

No. 608,474.

Patented Aug. 2, 1898.

S. J. McDONALD.
NECK YOKE.

(Application filed Sept. 10, 1897.)

(No Model.)

FIG. 1.

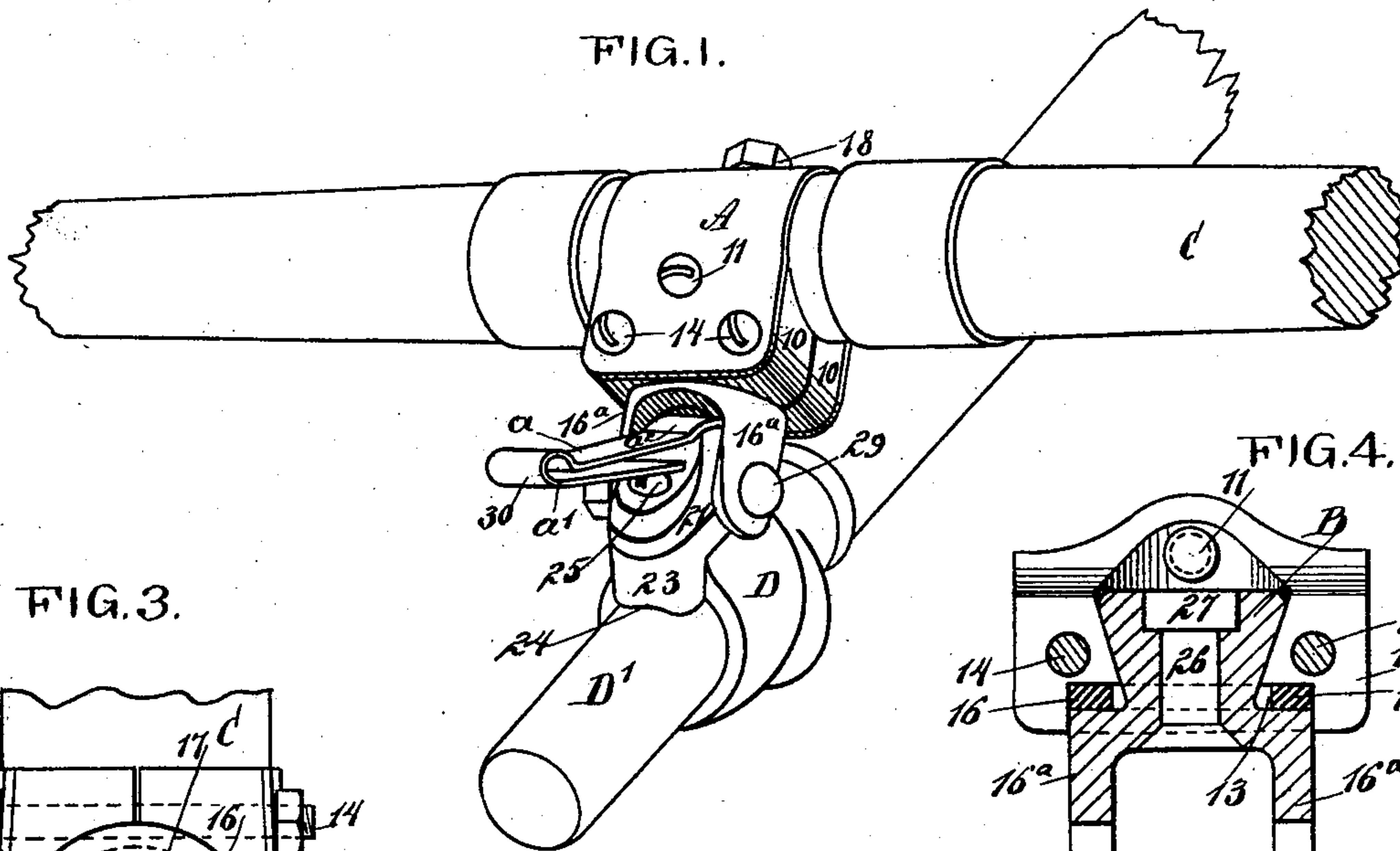


FIG. 3.

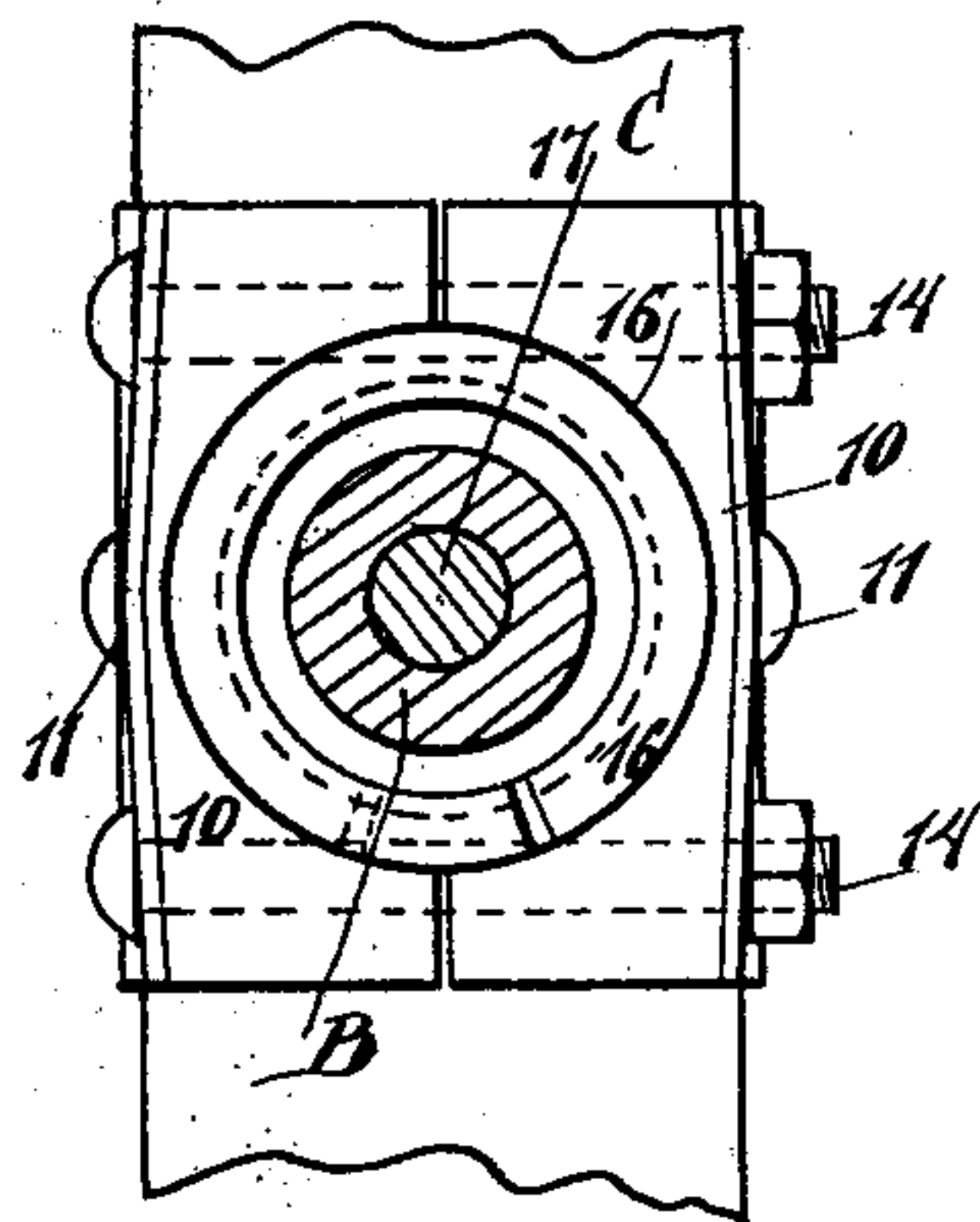


FIG. 4.

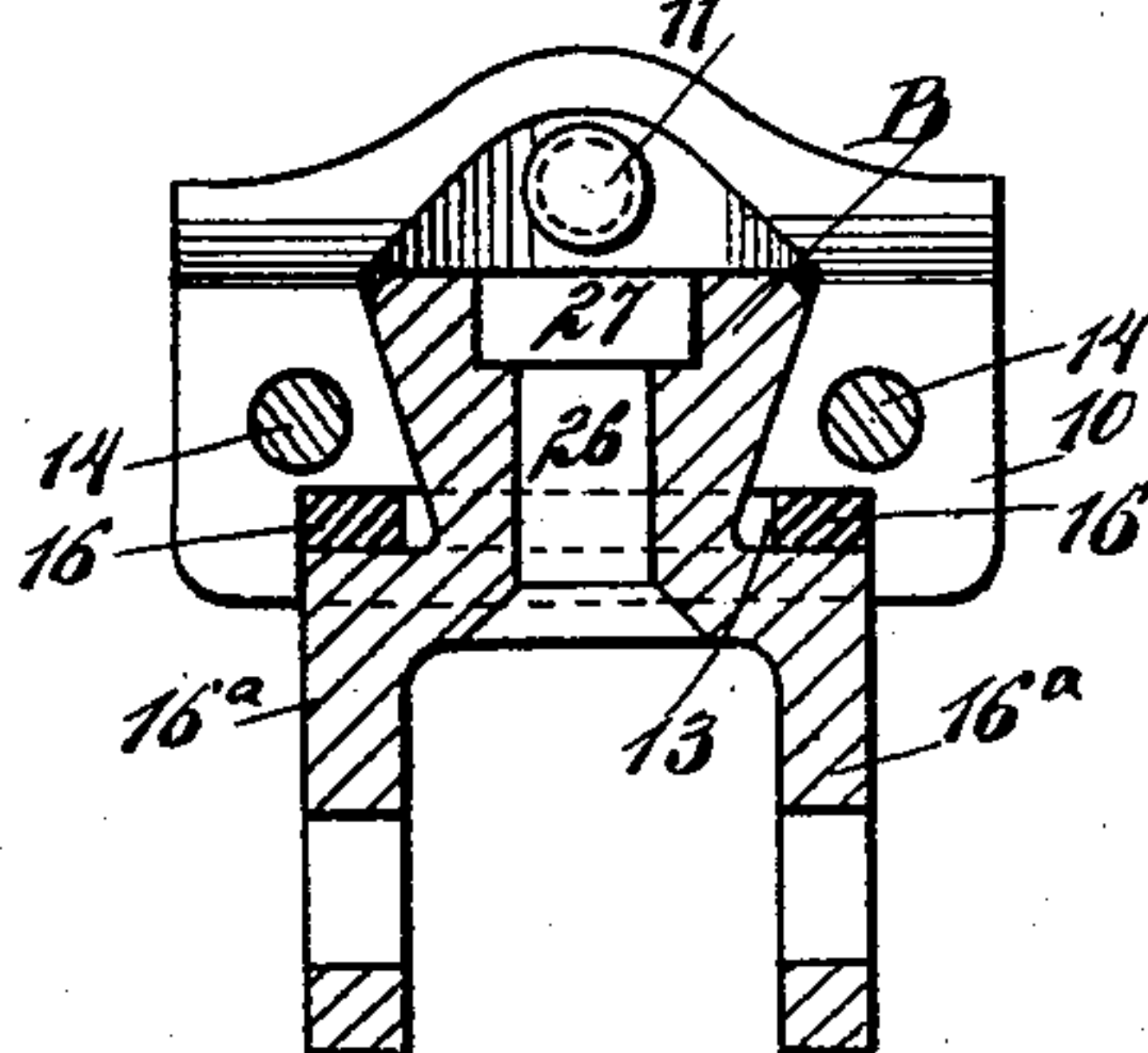
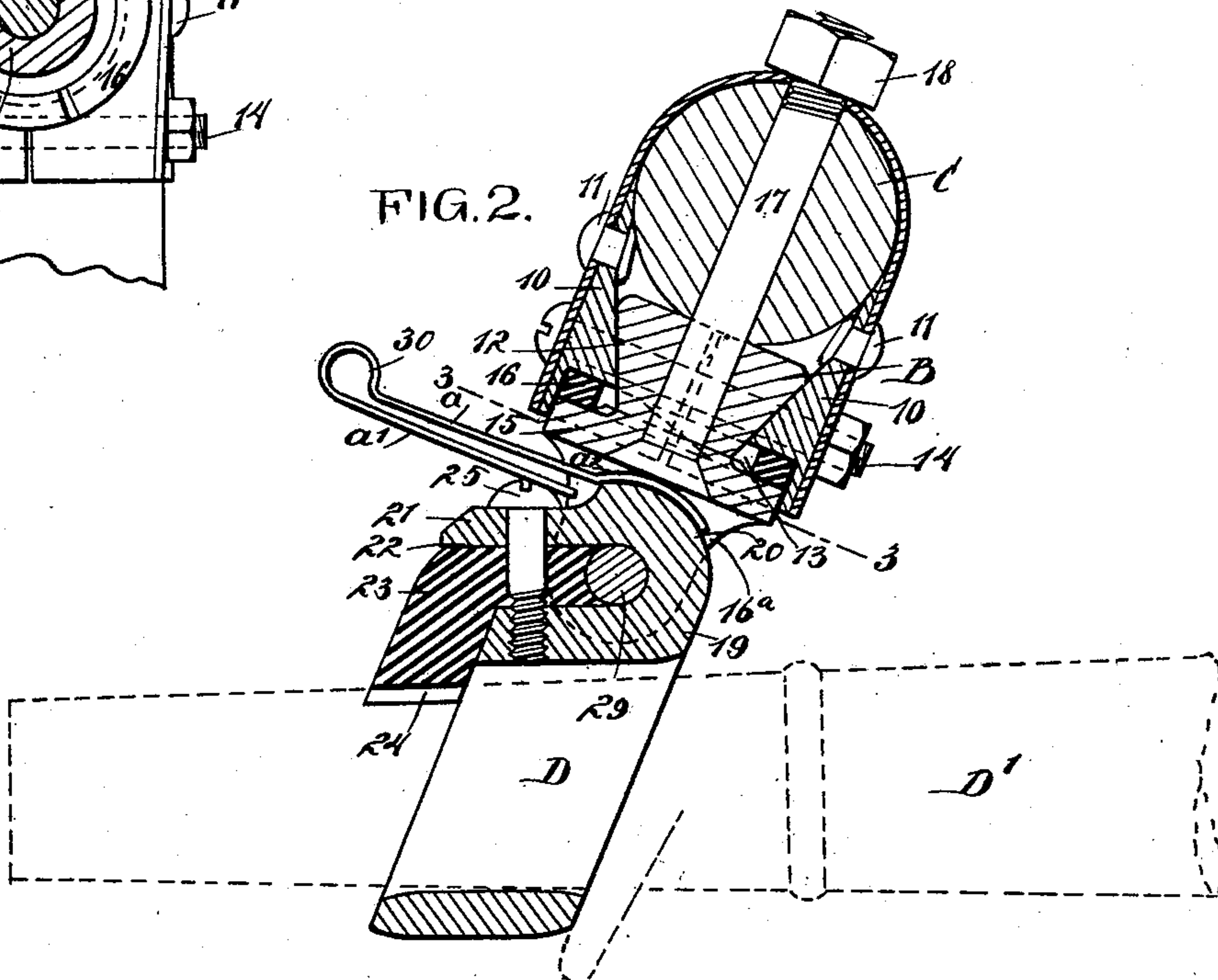


FIG. 2.



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NECK-YOKE.

SPECIFICATION forming part of Letters Patent No. 608,474, dated August 2, 1898.

Application filed September 10, 1897. Serial No. 651,218. (No model.)

To all whom it may concern:

Be it known that I, SAMUEL J. McDONALD, of Gallatin, in the county of Daviess and State of Missouri, have invented a new and useful Improvement in Neck-Yokes, of which the following is a full, clear, and exact description.

The object of the invention is to provide a center ring or loop which will have a swivel connection with the cross-pole of the neck-yoke, thus enabling the center ring or loop to accommodate itself to any necessary position.

A further object of the invention is to so assemble the parts that they will operate freely and with a minimum of wear and, furthermore, to provide a means whereby there will be no rattling.

Another object of the invention is to so construct the center ring or loop that it will not leave the tongue in the event the traces or tugs of the harness should become broken and to construct the yoke as an entirety in an exceedingly simple yet durable and economic manner.

The invention consists in the novel construction and combination of the several parts, as will be hereinafter fully set forth, and pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures.

Figure 1 is a perspective view of the neck-yoke, illustrating it applied to a pole-tip. Fig. 2 is a vertical section through the neck-yoke connection and through the cross-pole, the pole-tip being shown in dotted lines. Fig. 3 is a horizontal section on the line 3-3 of Fig. 2; and Fig. 4 is a vertical section through the swivel-head of the neck-yoke, illustrating a slight modification in the construction of the same.

A clip A is provided, adapted to be carried over the cross-pole C in any approved manner, and the said clip is provided interiorly at each of its sides with a socket-block 10. These blocks are alike in construction and are adapted to practically engage one with the other. Each block is secured ordinarily to the clip by means of pivots 11, located at the top portion of the block, extensions being pro-

vided for that purpose. Each block is provided with a segmental recess, the walls whereof extend downwardly and inwardly from the upper surfaces of the blocks, and when the two blocks are brought together the two recesses 12 will form a socket circular in cross-section and tapering longitudinally. The socket-blocks are further provided with recesses 13 in their under faces, and the socket-blocks are connected with each other and with the clip through the medium of bolts 14, two being usually employed, the said bolts having proper nuts applied.

The socket formed in the blocks 10 is adapted to receive the tapering body portion of a swivel-head B. The tapering body of the head is free to turn in the socket formed in the blocks, and the body of the head is provided at its lower end with an annular flange 15, which extends within the recess 13 of the socket-blocks, while between the upper face of the head-flange 15 and the upper wall of the recess 13 in the socket-blocks a washer 16, preferably of an elastic material, is placed, as is shown in Figs. 2 and 4. Ears 16^a are projected downward from opposite sides of the flange portion of the swivel-head. A bolt 17 is passed through the swivel-head and likewise through the cross-pole C, the head of the bolt being countersunk in the flange 15 of the head, while the threaded end of the bolt extends through and beyond the upper surface of the clip, being provided with a suitable nut 18. This bolt serves the dual purpose of attaching the clip and pole-supporting members to the cross-pole and of taking up any wear that may occur on the washers 16, while the cross-bolts 14 may be utilized for taking up any wear incident to the socket-faces of the blocks 10. The center ring or loop D is of the ordinary construction, being adapted to receive a pole-tip D'; but the center ring or loop at its upper end is increased in thickness to form a head 19, the tip 20 whereof is convexed, and the head portion of the center ring is provided with a forwardly-extending horizontal section 21, in which a horizontal slot 22 is made. The head portion of the center ring is pivoted to the ears 16^a of the swivel-head by means of a pivot-pin 29, as shown in Fig. 2.

A jaw or gripping-block 23, of elastic ma-

terial and of angular construction, is provided for the head of the center ring, the horizontal member of the said jaw or gripping-block being introduced into the slot 22 of the ring-head, while its other member extends downwardly and forwardly, being provided upon its under face with a concaved surface 24 for engagement with the pole-tip. This jaw or gripping-block, which is usually of rubber, will cling so tightly to the pole-tip as to hold the neck-yoke in engagement with the said pole-tip no matter what accident may happen to the harness. A bolt or a screw 25 is passed down through the extension of the head of the center ring and through the horizontal member of the jaw or gripping-block.

In Fig. 4 I have illustrated a slight modification of the device, in which instead of employing a long bolt 17 a short bolt 26 is substituted, its head being countersunk in the swivel-head in like manner as the bolt 17; but at the upper end of the bolt 26 a collar 27 is formed, which is tightly fitted in a recess made in the upper portion of the said swivel-head. Thus should the swivel-head break where its body connects with the shank the two parts will be firmly tied together. This same result may be obtained when a longer bolt 17 is employed by forming a collar corresponding to the collar 27 on the bolt 17 and countersinking the collar in the head in the same manner as shown in Fig. 4.

In order to prevent the parts of the neck-yoke from rattling, I employ a spring 30, which consists of a strip bent upon itself to form an upper long member a and a shorter lower member a' , the upper or longer member terminating in a curved foot a^2 . This curved foot is introduced between the convexed surface 20 of the center ring or loop and the bottom of the swivel-head, engaging with both, while the shorter member a' of the spring engages with the forward extension from the head of the center ring or loop. Besides acting as a handle therefor this spring serves to swing the ring backward, so that it will normally grip the pole with its upper forward edge and prevent its slipping off the pole in case of accident. To remove the ring from the pole, it should be engaged by its lower side.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. In a neck-yoke, the combination with a clip, socket-blocks located within the said clip and adjustable toward each other, said blocks being provided with a tapering opening, and a tapering head swiveled in the opening in the said socket-blocks, the head being provided with a flange at its bottom and extensions from the flange, of a center ring or loop pivoted in the extensions from the swivel-head, the said center ring or loop being provided with a slotted head, and an elastic gripping jaw or block secured in the slotted portion of the head, a member of the said jaw or gripping-block extending downwardly and

forwardly at the front portion of the said center ring or loop, as and for the purpose specified.

2. In a neck-yoke, the combination with a clip, socket-blocks adjustably secured in the said clip, said blocks being provided with a tapering opening, and being also provided with a bottom recess, of a head swiveled in the tapering opening in the said blocks, the head being provided with a flange extending into the lower recess of the blocks, a washer interposed between the blocks and the flange of the head, a center ring or loop pivotally connected with the said swiveled head, and a spring bearing upon the cross-pole and ring and acting to swing the lower edge of the ring backward, as and for the purpose specified.

3. In a neck-yoke, the combination with a clip, socket-blocks adjustably secured in the said clip, said blocks being provided with a tapering opening and being also provided with a bottom recess, of a head swiveled in the tapering opening in the said blocks, the head being provided with a flange extending into the lower recess of the blocks, a washer interposed between the blocks and the flange of the head, a center ring or loop pivotally connected with the said swivel-head, a bolt passed through the said swivel-head and adapted to strengthen the same, and an elastic jaw or gripping-block of angular construction, one member whereof is secured at the upper portion of the center ring or loop, the other member extending downwardly and forwardly at the upper portion of the said ring or loop, for the purpose set forth.

4. In a neck-yoke, the combination with a clip, a head swiveled in the said clip, and a center ring or loop pivoted to the said head, of a spring adapted to act as an antirattler, the said spring comprising two members, one member whereof is longer than the other, the longer member being provided with a curved extremity adapted for engagement with the curved upper portion of the center ring or loop and for engagement with the swivel-head, the shorter member of the spring engaging with the center ring or loop in advance of the point of engagement of the longer member, for the purpose set forth.

5. A neck-yoke connection, comprising a plate adapted to embrace the cross-pole, independent socket-blocks between the ends of said plate the socket-blocks being inwardly concaved and forming a central socket between them when in place, bolts passing through said blocks and the ends of the plate, and pivot-blocks occupying the socket between said blocks and having a pole-ring attached.

6. A neck-yoke connection, comprising a plate adapted to embrace the cross-pole and forming a clip, independent socket-blocks between the ends of said clip the socket-blocks being inwardly concaved and forming a central socket between them, bolts passing through said blocks and the ends of the clip,

a pivot-block within the socket between said blocks and having ears projecting from opposite sides thereof, and a pole-ring pivoted between said ears.

5 7. A neck-yoke having a pole-ring pivoted thereon to swing to the front and rear, a spring between the cross-pole and ring acting to swing the lower edge of the ring backward.

10 8. A neck-yoke having a pole-ring pivoted thereon to swing to the front and rear, and also to swivel, and a spring between the ring and its support, and adapted to swing the lower edge of the ring to the rear.

15 9. A neck-yoke connection, comprising a clip engaging the cross-pole, a pole-ring pivoted thereon to swing to the front and rear, the upper forward edge of the ring being adapted to engage and bite the pole when swung into contact therewith, and a flat doubled spring interposed between the clip and
20 ring and engaging the forward edge of said ring.

10. A pole-ring for neck-yokes, comprising a ring adapted for a pivotal suspension and having a slot in its upper forward part, a 25 ledge above said slot and projecting forward therefrom, and a block of rubber in said slot extending downward to engagement with the pole.

11. A pole-ring for neck-yokes, comprising 30 a ring having a hook or arm extending upward and forward from the upper rear edge thereof and forming a slot between the same and the body of the ring, the bottom of said slot forming a pivot-bearing, a block or rub- 35 ber within said slot and extending downward to contact with the pole, and a bolt passing through the end of the arm and rubber block and screwing into the body of the ring.

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