

No. 625,747.

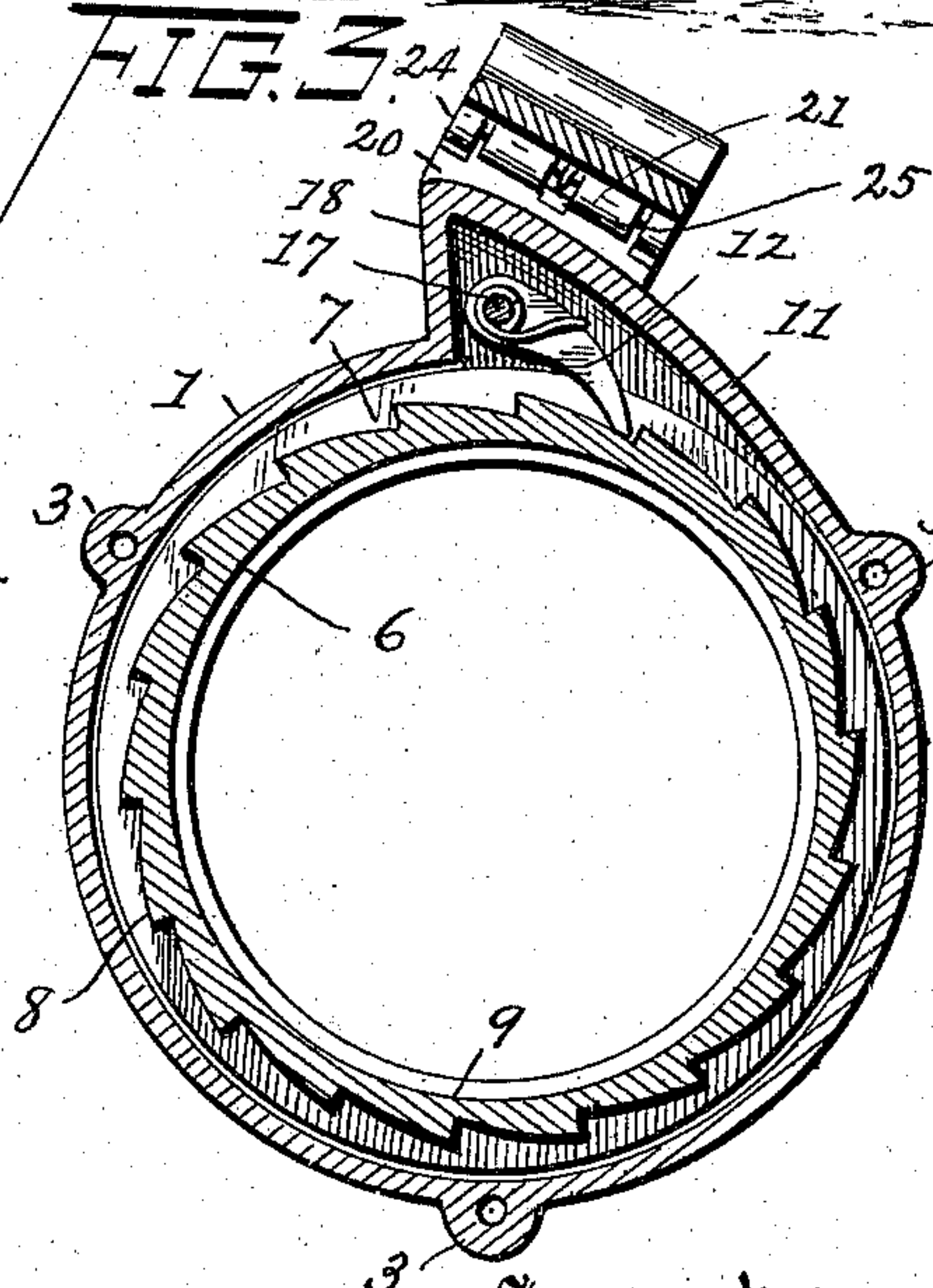
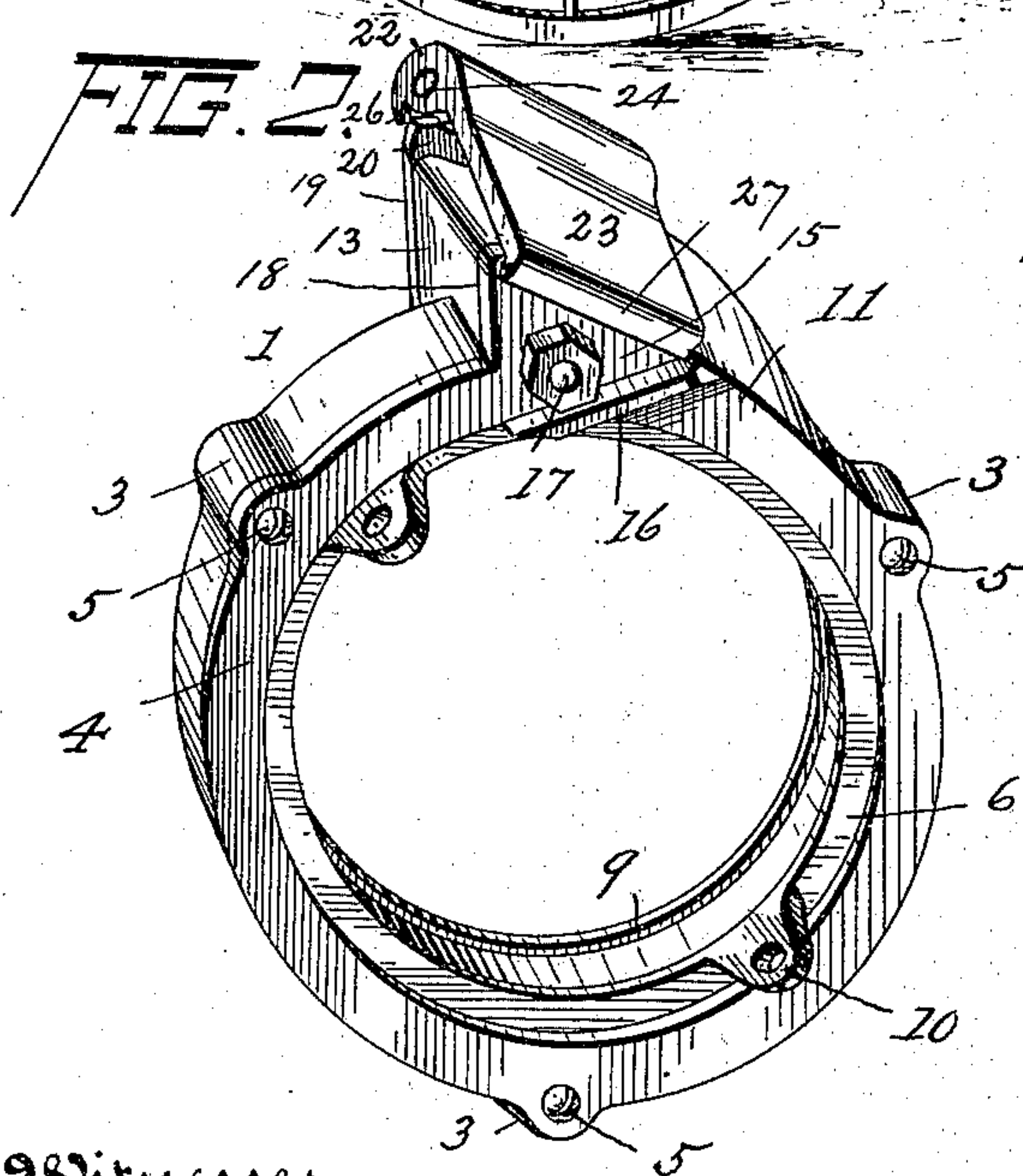
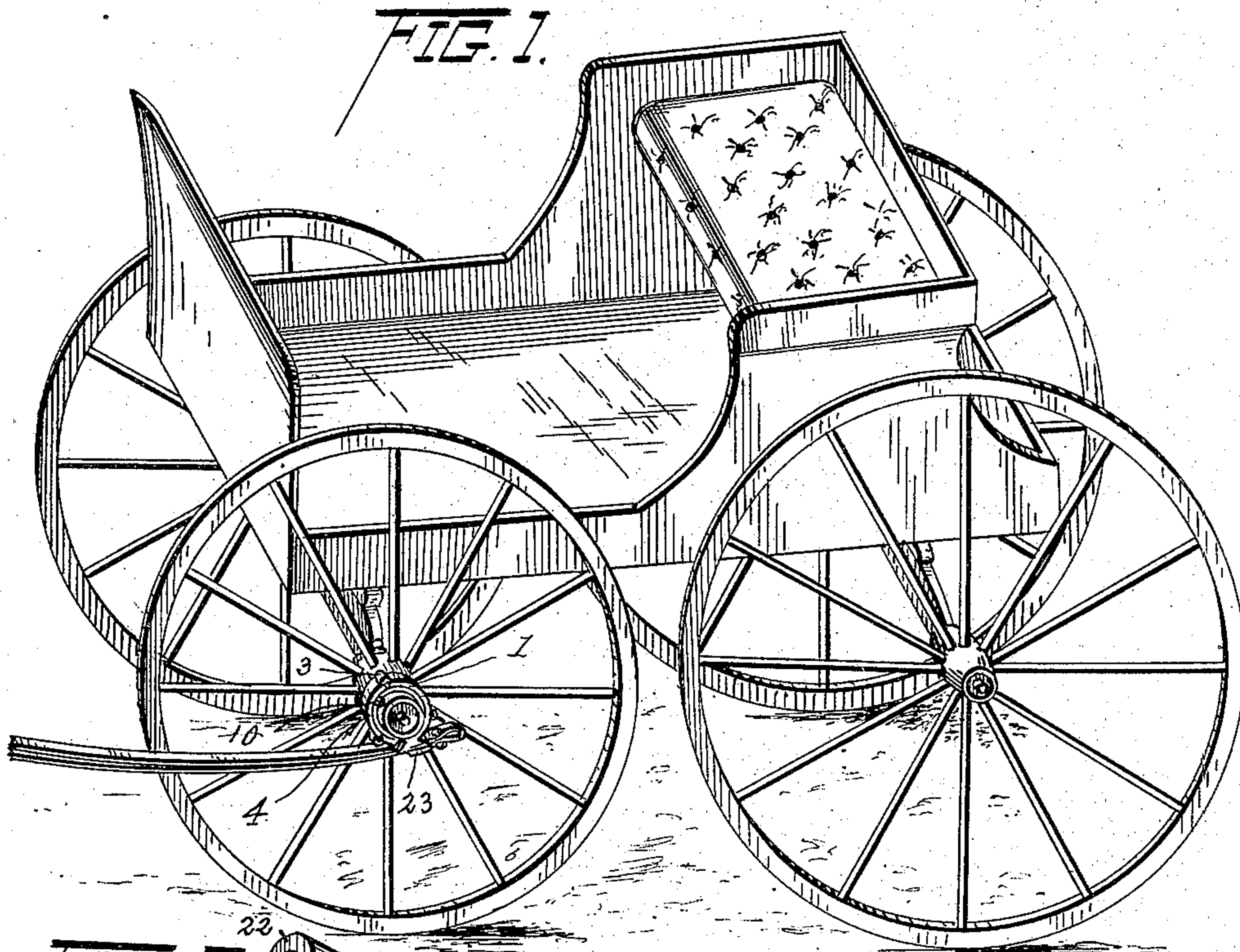
Patented May 30, 1899.

J. F. DEADMAN,
HORSE TIE.

(Application filed Sept. 2, 1898.)

(No Model.)

2 Sheets—Sheet 1.



Witnesses.
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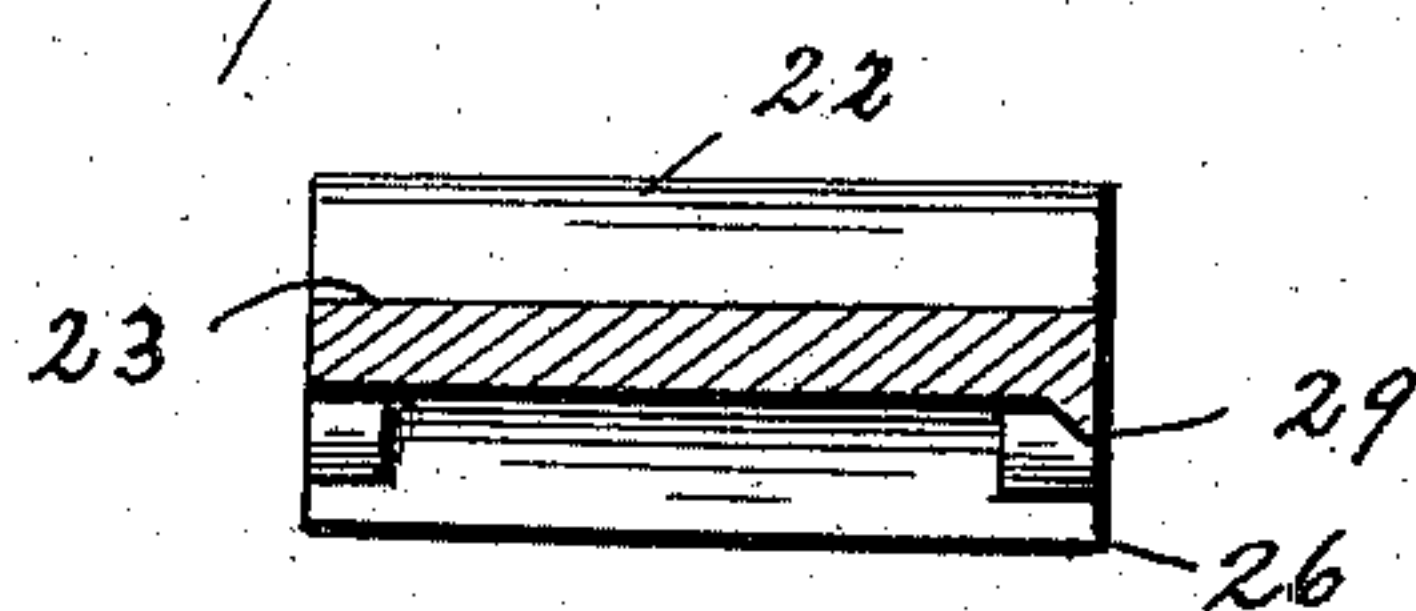
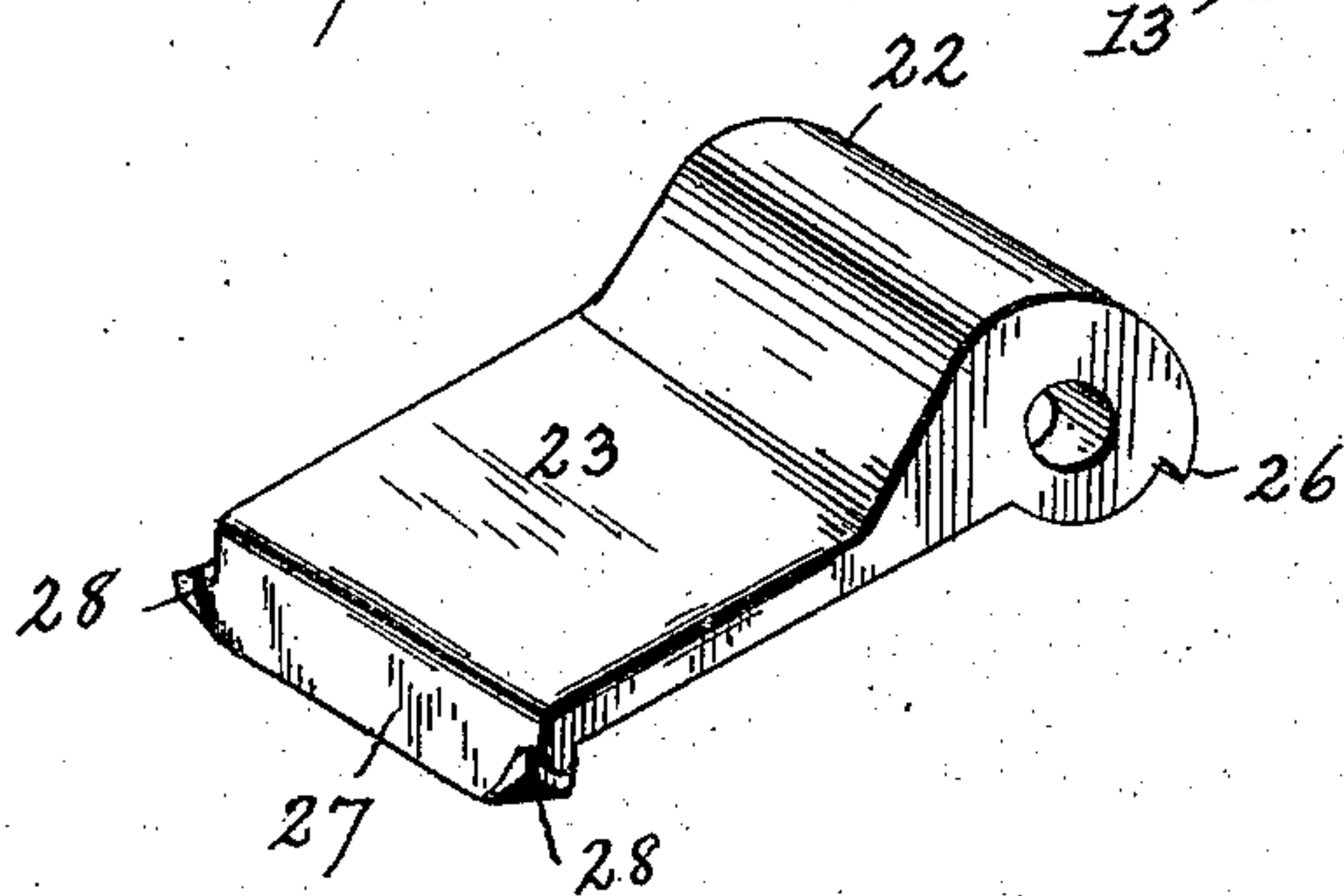
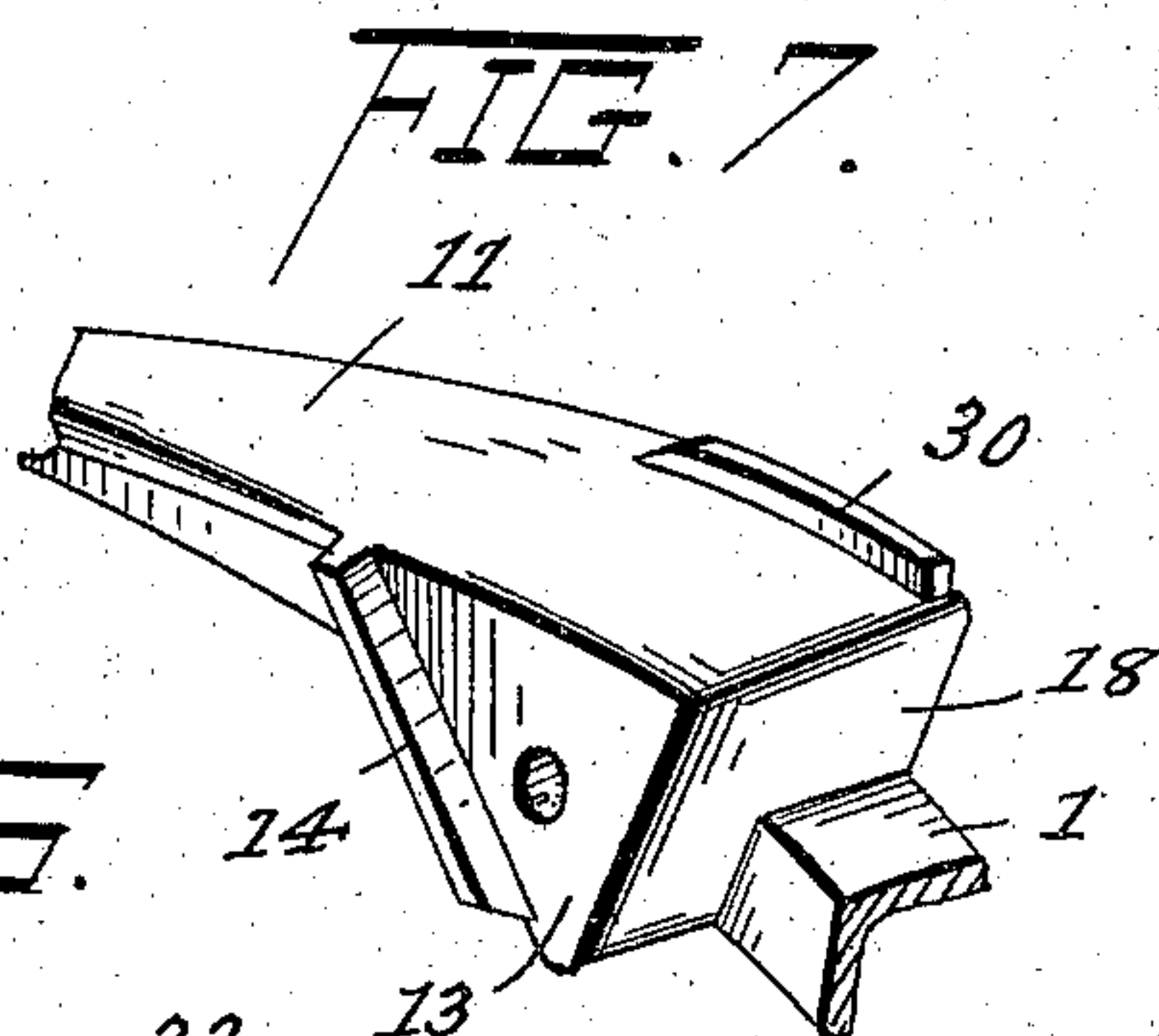
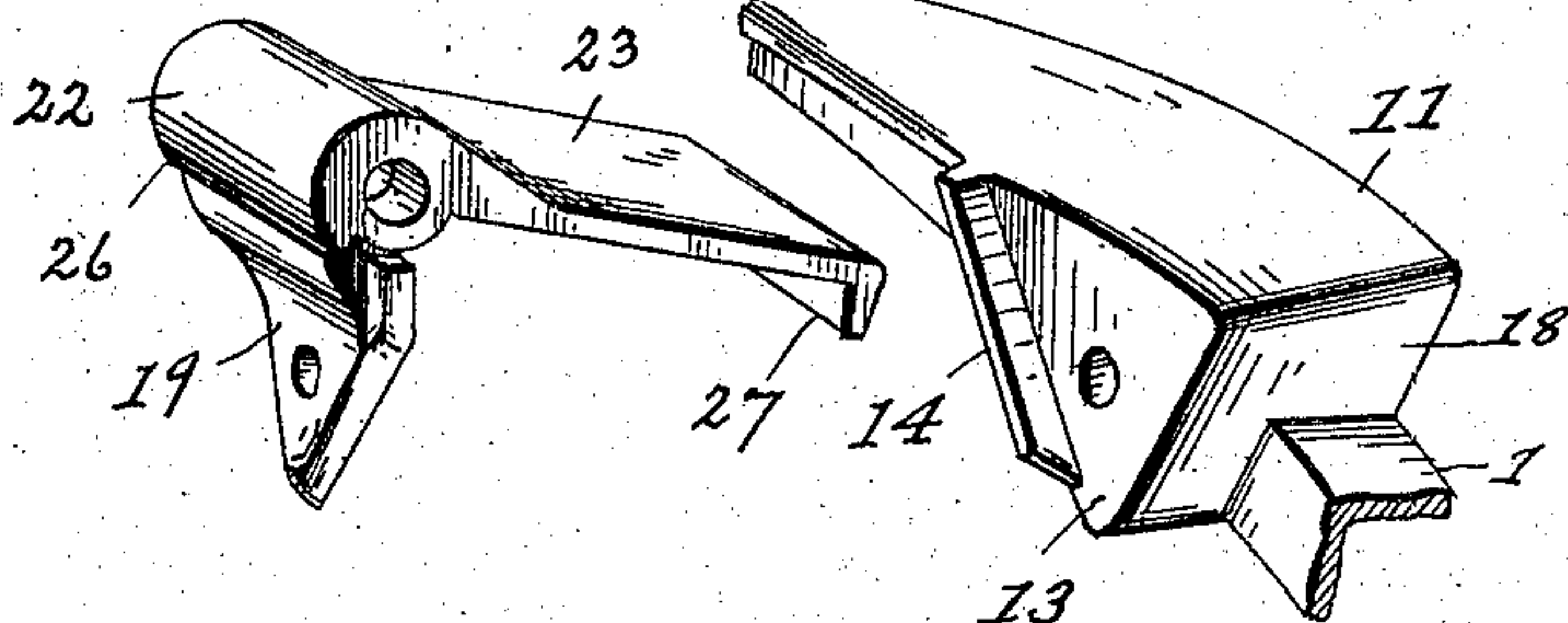
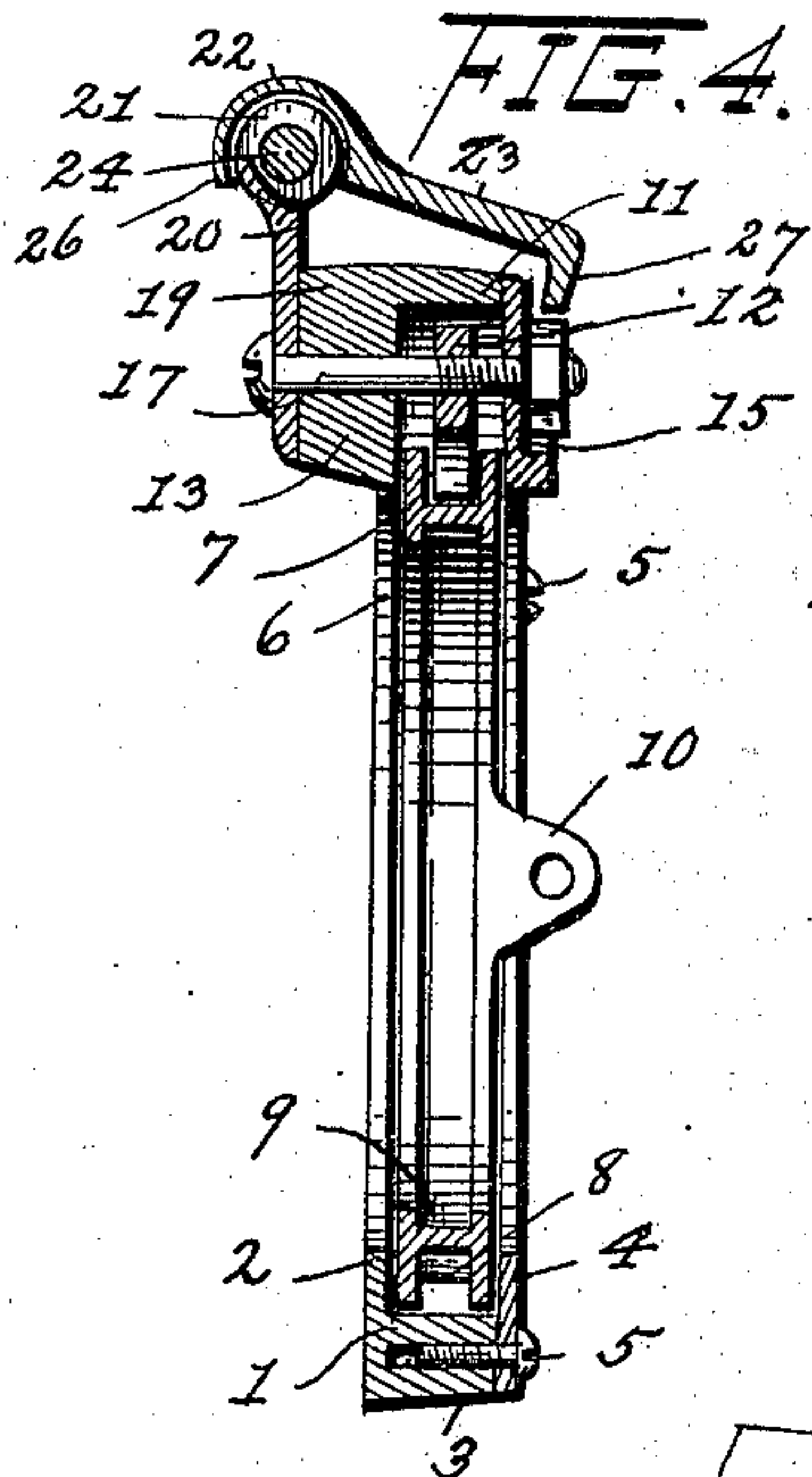
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HORSE TIE.

(Application filed Sept. 2, 1898.)

(No Model.)

2 Sheets—Sheet 2.



Witnesses:
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UNITED STATES PATENT OFFICE.

JOHN F. DEADMAN, OF SAULT STE. MARIE, MICHIGAN, ASSIGNOR OF THREE-EIGHTHS TO JACOB I. DEADMAN, FRED R. PRICE, AND D. K. MOSES, OF SAME PLACE.

HORSE-TIE.

SPECIFICATION forming part of Letters Patent No. 625,747, dated May 30, 1899.

Application filed September 2, 1898. Serial No. 690,115. (No model.)

To all whom it may concern:

Be it known that I, JOHN F. DEADMAN, a citizen of the United States, residing at Sault Ste. Marie, in the county of Chippewa and State of Michigan, have invented certain new and useful Improvements in Horse-Ties; 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.

This invention relates to automatic horse-ties to be preferably attached to the hub of a wheel of a vehicle and to which the reins or lines are rigidly and firmly secured by an attachment for the purpose of tying a horse or team.

The objects of the invention are to so tie a horse or team to a vehicle direct as to permit a free backward movement, but prevent an advance movement by tightening the said reins or lines to instantly check or restrain and stop the horse or team; to arrange the tie in such manner that a single device of this character will be equally well adapted for either right or left use; to establish a cover or sealing for the several parts, so that they will be dust-proof and the entrance of mud thereinto completely obviated, and thereby overcome the deleterious wear action of grit or other foreign particles and preserve the several parts in such condition as to be free for successful operation at all times, and to primarily construct the several parts in a strong and durable manner to enable them to effectually resist shocks, jars, or any tendency to breakage by contact with extraneous objects and also through the strain incident to the tension thereon of the reins or lines in the checking operation.

The invention consists of the construction and arrangement of the several parts, which will be more fully hereinafter described and claimed.

In the accompanying drawings, Figure 1 is a perspective view of a vehicle, showing the improved device applied thereto. Fig. 2 is a perspective view of the tie detached. Fig. 3 is a section through the entire device, showing the interior construction. Fig. 4 is a transverse vertical section. Fig. 5 is a detail

perspective view of the line or rein securing attachment and a part of the boss to which it is reversely applied at one side. Fig. 6 is a detail perspective view of the grip shown slightly modified. Fig. 7 is a detail view of the boss or enlargement on the casing, also slightly modified. Fig. 8 is a further modification of the grip.

Referring to the drawings, wherein similar numerals are utilized to indicate corresponding parts in the several views, the numeral 1 designates a surrounding casing of substantially circular form, having at one side a flange 2 and at various points provided with screw-receiving enlargements 3. On the side of the said casing opposite to that at which the flange 2 is formed an inclosing ring 4 is adapted to be removably secured through the medium of screws 5 engaging the enlargements 3. The said inclosing ring 4 is of such width as to form a flange equal in inward extent to the flange 2, and by this means a seat or groove is formed in which a ratchet-ring 6 is rotatably mounted. This ratchet-ring is formed with a circumferential groove 7 in the periphery thereof, having the base of the same constructed with a series of regularly-arranged ratchet-teeth 8, the flanges formed by the said groove 7 standing outwardly from the said teeth and closely bearing against the inner surface of the parts of the seat or groove formed by the surrounding casing 1 and the ring 4. The peripheries of the flanges formed by the said groove 7 in the ratchet-ring 6 are situated adjacent the inner part of the said casing and the flange 2, and inwardly-extending portions of the ring 4 extend over and cover a large part of the said ring 6, and while permitting a rotation of said ring dust and mud are prevented from entering into the groove 7 and clogging the ratchet-teeth 8. The inner wall of the ring 6 is also circumferentially channeled, as at 9, leaving opposite thin or reduced flanges, which are intended to be filed or cut away for the purpose of fitting the said ring and the entire device to hubs of varying diameters. On one side of the ring 6 securing-ears 10 are formed, which are apertured to receive screws or other fastening devices for the purpose of attaching the

said ring and the entire device to the hub. The upper part of the casing is also formed with an enlargement or angular boss 11, which is hollow, and therein is seated a spring-actuated dog 12, which engages the ratchet-teeth 8 and prevents rotation of the ratchet-ring 6 in one direction, but permits a free movement of said ring in the opposite or reverse direction. The boss 11 on one side of the casing 10 has a lateral solid projection 13 of substantially triangular form and provided at one side with a flange 14. The upper part of the ring 4 also has an extension 15, conforming in contour to the boss 11, and closes the open 15 side of the hollow part of said boss. An oblique lug 16 is formed on the extension 15 and a part of the ring 4, and extending through the dog 12 and a portion of the extension 15 beyond the lug 16 is a bolt 17, 20 which serves as a pivotal support for the said dog and also as a means for securing the several parts. The nut of this bolt is adapted to be held against rotation by either the flange 14 or the lug 16.

25 The upper surface of the boss 11 gradually curves until it meets an abrupt inwardly-extending termination 18. A triangular arm 19 is also secured by the bolt 17 against the outer surface of the lateral projection 13 of the boss 30 11, and one side of said arm is adapted to bear against the flange 14, as shown, for the purpose of sustaining said arm in its adjusted position and prevents it from moving or defeating the operation of holding the reins or 35 lines in a firm and secure manner, as will be presently set forth. The said arm 19 has an upper extension 20 formed with apertured ears 21, and movably fitted over the said ears is a hollow knuckle formed as a part of a 40 grip 23. A pivot-bolt 24 connects the said knuckle and ears, and through the medium of a spring 25, engaging the said bolt and adjacent parts, the said grip is normally held down at an angle of inclination with considerable 45 tension toward the upper adjacent surface of the boss 11. The knuckle 22 has an overhanging shield 26, which prevents dust or mud from entering into and obstructing the operation of the pivot-bolt 24 and the relative parts, and the grip 23 is limited in its 50 elevation by the said shield striking against adjacent portions of the triangular arm. In the majority of the forms shown the said grip 23 has an unbroken straight engaging 55 surface and a depending lip 27 at its free end. As shown in the modification in Fig. 6, however, to permit ready insertion of the lines or reins under the grip the opposite corners of the lip 27 are flared outwardly, as at 28; 60 also, at one side a biting lip 29 can be formed, as shown by Fig. 8, to more firmly bear upon the said lines or reins. The lug 14 prevents the grip and the arms supporting the same from being moved by the strain on the reins, 65 and thereby preventing any reduction of the biting or clamping action of said grip, but, on the contrary, through the formation of the

outer surface of the boss 11 and the arrangement of the several parts, as specified, the more tension that is brought to bear on the 70 reins or lines the greater will be their securement. The lip 26 prevents the reins or lines from being drawn outwardly in a lateral direction, and the inclined position of the said grip materially facilitates this very desirable 75 advantage. In reversing the grip and its attachment, so as to attach the entire device for either a right or left use, the screw 17 is withdrawn and the arm of the grip thereby released and applied on the opposite side or 80 against the upper portion of the ring 4 and firmly held against the extension 15 of the latter, with one side bearing against or contiguous to the oblique lug 16, when the operation of the parts will be just as efficient and 85 the resistance equally strong. Thus the device is readily adapted for application to either side of a vehicle. In Fig. 7 the top surface of the outer portion of the boss 11 is shown formed with a rib 30 to assist in pre- 90 venting the lines or reins from slipping.

In applying the device it is attached to the hub of a wheel, and to make the operation effective buttons or analogous projections are secured to the reins or lines. In tying a horse 95 or team the reins or lines are placed under the grip 23, care being taken that both of the reins or lines are drawn with equal tension, so as to prevent slack which might be sufficient to permit the horse or team to turn their 100 heads either to the right or left. After the reins or lines are thus arranged an advance movement of the horse or team will necessarily cause the wheel carrying the improved device to revolve and the ratchet-ring 6 also 105 to rotate therewith, which winds the reins or lines around the periphery of the casing 1 and continually sets up an increasing tension on the lines or reins and causes the horse or team to stop or cease pulling forwardly. The 110 sudden check will necessarily cause the animals to move backwardly and the lines or reins will be unwound from the said casing, as the dog 12 will then slip through the ratchet-teeth 8. 115

The utility and advantages of the device other than those heretofore enumerated are manifold and will become readily apparent to those using the same. In applying the device it is preferably attached to the outside 120 of the hub as a matter of convenience and without requiring the removal of the wheel, and, further, to prevent entanglement of or injury to the lines or reins and provide for arranging the latter in the device without 125 passing the arms through or around dirty or muddy wheels and also more readily acquiring a uniform primary adjustment of both lines or reins in the grip.

To accommodate various applications, 130 changes in the proportions, dimensions, and minor details of construction could be resorted to without departing from the nature or spirit of the invention.

Having thus described the invention, what is claimed as new is—

1. In a horse-tie, the combination of a surrounding casing having a line or rein holding device thereon and a flange on one side, a ratchet-ring rotatably mounted in the casing having a circumferential groove in its periphery in which are ratchet-teeth below the peripheries of the opposite flanges formed by said groove, a closing-ring applied against the side of the casing opposite to the flange of the latter, said casing-flange and closing-ring covering the part of the ratchet-ring having the teeth therein, and the peripheries of the flanges on opposite sides of the ratchet lying closely to the inner surface of the said casing and a spring-actuated dog mounted on the inner portion of the casing and engaging said ratchet-teeth.

2. In a horse-tie, the combination of a casing carrying a line or rein holding device and provided with a flange on one side, a ratchet-ring rotatably mounted in the casing and having peripheral teeth with flanges on opposite sides extending outwardly beyond the same, a closing-ring bearing against the one side of the ratchet-ring to cover the same, the peripheries of the flanges formed on the opposite sides of the ratchet-teeth on the said ring being closely located to the inner surface of and covered by the casing, and an inclosed dog to engage said ratchet-ring.

3. A ratchet-ring for a horse-tie adapted to be applied to a hub and having an inner circumferential groove forming opposite reduced parallel flanges to be cut away for fitting purposes.

4. A ratchet-ring for a horse-tie having a peripheral groove within which ratchet-teeth are formed and protected by the opposite flanges provided by said groove, and stand beyond the diametrical extent of said teeth, and an inner circumferential groove to form opposite reduced flanges to be cut away for enlarging the opening of said ring.

5. A ratchet-ring for a horse-tie having a peripheral groove within which ratchet-teeth are formed and protected by opposite flanges provided by the formation of said groove, and which stand beyond the diametrical extent of said teeth and means for inclosing said flanges of the ring.

6. A horse-tie having a surrounding casing with an enlargement or boss thereon having opposite engaging sides, and a removable and reversible hinged rein or line holding grip thereon applicable to either side of said enlargement or boss.

7. A horse-tie having an inclosing casing provided with a boss or projection on one portion thereof, a ratchet-ring removably mounted in said casing, a dog engaging said ratchet-ring, and a spring-actuated grip extending transversely across the width of the said boss or projection at a downward incline and freely resting on one side of the latter.

8. In a horse-tie, the combination of an inclosing casing having a boss and a lateral projection with a flange at one side, an angular arm removably fitted to said projection and having one part resting against said flange, a spring-actuated grip attached to said arms and extending transversely across the boss at a normal inward incline, a dog in said casing, and a ratchet-ring adapted to be secured to a hub and on which said casing is adapted to rotate.

9. In a horse-tie, the combination of a casing having a boss with a lateral projection and a dog in said boss, a ratchet-ring mounted in the casing, a closing-ring on one side of the casing having an extension, and a grip having an arm adapted to be applied either to the projection of the boss or the extension of the ring.

10. In a horse-tie, the combination of a casing having a boss thereon with an oblique lug on the one side or face thereof, ratchet mechanism in said casing, a closing-ring for the casing having an extension conforming in shape and applicable to the opposite side of the boss and having an oblique lug thereon in reverse position to that on the boss, an arm for attachment to the side or face of the boss having the lug thereon or to a part of the extension of the closing-ring, a grip hinged to a part of the arm, and a removable bolt to secure the arm and grip in either one of two positions.

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

JOHN F. DEADMAN.

Witnesses:

LEONA A. FEATHERS,
GENEVIEVE MATTHEUS.