete device, and Fig. 5 is a cross-section of the complete device on the indicated line 2 2 of Fig. 4. Fig. 6 is a perspective illustrating a slightly-modified construction of one of the members of the device.

In the construction of the device as illustrated in Figs. 1, 2, 3, 4, and 5 the numeral 10 designates a base-plate or clip, concavo-convex in cross-section and provided with holes in its end portions so shaped and arranged as to receive screws 11 12, whereby the plate is attached, removably and replaceably, to a thill. (Dotted lines.) The base-plate or clip 10 is formed with a boss 13, integral with and projecting laterally from the central portion of its convex face, and a slot 10^a is formed in the plate behind the boss to lighten the plate and provide for the convenient molding thereof. The boss 13 is bored longitudinally in communication with the slot 10^a of the plate, and the extremities of the bore are in alinement with each other and parallel with the trend of the plate. A slide-bearing 14 is located in and transversely of the bore of the boss 13 and is fixed to or formed on the inner face of said boss. A groove 15 is formed in the convex face of the

plate 10 at the rear of the boss 13 and communicates with the interior of said boss and a latch 16, slidably mounted in said groove and extending within the boss. The latch 16 is formed with an ear 16^a, abutting the rear end of the boss 13 at times, and a stem 17 is fixed to or formed on said ear and extends rearwardly therefrom through a slide-bearing 18, formed on and projecting laterally from the plate 10 in alinement with said ear. A ring 19 is mounted in the rear end portion on the stem 17, and a latch-cord 20 is attached to said ring and extends rearwardly therefrom to the vehicle. (Not shown.) A tongue 21 is formed on and extends forwardly from the ear 16^a in alinement with the stem 17 and is arranged for rectilinear reciprocation within and outside of the rear portion of the bore of the boss 13. The latch 16 is offset in an inclined plane within the bore of the boss 13 and terminates at its forward end in a tongue 22, normally projecting from the forward portion of said bore and arranged for rectilinear reciprocation in the slide-bearing 14. An expansive coil-spring 23 is mounted on the stem 17, between and impinging on the ear 16^a and slide-bearing 18. A trace-plate 24 is provided and is formed with a billet 25 at its rear end for attachment thereto of a trace 26, and billets 27 28 are formed on the edges of the trace-plate for attachment thereto of the back-band or saddle 29 and the belly-band 30. Ears 31 32 are formed and project laterally from the trace-plate 24 in such a manner as to engage opposite ends of and embrace the boss 13, and said ears are apertured in alinement with each other and with the bore of the boss to receive the tongues 21 22. The forward portion of the trace-plate 24 is tubular and is formed with an apertured end piece shaped to receive an eyebolt 33. The inner end of the eyebolt 33 is provided with a washer 34 and nut 35, and an expansive coil-spring 36 is mounted on said bolt between and impinging on the end piece and washer. The nut 35 is omitted from Fig. 3 to more clearly show the construction of the washer 34. The eye of the eyebolt 33 is shaped for attachment to a hame-tug 37, and the trace-plate and devices carried thereon serve to connect the trace and hame-tug.

In practical use the tongues 21 22 enter

and engage in the ears 32 31, respectively, and connect the trace-plate to the base-plate or clip 10. With the parts in this position the animal may be driven and will draw the vehicle. In the event that it is desirable to detach the animal from the shafts or thills of the vehicle hastily for any purpose manual force may be applied to the latch-cord 20 and exerted through said cord to draw the stem 17, latch 15, and tongues 21 22 rearwardly. The rearward movement of the latch-stem and tongues withdraws the tongues from engagement with the ears 31 32 and causes the inclined offset portion of the latch to engage the ear 32 and crowd or force the trace-plate away from the boss 13, thus effectually disengaging the trace-plate from the base-plate and unhitching the animal from the shafts or thills.

In the construction of the device as shown in Fig. 6 the trace-plate 24^a is formed with flanges 24^b 24^c, connecting the ears 31 32, and said flanges are slotted. The billets 27 28 are omitted, and a tongue 38 is located on and projects laterally from the central portion of the plate between the flanges and intermediate of the ears. A strap 39 is employed to connect the belly-band 30 and saddle 29 and is extended from the slots of the flanges 24^b 24^c and across the plate. The strap 39 is provided with a series of holes 40, arranged to receive the tongue 38, whereby when the strap is drawn taut movement of the plate relative to the strap in a vertical direction is prevented.

I claim as my invention—

1. The base-plate provided with means for attachment to a thill and formed with a slot in its central portion and a groove in one face communicating with said slot, the boss on and projecting laterally from the base-plate over the slot therein and bored longitudinally, the latch mounted within the bore of the boss and extending within the groove of the plate,

tongues on said latch, a trace-plate, apertured ears on the trace-plate arranged to embrace the boss and receive the tongues of the latch, a spring on the latch, a latch-cord leading from said latch, and means for attaching harness to a trace-plate.

2. A harness and thill attaching device, comprising the base-plate arranged and shaped for attachment to a thill, a tubular boss on said plate, a latch slidably mounted in said plate and boss, a spring holding said latch in one direction, which latch is offset and inclined, a trace-plate arranged and shaped for attachment to a harness, ears on said trace-plate apertured for engagement by the latch, one of said ears being so located as to be engaged by the inclined offset portion of the latch at times.

3. A harness and thill attaching device, comprising the base-plate arranged and shaped for attachment to a thill, a tubular boss on said plate, a latch slidably mounted in said plate and boss, said latch being formed with an inclined offset in its central portion, a stem on the latch, a slide-bearing within which the stem may reciprocate, an ear on the latch, an expansive coil-spring on the stem between and impinging the ear and slide-bearing, tongues on the latch in alinement with the stem, a slide-bearing within the boss and arranged to receive one of the tongues, a trace-plate provided with means for attachment to a saddle and belly-band, an eyebolt in the trace-plate, spring-held in one direction and arranged for attachment to a hame-tug, ears on the trace-plate arranged and shaped to embrace said boss and apertured to receive the said tongues, and means for moving the latch against the resilience of the spring on the stem.

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