

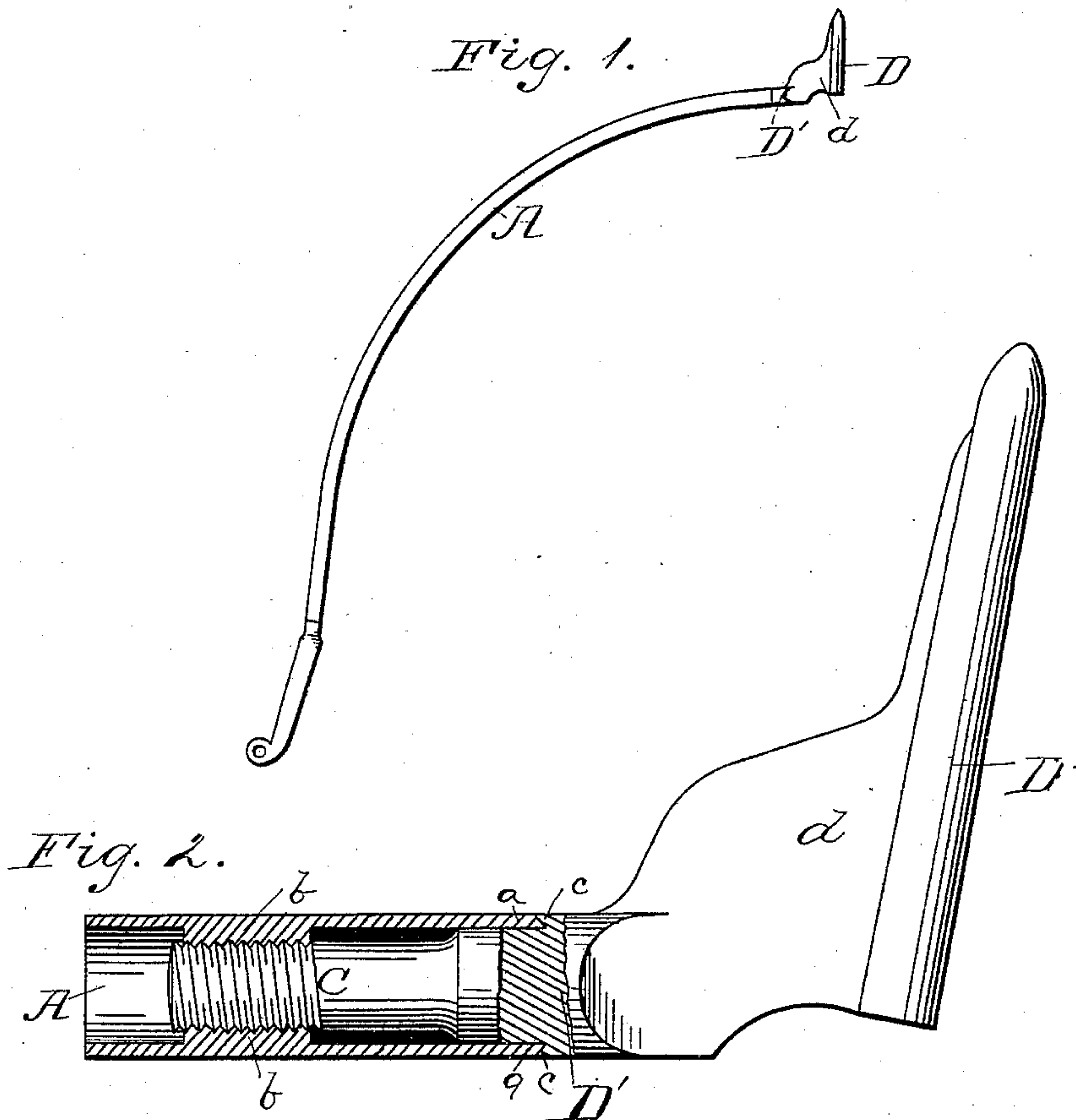
No Model.)

R. C. SCHERLING.

BACKBONE COUPLING FOR BICYCLES.

No. 285,685.

Patented Sept. 25, 1883.



Witnesses:

H. J. Howard,

L. S. Schoff

Inventor:

Rudolph C. Scherling

By James H. Coyne,

Att'y.

UNITED STATES PATENT OFFICE.

RUDOLPH C. SCHERLING, OF CHICAGO, ILLINOIS, ASSIGNOR OF ONE-HALF
TO ST. NICHOLAS TOY COMPANY, OF SAME PLACE.

BACKBONE-COUPLING FOR BICYCLES.

SPECIFICATION forming part of Letters Patent No. 285,685, dated September 25, 1883.

Application filed April 20, 1883. (No model.)

To all whom it may concern:

Be it known that I, RUDOLPH C. SCHERLING, of Chicago, in the county of Cook and State of Illinois, have invented certain new
5 and useful Improvements in Couplings for the Backbones of Bicycles; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable
10 others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

The principal object of my invention is to
15 furnish a strong, durable coupling for connecting the backbone of bicycles to the neck of the steering-head and to the rear fork of the same, which avoids the results of the strain at the point of connection and consequent splitting of the ends of or cutting of the
20 backbone laterally, that so frequently happens in the common coupling now in current use. This I accomplish by placing in and near the ends of the backbone a bushing which
25 is tapped to receive a screw extending into the bore of the same from the neck of the steering head or shank of the rear-fork, and also by beveling the end edges of the backbone, which, when coupled, enters an annular inversely-beveled mortise in the abutting-shoulder
30 on the neck of the steering-head or shank of the rear fork.

In the drawings, Figure 1 is a side elevation of the backbone as coupled to the neck
35 of the steering-head and shank of the rear fork. Fig. 2 is a sectional view of the coupling.

In the drawings, A represents a tubular backbone for bicycles, the end edge, *a a*, of
40 which is beveled, and which is provided with the bushings in its bore, near either end thereof. Connected to the steering-center D by means of a neck, *d*, is a boss, D', corresponding in diameter and circumference to
45 the tubular backbone, and provided with the inversely-beveled shoulder *c*, against which the correspondingly-beveled end edges, *a a*, of the backbone abut. From this beveled shoulder the boss D' is stepped to a diameter
50 corresponding to that of the bore of said backbone, into which it is adapted to enter. Extending centrally and longitudinally into the bore of the backbone from the stepped portion of the boss D' is the screw C, which is

adapted to engage the tapped bushing *b*. 55
This bushing *b* diminishes the diameter of the bore of the said backbone to such an extent that there is no fear of the outer edges of the screw, which extends slightly beyond the confines of the same, cutting the annular surface
60 of said bore.

When the coupling is properly made, the beveled end edges of the backbone will be confined within the inversely-beveled shoulder. Thus when there is any radial strain
65 this joint resists the tendency of said ends *a a* to split.

When the coupling is complete I prevent the parts from any possible unscrewing or separation by passing a suitable rivet laterally
70 through that part of the backbone in which the bushing *b* is set and the screw, thus making a permanent and perfect coupling.

The cutting of the backbone radially, and the splitting of its ends, which I have elucidated in the two next preceding paragraphs, are objections which are frequently experienced in the use of the old coupling, which consists merely in a plug extending from the
80 neck of the steering head or shank of the rear fork, of the same diameter as the bore of said backbone, in which it is brazed and riveted, its square end edges bearing flush against the corresponding shoulder of the said plug. 85

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

1. The combination, with a tubular backbone for bicycles, &c., having suitable tapped bushing in and near the ends thereof, of a
90 screw extending directly or indirectly from a suitable head or shank or other suitable formation.

2. The combination, with a tubular backbone for bicycles or other vehicles, the end edges
95 thereof being beveled, and having bushings inserted in and near said ends, of a steering-head or other device having a shoulder which is inversely beveled, and having a screw extending into the bore of said backbone and
100 engaging the tapped bushing therein.

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

RUDOLPH C. SCHERLING.

Witnesses:

JAMES H. COYNE,

FRANK D. THOMASON.