

(No Model.)

H. BURKHARDT.

DRAW BAR FOR CARS.

No. 271,216.

Patented Jan. 30, 1883.

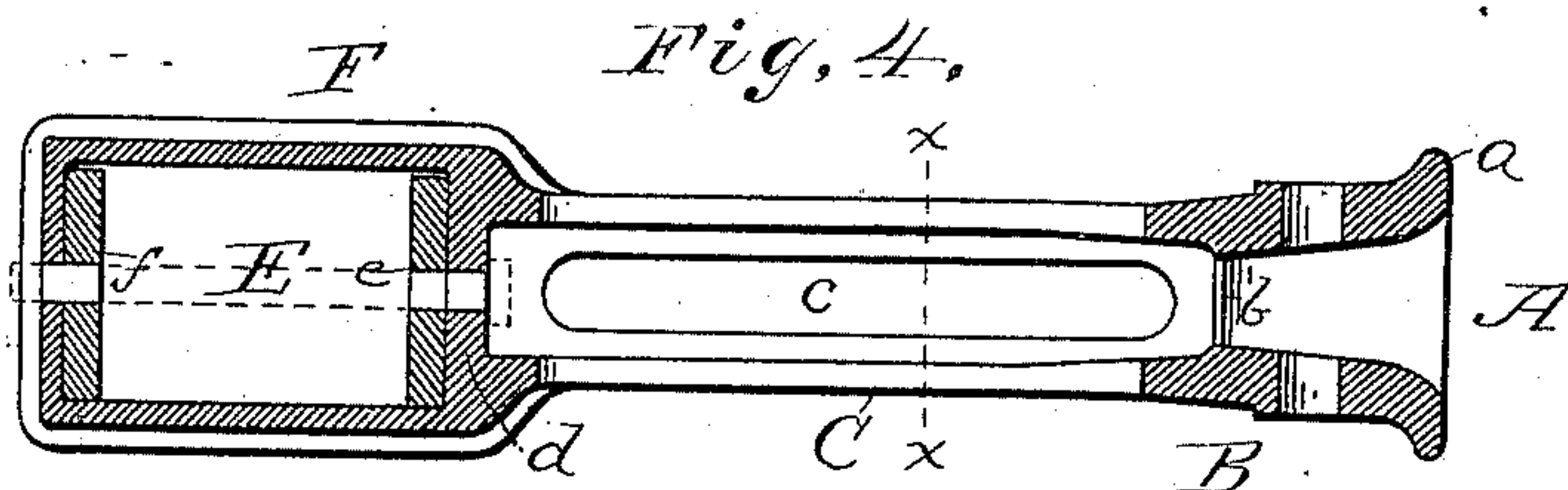
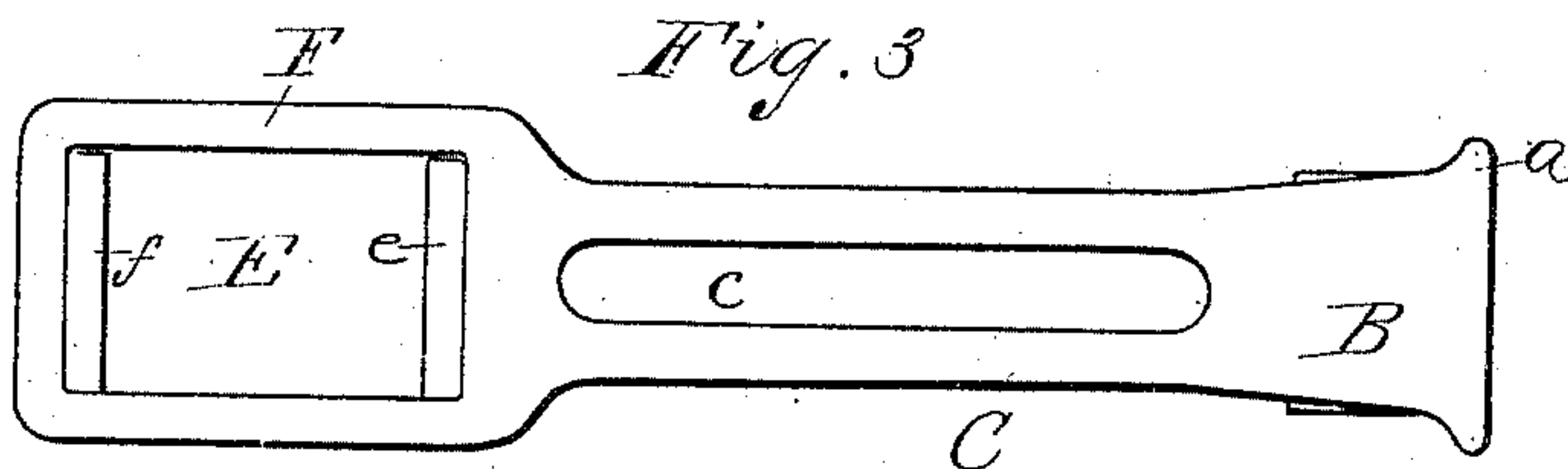
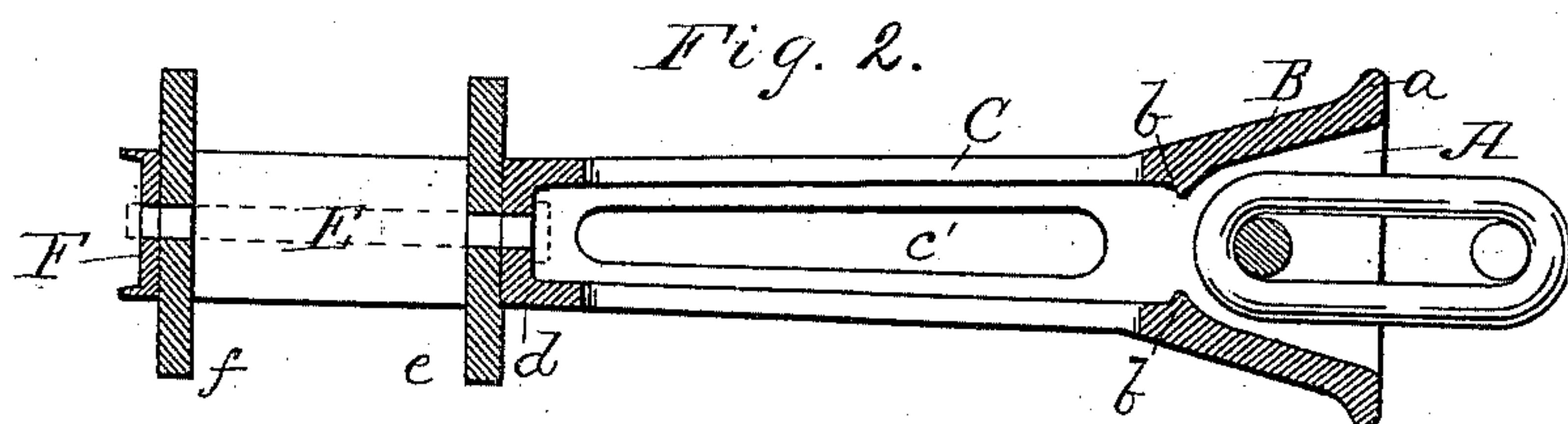
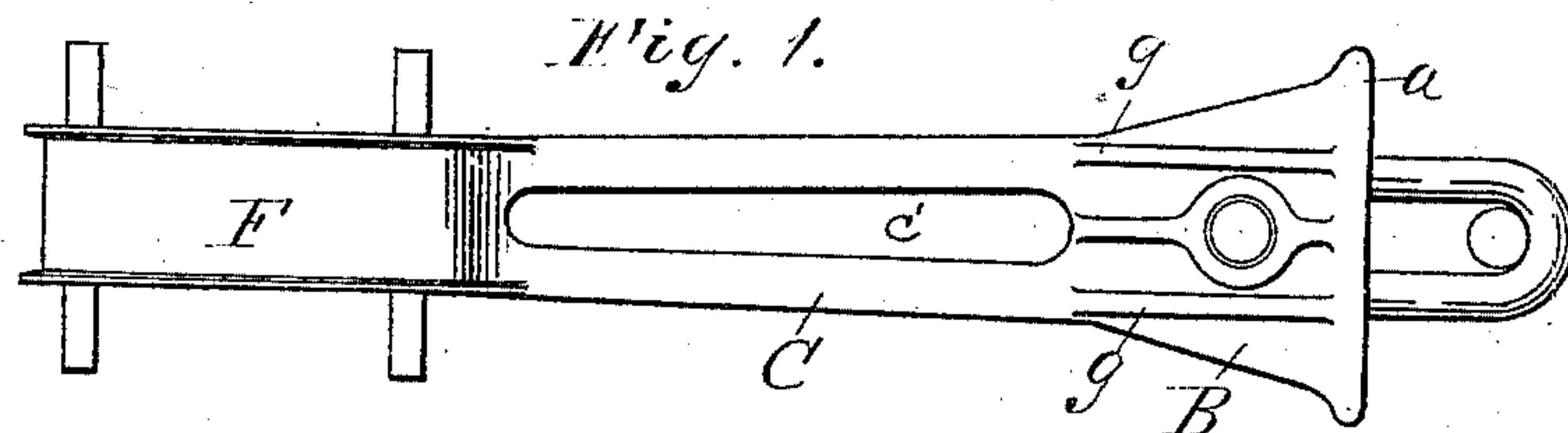
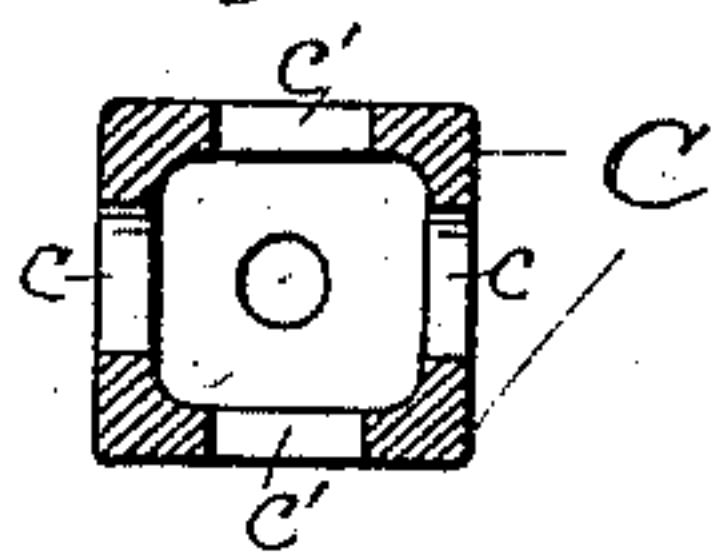


Fig. 5.



Witnesses:
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UNITED STATES PATENT OFFICE.

HENRY BURKHARDT, OF CHICAGO, ILLINOIS.

DRAW-BAR FOR CARS.

SPECIFICATION forming part of Letters Patent No. 271,216, dated January 30, 1883.

Application filed October 2, 1882. (No model.)

To all whom it may concern:

Be it known that I, HENRY BURKHARDT, of Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Draw-Bars; 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 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 object of my invention is to furnish a draw-bar and pocket combined, cast as an entirety in one piece of metal, and uniting the advantages of simplicity, strength, durability, and cheapness. This I accomplish by the construction hereinafter described, and as shown in the drawings, in which—

Figure 1 is a plan view. Fig. 2 is a horizontal longitudinal section. Fig. 3 is a side elevation. Fig. 4 is a vertical longitudinal section, and Fig. 5 is a transverse section on the line *xx* in Fig. 4.

In the drawings, A represents the mouth of my draw-bar, flaring outward, so as to present a curved surface, which will cause the colliding link to enter the mouth whenever it strikes thereon. The head B is pyramidic in shape, the smaller portion merging into the body C, and the outer portion, which surrounds the mouth, conforming to the shape of the same, forming a bead, *a*. The mouth is a rectangular opening which gradually narrows, conforming to the shape of the head, as it enters the bar until it reaches the projections *b b*, where it terminates. These projections narrow the width of the passage, so as to prevent the entering link from passing farther into the bar, and forms a sort of throat between the mouth and body. The body C of the draw-bar is hollow, and has longitudinal openings *c c* and *c' c'* in its four sides, the area of the openings *c c* in the right and left side being slightly the greatest. The body extends back a suitable distance to the partition *d*, which separates it from the spring-pocket E, at which point it merges into the pocket-strap F, which, as hereinbefore stated, is cast in one piece with it. This strap F surrounds the draw-bar plates *e* and *f* in the same manner as the ordinary strap,

said plates being secured therein by a bolt, as shown in dotted lines, which passes from within the body of the draw-bar, through the partition *d*, plates *e* and *f*, and strap F. The plate *f* is made fast to the adjoining framework of the car, so that when the expansion-spring is placed between the two plates, and the draw-bar is pushed backward by the colliding head, it forms a cushion to break the force of the blow, similar to many draw-bars now in current use.

Heretofore the shape of draw-bars and head has been massive and clumsy, the object seeming rather the accumulation of material to afford strength than a construction which utilizes the least material to the best effect. This I accomplish by making the shell of the whole draw-bar about one-half the thickness of those in current use, and especially is this noticeable in the construction of the draw-head; but as this part of the draw-bar has to afford the greatest resistance I strengthen the same by abutments *g g*, which abut against the flared portion or bead of the head, and merge into the shell at a point where the pyramidic-shaped head loses itself in the body C, thus presenting a straight line of resistance to the blow on the face of the draw-head or shock caused by the collision of the cars.

From the description of my draw-bar, as elucidated by the drawings, it will be seen that the least material is utilized to the best effect, and that instead of relying upon the quantity of material to afford strength I depend on the disposition of the same.

The openings in the body of the draw-bar, while they do not detract from the strength, materially lessen the weight of the draw-bar, and it can be said that the general construction of my invention lessens its weight about one-half those now in use.

I prefer making my bar of cast-steel, malleable iron, or other strong metal. Moreover, I materially strengthen the pocket by casting it in one piece with the draw-bar, and save labor and expense when fixing the same to the car.

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

1. A draw-bar consisting of the usual parts, the head of which is preferably made of a thin shell strengthened by abutments, which afford

a straight line of resistance to blows or shocks received on the face of the same, a body having longitudinal openings in its four sides, and having a pocket-strap on its end, cast in one piece with said draw-bar, substantially as hereinbefore specified.

2. A draw-bar having a hollow body, C, which has longitudinal openings in its four sides, in contradistinction to draw-bars having

one side open or two open sides opposite each other, substantially as described.

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

HENRY BURKHARDT.

Witnesses:

FRANK D. THOMASON,
CHARLES H. SCHOFF.