

(No Model.)

F. NESSEL & F. McLISH.
HUB FOR BICYCLE WHEELS.

No. 504,888.

Patented Sept. 12, 1893.

Fig. 1.

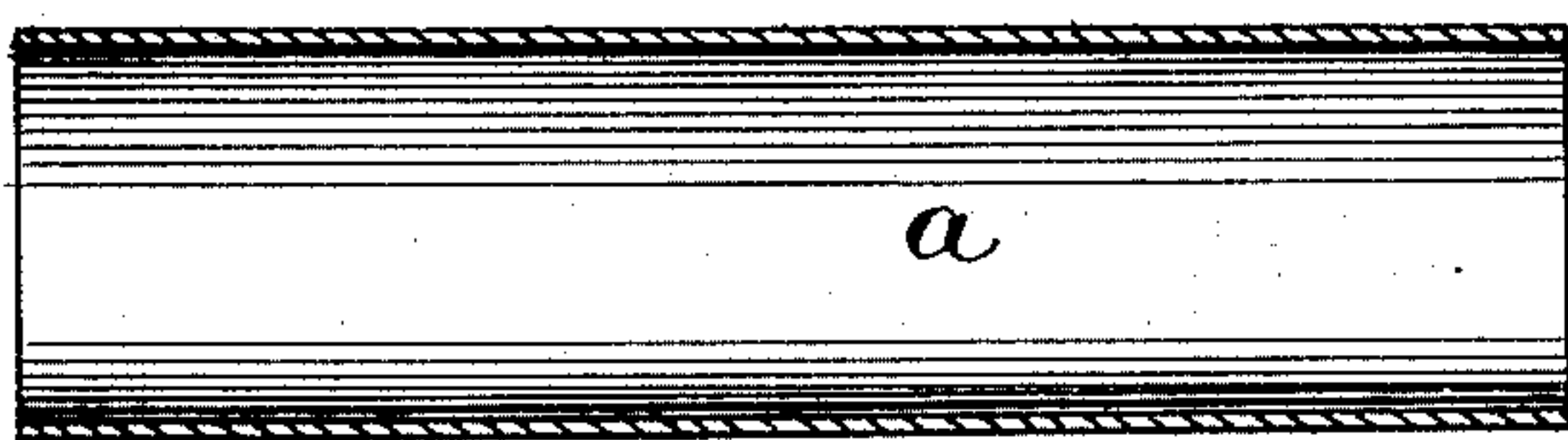


Fig. 3.

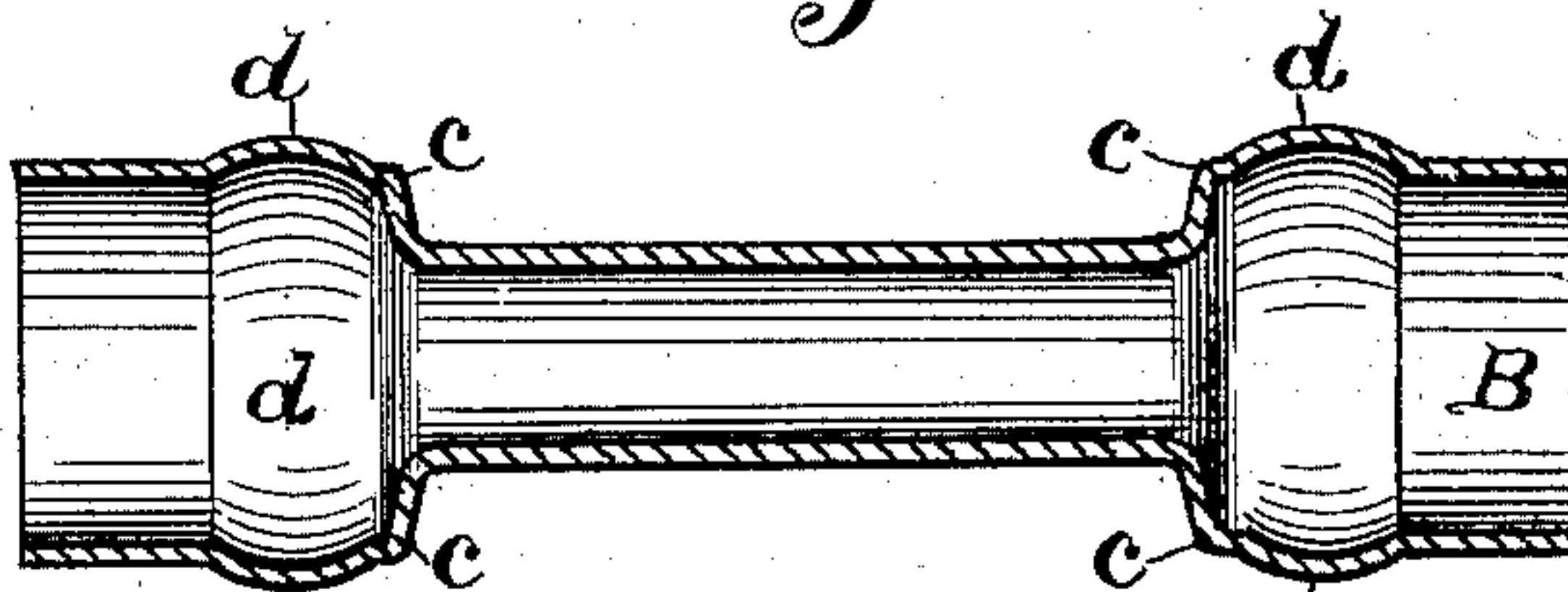


Fig. 2.

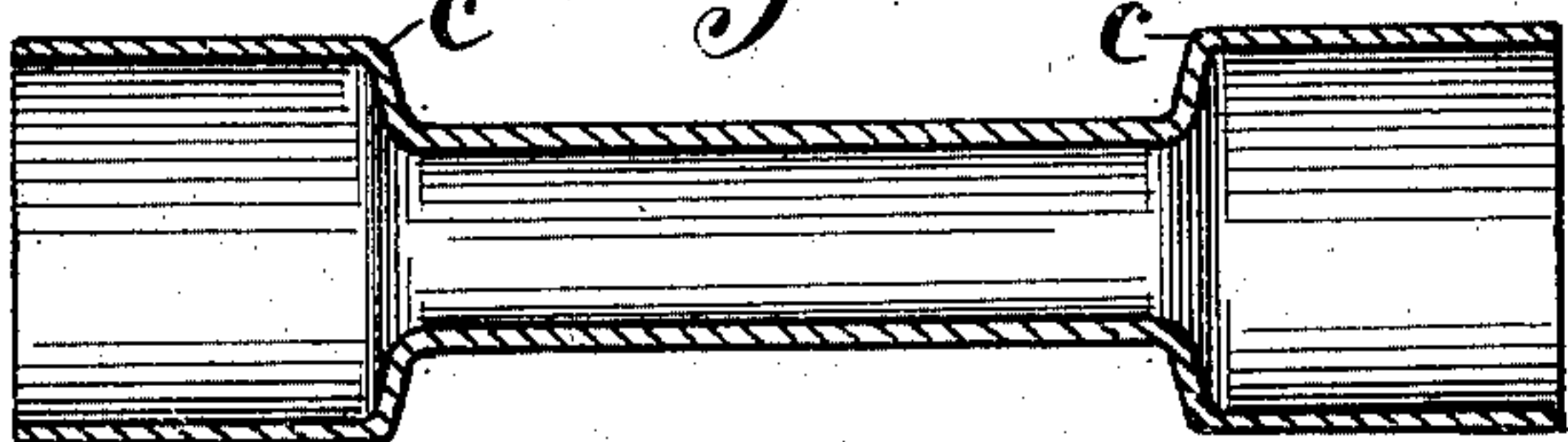
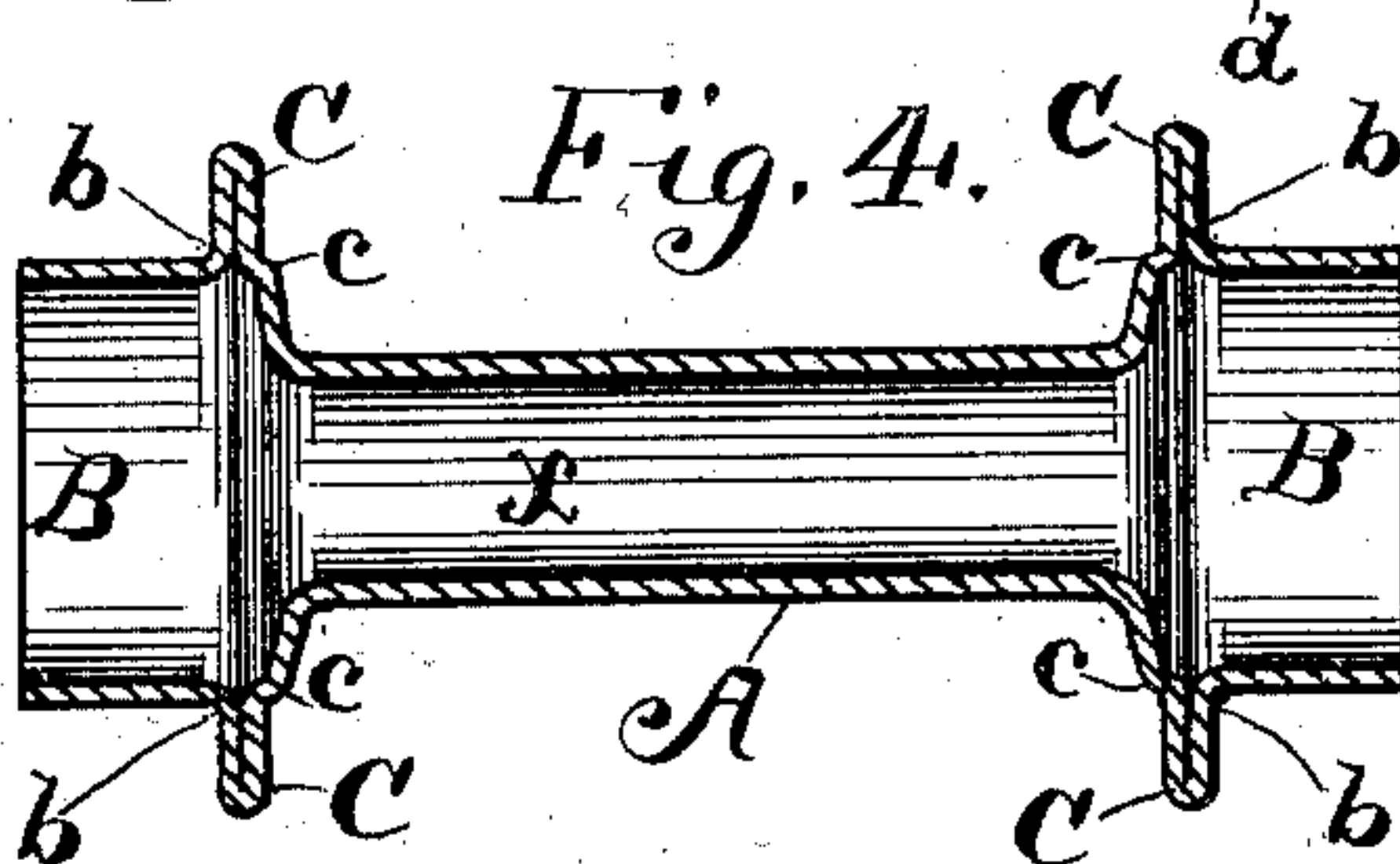


Fig. 4.



Witnesses:

R. J. Jacker.

A. L. Kerney

Inventors:

Fred Nessel, and Frank McLish.
By Frank D. Thomason
Attys

UNITED STATES PATENT OFFICE.

FRED NESSEL AND FRANK McLISH, OF CHICAGO, ILLINOIS.

HUB FOR BICYCLE-WHEELS.

SPECIFICATION forming part of Letters Patent No. 504,888, dated September 12, 1893.

Application filed December 19, 1892. Serial No. 455,734. (No model.)

To all whom it may concern:

Be it known that we, FRED NESSEL, a subject of the Emperor of Germany, and FRANK McLISH, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Hubs for Skeleton and Bicycle Wheels, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

The object of our invention is to provide a simple, economical, strong and durable hub for skeleton and bicycle wheels; substantially as hereinafter described, and as illustrated in the drawings, in which—

Figure 1 shows a suitable length of tubing, from which our invention is to be constructed. Fig. 2 shows the same, having the diameter of its central portion reduced. Fig. 3 shows the same having its bell-shaped ends provided with an initial circumferential bulge in order to facilitate the formation of circumferential flanges to which the spokes are to be attached, and, Fig. 4 shows a longitudinal central section of our improved hub as it appears when completed.

Having reference more particularly to Fig. 4 of the drawings, A represents the central portion of our improved hub which, like the hubs of bicycle wheels now in extensive use, is hollow, and has its central portion α less in diameter than the bell-shaped ends B, B, and has its said bell-shaped ends provided with a circumferential flange C, to which the spokes are attached.

Heretofore it has been customary to cast hubs so designed in one piece, and then finish them by boring them out, and by turning them to the requisite dimensions on a lathe. The construction which forms the gist of our invention enables us to dispense with this hand labor to a very great extent. We take

a steel tube, which, preferably, is of the same diameter throughout, and is of a suitable length, and reduce its central portion, by rolling or otherwise, while hot, thus leaving the diameter of the ends about the same as they were originally, and giving to said ends a bell-shape; substantially as shown. We then expand the cylindrical walls of the end B, near or next to the shoulders c, c , so as to obtain an initial outward circumferential bulge d . This bulge d is made so as to start the walls of the bell-shaped ends in the right direction when the longitudinal end pressure of the last step is brought into play, to form the flanges C.

We heretofore alluded to the tubes as being made of steel. This is only necessary when the higher grades of wheels are being made. Malleable iron or other material may be used for the cheaper grades.

What we claim as new is—

1. A hub for skeleton and bicycle wheels, consisting of a suitable length of tubing, originally of the same diameter its entire length, which has its central portion reduced in diameter, its bell-shaped ends the same diameter as originally, and circumferential flanges on said ends made by expanding radially outward a section of said ends and then collapsing the same so that said flanges consist of two thicknesses of said tube.

2. A hub for a skeleton or bicycle wheel made of one integral piece of tubing, having a central portion reduced in diameter, bell-shaped ends of greater diameter, and circumferential flanges thereon consisting of two thicknesses of the walls of said ends, as set forth.

FRED NESSEL.
FRANK McLISH.

Witnesses:

RICHARD J. JACKER,
FRANK D. THOMASON.