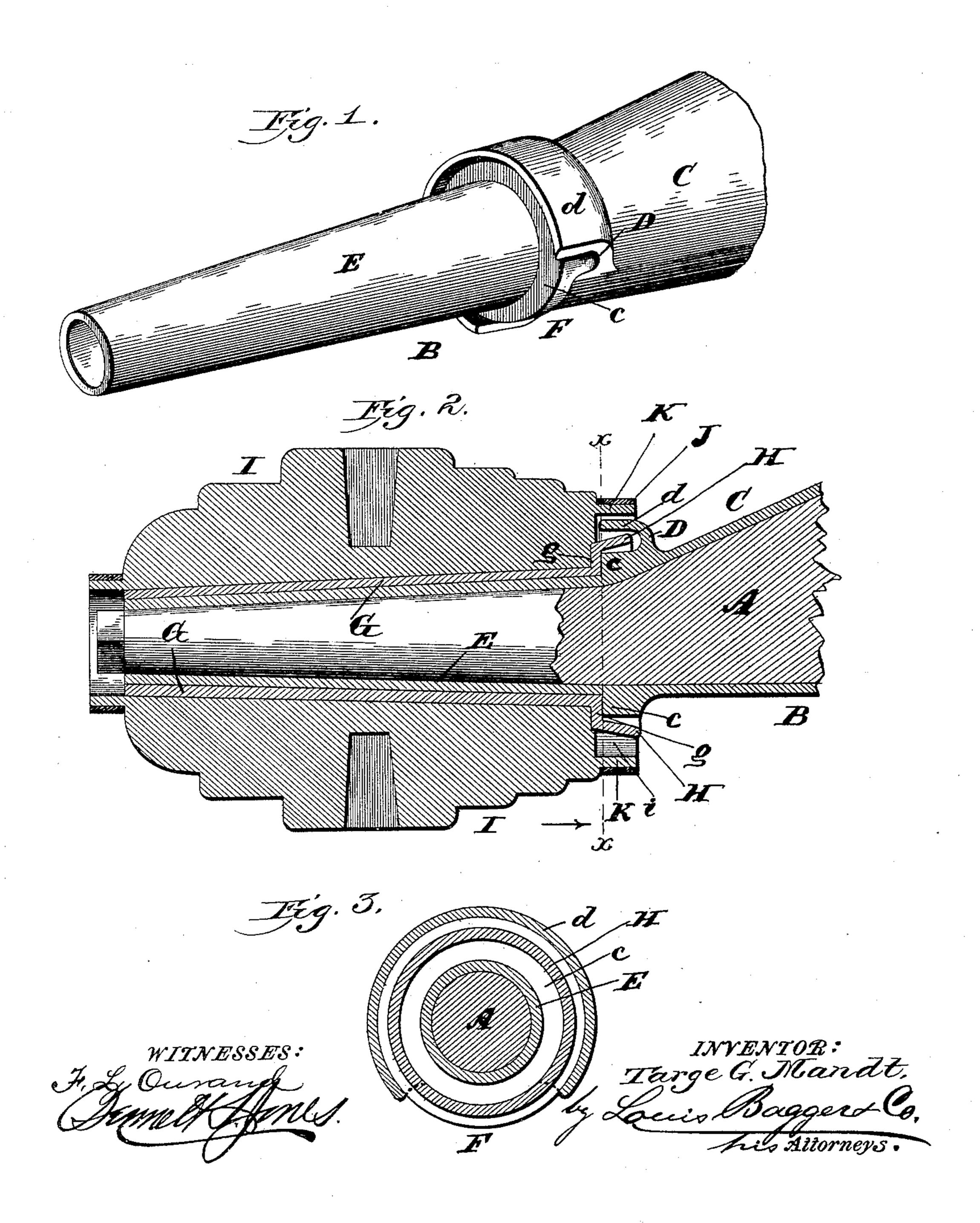
(No Model.)

## T. G. MANDT. AXLE SKEIN.

No. 467,819.

Patented Jan. 26, 1892.



## United States Patent Office.

TARGE G. MANDT, OF STOUGHTON, ASSIGNOR OF ONE-HALF TO JOHN A. JOHNSON, OF MADISON, WISCONSIN.

## AXLE-SKEIN.

SPECIFICATION forming part of Letters Patent No. 467,819, dated January 26, 1892.

Application filed July 11, 1891. Serial No. 399,171. (No model.)

To all whom it may concern:

Be it known that I, TARGE G. MANDT, a citizen of the United States, and a resident of Stoughton, in the county of Dane and State 5 of Wisconsin, have invented certain new and useful Improvements in Axle-Skeins; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to 10 which it appertains to make and use the same, | reference being had to the accompanying drawings, which form a part of this specification, and in which—

Figure 1 is a perspective view of my im-15 proved axle-skein with the box removed. Fig. 2 is a longitudinal sectional view through the axle-skein, axle-box, and hub; and Fig. 3 is a transverse sectional view on line x x in Fig. 2.

Like letters of reference denote correspond-

ing parts in all the figures.

This invention relates to an improvement in axles for vehicles; and it consists in the peculiar construction of the axle-skein and 25 sand-band and in the combination of the same with the hub, which will be more fully set | forth hereinafter, and particularly pointed out in the claim.

Referring to the drawings, the letter A des-30 ignates the axle, which may be of wood or

metal, solid or tubular, as desired.

B is the skein, which consists of the sleeve C, fitting upon the axle, the flanged collar D, and thimble-skein proper or spindle E. The 35 flanged collar D is set back upon the part C, so that the latter will form an offset or shoulder c within the collar, the flange d of which slightly overlaps the same, as shown in Fig. 2. The collar and flange D d are broken off 40 or discontinued on the under side of the skein, as shown at F.

The axle-box G has an annular shoulder g and flaring flange II, which latter, when the I

parts are in their proper juxtaposition, (illustrated in Figs. 2 and 3,) projects into the seg- 45 mental space formed in the skein by the annular shoulder c and flanged collar D d. The inner end of the hub I is cupped at i, so as to form an annular recess into which projects the outer rim of the collar-flange d, the cupped 50 inner rim K of the hub being provided with the usual hub-band J.

From the foregoing description, taken in connection with the drawings, the operation of this device will readily be understood. The 55 flange H of the axle-box, collar-flange d of the skein, and flange K of the hub, overlapping one another from alternately opposite sides, form an effectual sand-guard, keeping the axle-box at all times free from dust and grit, 60 and thus insuring its smooth and easy running.

I am aware that wagon-skeins have before been made with an overlapping flange, forming, in combination with a flanged axle-box, 65 a more or less effective sand band or guard for the inner end of the hub, nor do I claim such construction broadly; but

What I claim as my improvement, and desire to secure by Letters Patent of the United 70

States, is—

The combination of the skein comprising the shouldered sleeve C c, overlapping flanged collar D d, and spindle E, cast in one piece, axle-box G, having annular shoulder g and 75 flaring flange or bell-mouth H, and hub I, having overlapping annular banded flange K, substantially as and for the purpose shown and set forth.

In testimony that I claim the foregoing as 80 my own I have hereunto affixed my signature in presence of two witnesses.

TARGE G. MANDT.

Witnesses:

AUGUST PETERSON, BENNETT S. JONES.