(No Model.)

A. E. PARKER.

WAGON AXLE.

No. 312,502. Patented Feb. 17, 1885.

Fig. 1.

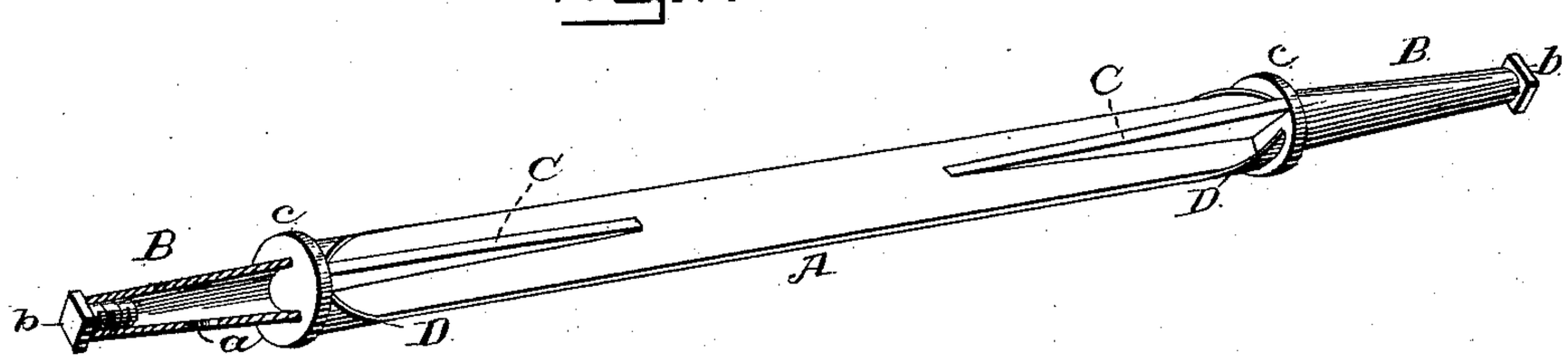


Fig. 2.

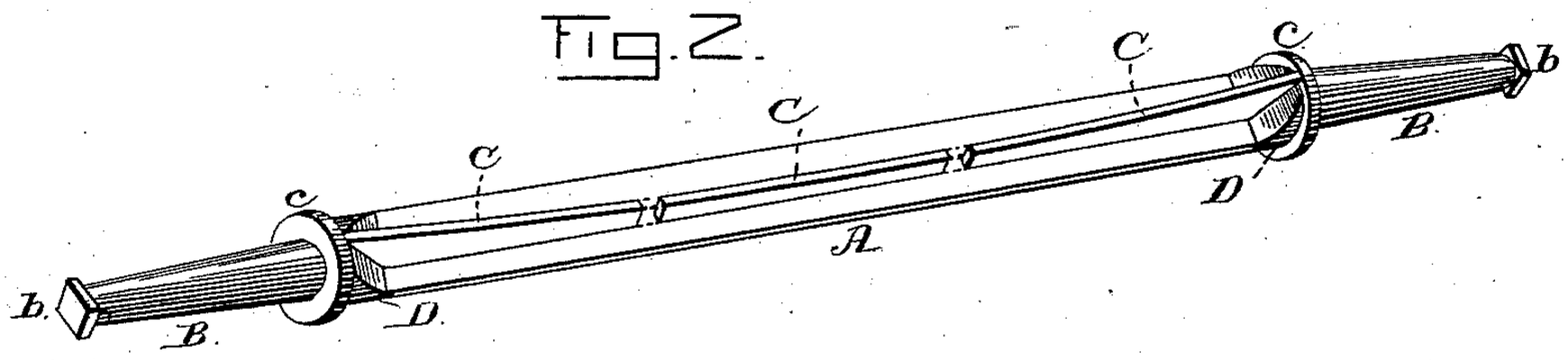
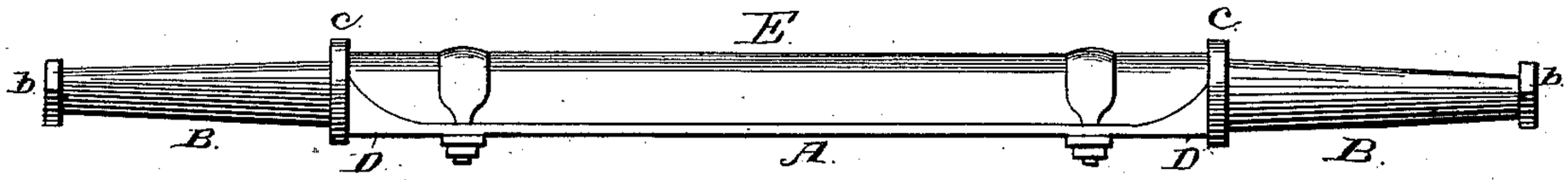


Fig. 3.



WITNESSES

H. A. Clark.

Jno. C. Schroeder

INVENTOR

Adelbert E. Parker

by Geo. W. Dyer

Atty.

UNITED STATES PATENT OFFICE.

ADELBERT E. PARKER, OF DUBUQUE, IOWA.

WAGON-AXLE.

SPECIFICATION forming part of Letters Patent No. 312,502, dated February 17, 1885.

Application filed June 25, 1884. (No model.)

To all whom it may concern:

Be it known that I, ADELBERT E. PARKER, of Dubuque, in the county of Dubuque and State of Iowa, have invented a new and useful Improvement in Axles; and I do herêby declare that the following is a full and exact description of the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

My improvement relates to axles, particularly such as are used for heavy road or lumber wagons, by which I propose to dispense with the use of heavy and fine qualities of wood necessary for this class of wagons, and at the same time produce a lighter and more durable axle, and one whereon the wagon-body may have bearings nearer the hubs of the wheels, in order to lighten the draft and to render the axle less liable to spring or break between the hub-bearings; and the invention therein consists in the construction of a combined iron and wood axle, all as more fully hereinafter described and claimed.

For the better understanding of the mode of constructing this axle, attention is invited to the accompanying drawings, in which—

Figure 1 is a side elevation in perspective of the base or iron portion of an axle constructed in accordance with my invention, and showing one of its spindles in section; Fig. 2, a similar view of a modification of the base or iron portion proper, and Fig. 3 a side eletion of the axle complete.

The base or iron portion of this axle is cast or forged in one piece with its several elements, and consists of a flat strip of metal, A, provided at each end with a hollow spindle, B, screw-threaded on its interior and having an outlet to its surface, as indicated at *a*. A nut, *b*, threaded on its exterior, is screwed into the open end of each spindle after it receives the lubricating oil or grease, and the latter can only escape through the outlet *a* into the hub of the wheel. On the inner end of each spindle is a collar, *c*, which acts as a seat for the hub of the wheel.

Upon the base plate or strip A, between and connecting with the spindle-collars *c c*, are two vertical flanges, C C, the upper edges of which incline from the upper edges or peripheries of said collars down to points flush with said plate or strip A, as shown in Fig. 1; or, as shown in Fig. 2, these two flanges may be substituted by a single flange or three flanges straight or slightly curved from end to end. Adjoining these collars *c c*, upon the plate or strip A, at each end of the same, is a hollow incline, D, as shown in Fig. 1; or, as shown in Fig. 2, this incline may be solid. The wooden portion of this axle consists of a block, E, provided on its under side with a groove of suitable adaptation to fit snugly over the flange or flanges C, and adapted at its ends to fit within or against the inclines D D. The axle is completed by placing the portion E over the flange or flanges C and clamping the two parts together by means of ordinary clips, as shown in Fig. 3. By this construction it will be noticed that the bearings of the wagon-body may be near the hubs of the wheels to make the draft lighter and the axle less liable to spring or break near the center, whereas heretofore axles made of wood with iron thimbles on their ends required the bearings of the wagon-body to be nearer the center of the axle. Consequently there was more strain at this point and frequent breaks, which are absolutely avoided by the flanges in my axle. It will be further noticed that I do not materially increase the weight of the axle, but by the construction and combination of its parts render the whole stronger and more durable with less wood and a poorer quality of wood.

It will be apparent that without the exercise of invention the form and arrangement of the strengthening flange or flanges may be changed without altering the character of the axle or producing any objectionable results.

What I claim, and desire to secure by Letters Patent, is—

1. The metal base A, provided with the spindles B B, the collars *c c*, and the two intermediate vertical flanges, C C, the upper edges of which incline from the collars down to points flush with said base A, substantially as described and shown.

2. The metal base A, provided with the spindles B B, collars *c c*, two intermediate vertical flanges, C C, inclining from said collars

down to points flush with the base, and the two hollow inclines D D, adjoining the collars, substantially as described and shown.

3. The combination, in an axle, of the metal base A, provided with the spindles B B, collars *c c*, one or more intermediate concave flange or flanges, C, and two hollow inclines, D D, and the grooved wooden top E, secured upon said base by means of the flange or flanges C and the clips, substantially as described and shown.

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

ADELBERT E. PARKER.

Witnesses:
WILLIAM GRAHAM, Jr.,
MONROE M. CADY.