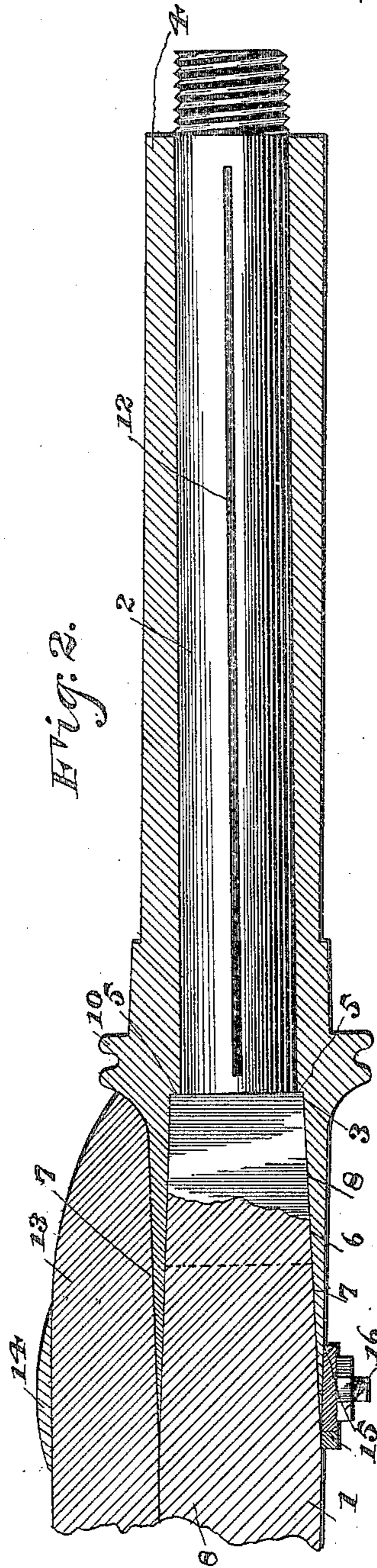
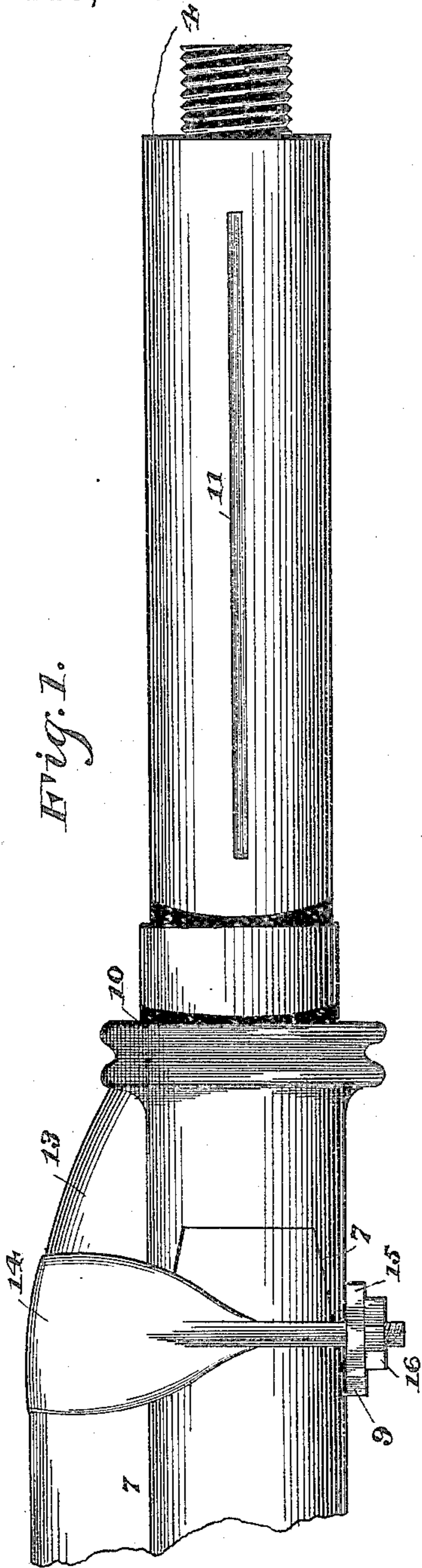


(No Model.)

O. W. BEACH.
VEHICLE AXLE.

No. 446,416.

Patented Feb. 17, 1891.



Witnesses,

G. S. Ober,
W. S. Duwall.

By *his* Attorneys,

C. A. Snow & Co.

Inventor
Oscar W. Beach.

UNITED STATES PATENT OFFICE.

OSCAR W. BEACH, OF FORT MORGAN, COLORADO, ASSIGNOR OF ONE-HALF
TO JAMES P. CURRY, OF SAME PLACE.

VEHICLE-AXLE.

SPECIFICATION forming part of Letters Patent No. 446,416, dated February 17, 1891.

Application filed August 29, 1890. Serial No. 363,425. (No model.)

To all whom it may concern:

Be it known that I, OSCAR W. BEACH, a citizen of the United States, residing at Fort Morgan, in the county of Morgan and State of Colorado, have invented a new and useful Axle, of which the following is a specification.

This invention has relation to improvements in axles, and the objects in view are to prevent an undue heating of the same and to provide a safe, simple, and secure means of connecting the skeins to the axles and axle-beds and to prevent a bending of the axle.

With these objects in view the invention consists in certain features of construction hereinafter specified, and particularly pointed out in the claims.

Referring to the drawings, Figure 1 is an elevation of one end of an axle constructed in accordance with my invention. Fig. 2 is a vertical longitudinal section of the same.

Like numerals of reference indicate like parts in all the figures of the drawings.

1 designates the axle square in cross-section and terminating at its ends in the cylindrical portions or bearings 2, at the inner end of which is formed a square shoulder 3.

4 designates the axle-skein which fits upon the spindle 2, and the latter extends beyond the outer end of the skein and is threaded to receive the usual nut. The inner bore of the skein is shouldered, as at 5, to abut against the shoulder 3 of the axle, and beyond the shoulder 5 said skein has formed a socket 6, square in cross-section and flaring toward its mouth, the axle being correspondingly shaped at this point, as shown at 8. The upper and lower walls of the socket extend a slight distance beyond the side walls thereof, as shown at 7, so that they embrace the upper and lower sides of the axle, and the lower wall terminates at its extreme end in a transverse rib 9. The skein is thicker upon its under side near its outer end than upon its upper at an opposite point, while the top of the skein near its rear end or opposite the shoulder 5 is thicker than is the bottom side opposite the same point, so that the wheels are given the desired pitch or gather—that is to say, their lower and front portions tend toward each other. When it is desired to set the axle, it is simply necessary to make both ends of the

axle straight. The skein is then placed in position and the job is complete. I thus avoid the heretofore difficult task of setting the axle and accomplish the same by a simple, convenient, and expeditious means. The exterior of the skein above the shoulder 5 is provided with the usual collar 10 to prevent the entrance of dust, and upon its cylindrical portion beyond the collar is provided with one or more oil-grooves 11. The spindle of the axle is provided at diametrically-opposite sides with two or a series of longitudinal grooves 12 for the admission of air, and consequently prevent an undue heating thereof.

13 designates the axle-bed, which is mounted upon the axle and overlaps the upper wall 7 of the socket 6 of the skein, and 14 designates a clip straddling or embracing the axle-bed and axle and having its lower terminals connected by a tie-plate 15, below which are located nuts 16. It will be observed that these transverse ribs 9 abut against the inner edge of the plate 15, which latter forms a stop and prevents any withdrawal of the skein even though the nuts might become loosened or any lateral movement whatever.

Heretofore axles have been liable to become bent or sprung immediately in rear of the collars 10, but by thus re-enforcing the axles by the skeins at these points I obviate this liability and render the axle much stronger.

Having described my invention, what I claim is—

1. The combination, with an axle terminating in a spindle, of a skein snugly fitting the spindle and terminating at its rear end in a square socket snugly fitting the axle, an axle-bed mounted upon the axle and overlapping the skein, and a clip embracing the axle skein and bed, substantially as specified.

2. The combination, with a square axle terminating in a spindle, of a skein fitting the spindle and terminating in its inner end in a tapered square socket fitting the axle, the upper and lower walls of the socket being extended beyond the side walls thereof and the lower wall provided with a transverse rib, an axle-bed mounted on the axle and overlapping the skein, a clip embracing the bed, axle, and skein, a tie-plate connecting the ends of the

clip and located in rear of the rib, and nuts threaded on the ends of the clip below the plate, substantially as specified.

3. The combination, with an axle having its
5 end reduced to form a spindle, of an axle-skein fitting the spindle and the axle, said skein being provided with a superficial enlargement near its rear end thicker at its top than at its bottom and in front of the enlarge-

ment made thicker at its bottom than at its top, substantially as specified.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in presence of two witnesses.

OSCAR W. BEACH.

Witnesses:

H. M. PUTNAM,

D. W. FLEMING.