

(No Model.)

F. H. WELLS.

METALLIC POLE FOR VEHICLES.

No. 397,767.

Patented Feb. 12, 1889.

Fig. 1.

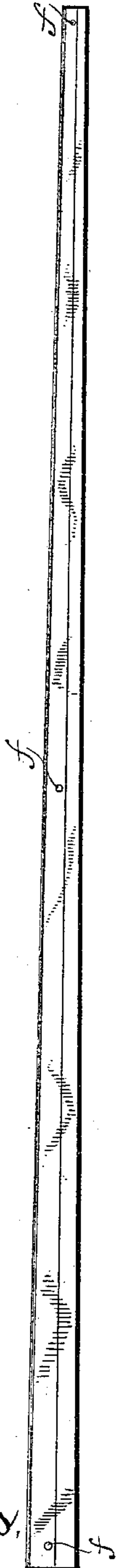


Fig. 3.

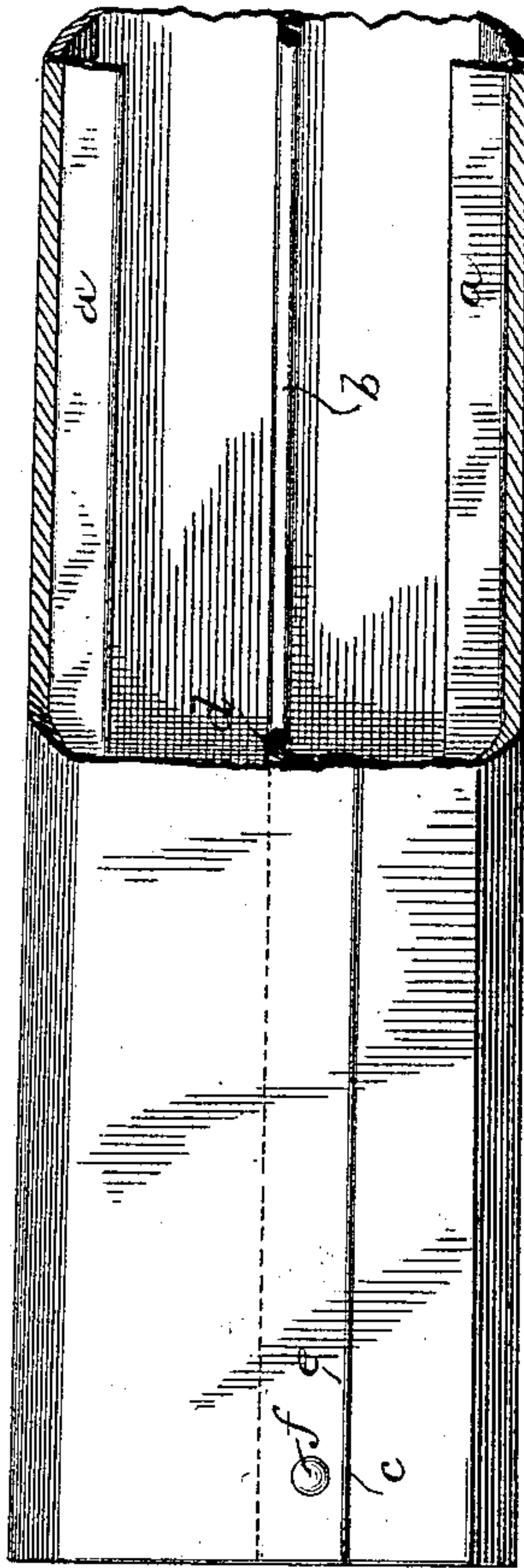


Fig. 2.

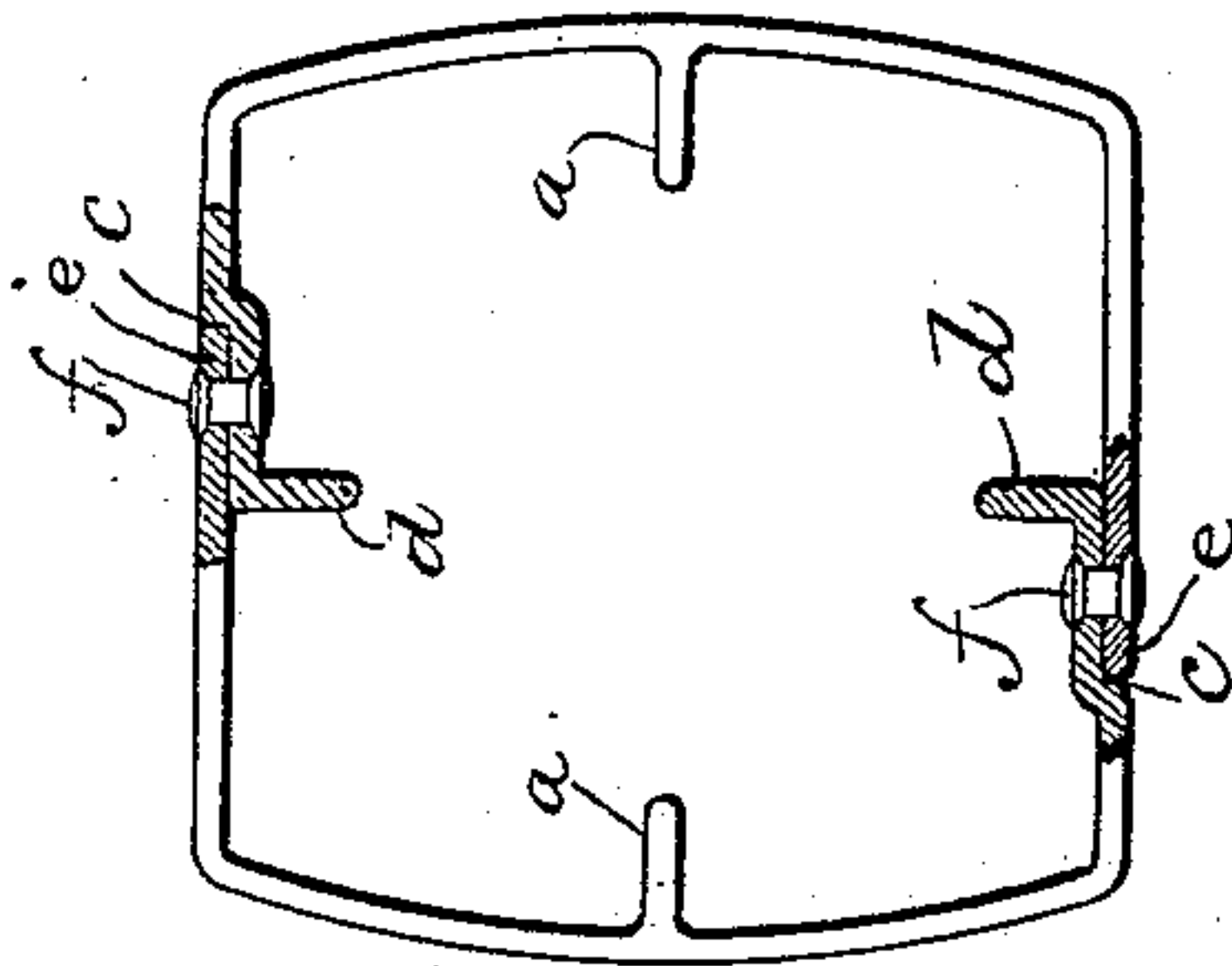
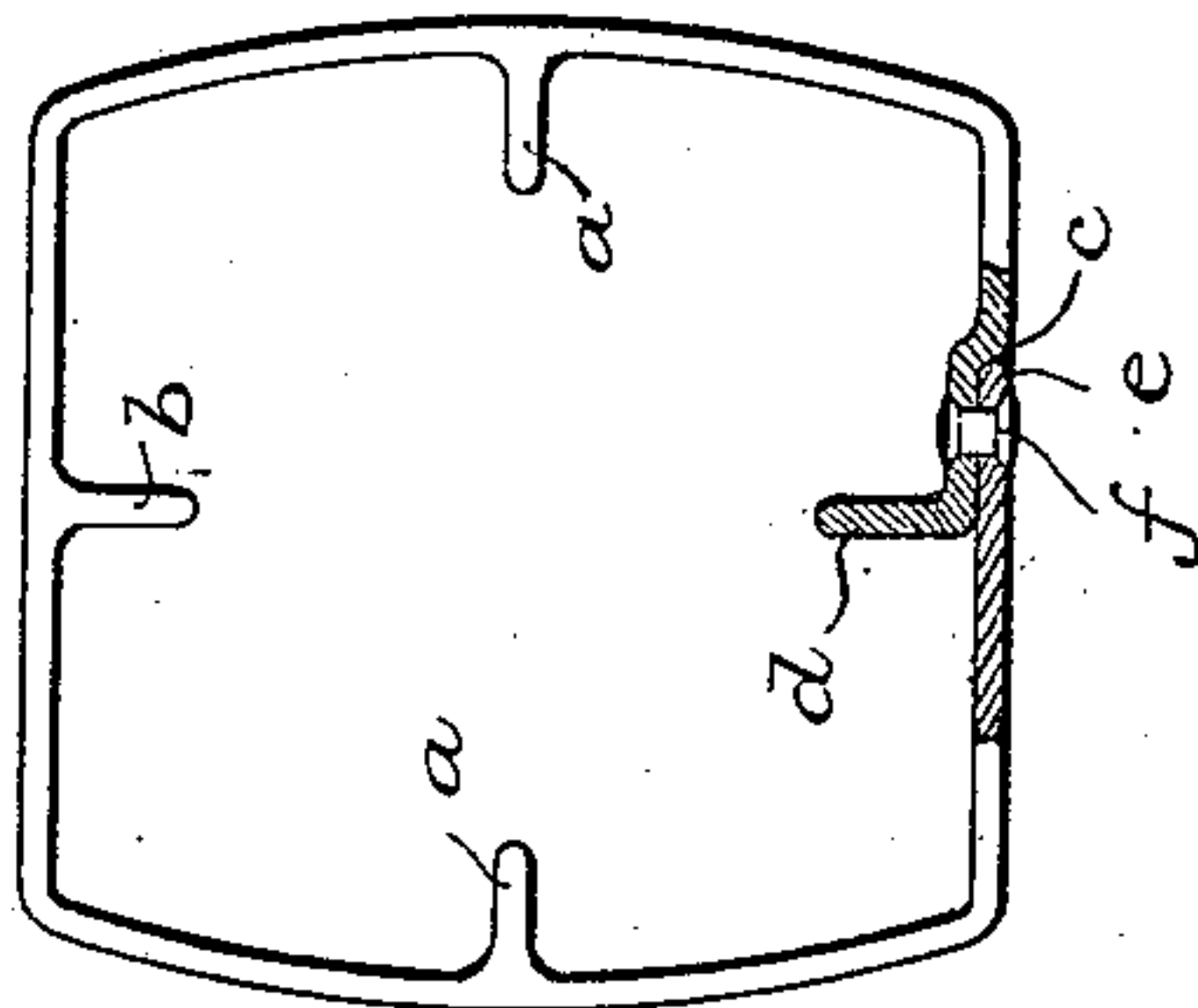


Fig. 4.

Witnesses,  
Geo. W. Young,  
William Klug.

Inventor,  
Francis H. Wells,  
By Stout & Underwood  
Attorneys

# UNITED STATES PATENT OFFICE.

FRANCIS H. WELLS, OF RACINE, WISCONSIN.

## METALLIC POLE FOR VEHICLES.

SPECIFICATION forming part of Letters Patent No. 397,767, dated February 12, 1889.

Application filed November 22, 1888. Serial No. 291,551. (No model.)

*To all whom it may concern:*

Be it known that I, FRANCIS H. WELLS, of Racine, in the county of Racine, and in the State of Wisconsin, have invented certain  
5 new and useful Improvements in Metallic Poles for Vehicles, &c.; and I do hereby declare that the following is a full, clear, and exact description thereof.

The invention relates to metallic poles designed for use with wagons, omnibuses, harvesters, and other vehicles and machines of heavy draft, or such as require a pole combining strength with lightness; and it consists in certain peculiarities of construction, as will  
15 be fully set forth hereinafter, and pointed out in the claim.

In the drawings, Figure 1 is a bottom plan view of my improved pole. Fig. 2 is an end view, partly broken away at one point. Fig.  
20 3 is a view corresponding to Fig. 1 of part of the device on an enlarged scale and partly broken away to show the construction. Fig. 4 is a view similar to Fig. 2, showing a modified construction.

My device is rolled out of suitable metal—such as wrought-iron, steel, or malleable iron—being originally a flat sheet of metal with the strengthening ribs or projections *a b a* extending from side to side, the said sheet tapering, so that when it has been formed into  
30 the shape shown in Fig. 1 the left-hand end will be about double the size of the right-hand end, with an even taper from one end to the other. The sheet, with its ribs, is bent over a suitable former; but the method of making the pole forms no part of my present invention, and is only described for the sake of  
35 clearness.

One edge of the described sheet is turned  
40 over so as to form a rib, *d*, which, when the pole is complete, will be opposite the rib *b*, as shown in Fig. 2, and that part of the sheet adjacent to said turned-up end is preferably shouldered or offsetted, (of course before said  
45 edge is turned up to form the rib *d*,) as at *c*, so that when the other edge of the sheet is brought to place, as shown at *e*, the joined edges may be flush on the outside, and the overlap-

ping parts are then united by suitable bolts or rivets, *f f*.

If preferred, the offset *c* may be dispensed with, and then the edge marked *e* would merely overlap the end having the inturned edge *d*, and be united by rivets *f*, as before; but the construction first described and illus-  
50 55 trated presents a neater appearance.

In Fig. 4 I show a modified construction, wherein my improved pole is made of two parts rolled out from two sheets, but otherwise the same, the difference being that each  
60 sheet would be rolled with only one rib *a* and each sheet would have an inturned edge *d*, (turned from the previously offsetted part *c*, if preferred, as shown,) and one of these inturned edges *d* would then take the place of  
65 the rib *b* in the form shown in Fig. 2, the two sheets, after being formed into proper shape, being united by bolts or rivets *f f* on top as well as below.

I have not deemed it necessary to show any  
70 especial means of uniting my pole to the vehicle or machine to which it is to be attached, as such means would necessarily differ with each different kind of vehicle or machine, and because it is well understood how poles are  
75 commonly attached, as by passing between hounds and being bolted thereto, or any equivalent means.

Having thus fully described my invention, what I claim as new, and desire to secure by  
80 Letters Patent, is—

A tubular vehicle-pole formed of one or more pieces of metal having longitudinal strengthening-ribs rolled therefrom and projecting inwardly the entire length of said  
85 pole, the edges of said metal pieces overlapping and being united by bolts or rivets.

In testimony that I claim the foregoing I have hereunto set my hand, at Racine, in the county of Racine and State of Wisconsin, in  
90 the presence of two witnesses.

FRANCIS H. WELLS.

Witnesses:

J. W. JUDD,

J. W. JOHNSON.