

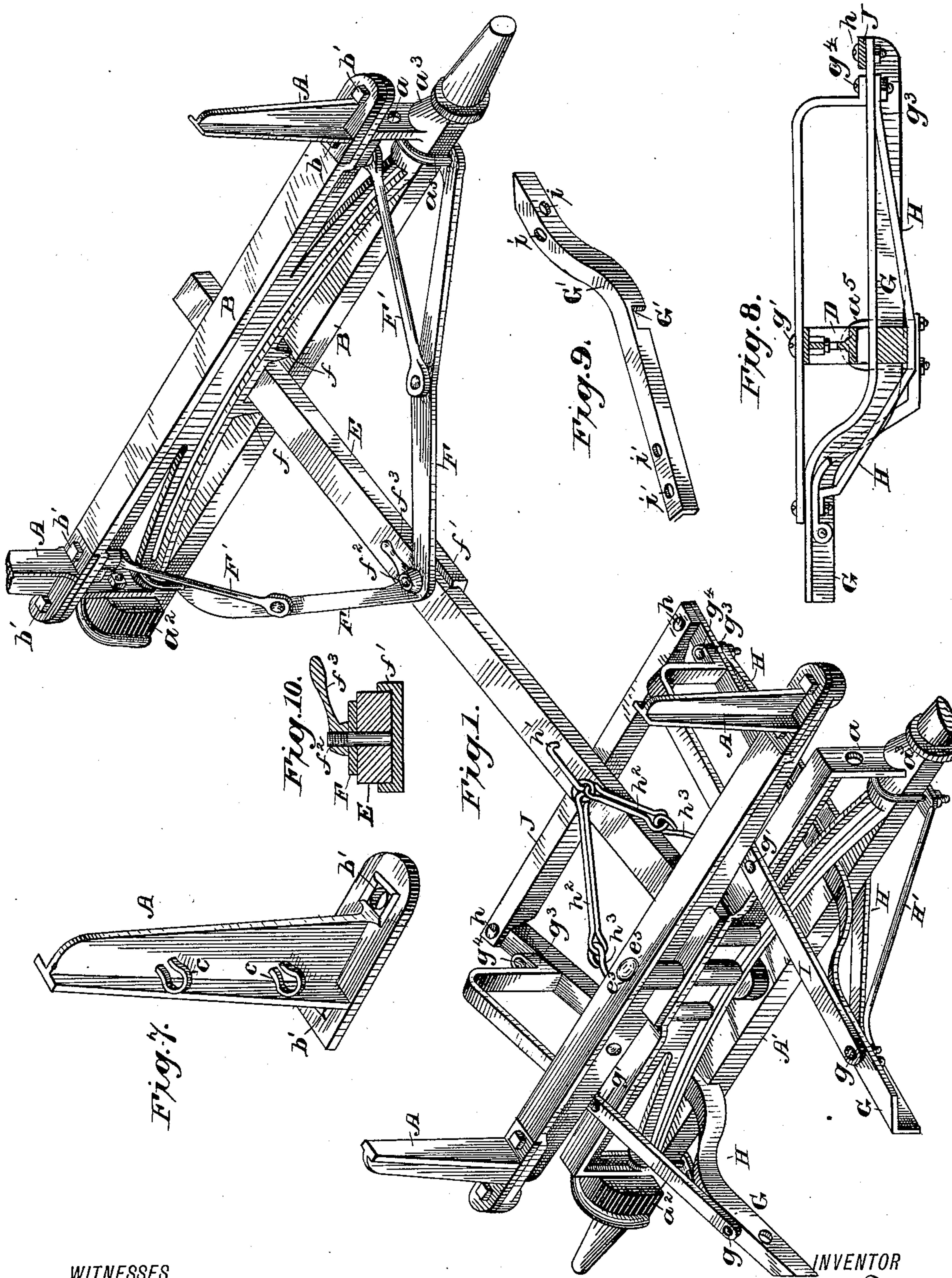
(No Model.)

3 Sheets—Sheet 1.

R. C. PARVIN.
VEHICLE RUNNING GEAR.

No. 297,439.

Patented Apr. 22, 1884.



WITNESSES

Geo. J. Panner
D. R. Holloway

INVENTOR
Robert C. Parvin
by
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(No Model.)

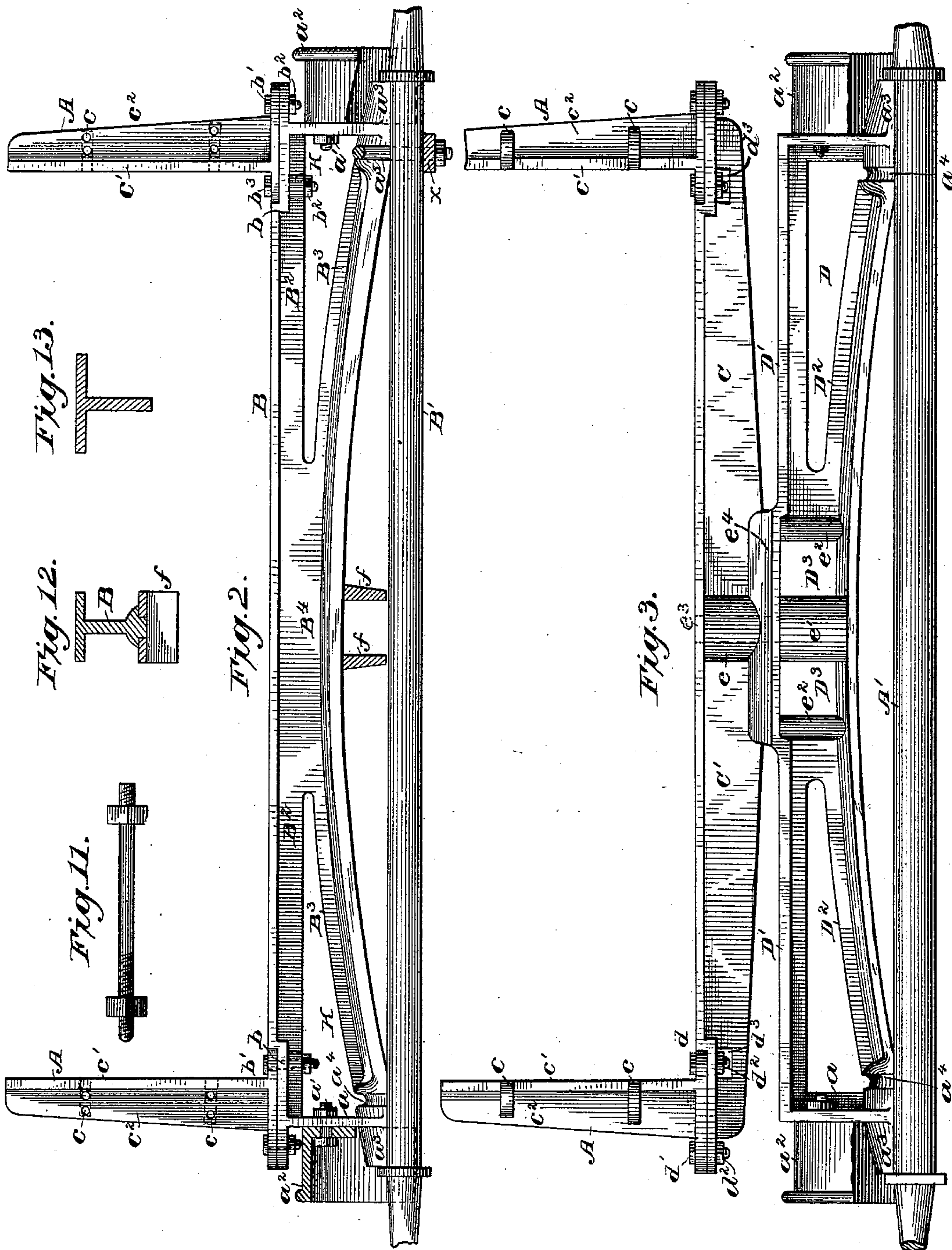
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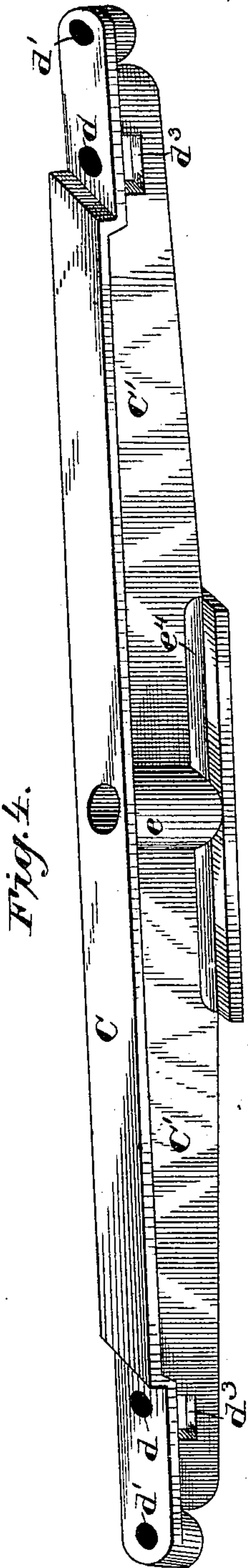


Fig. 4.

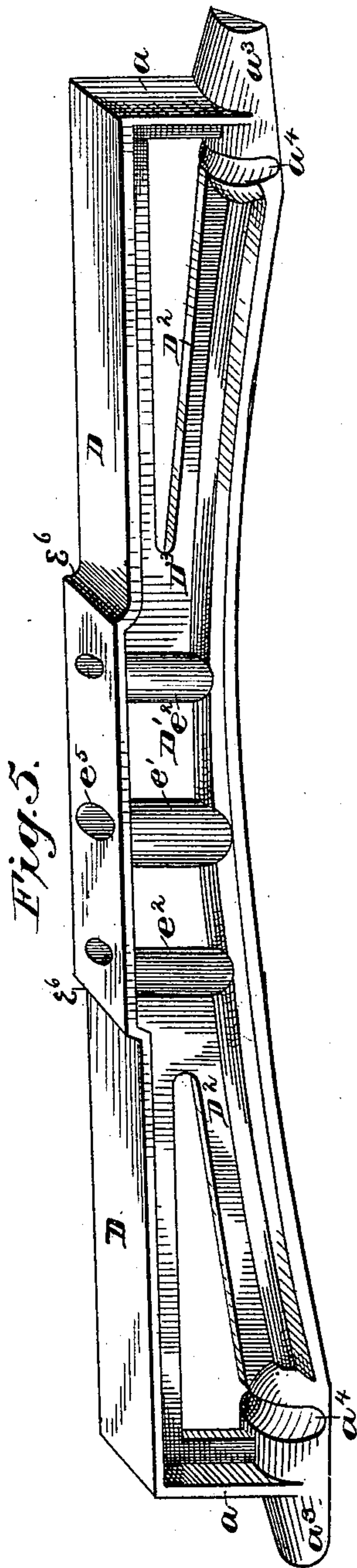


Fig. 5.

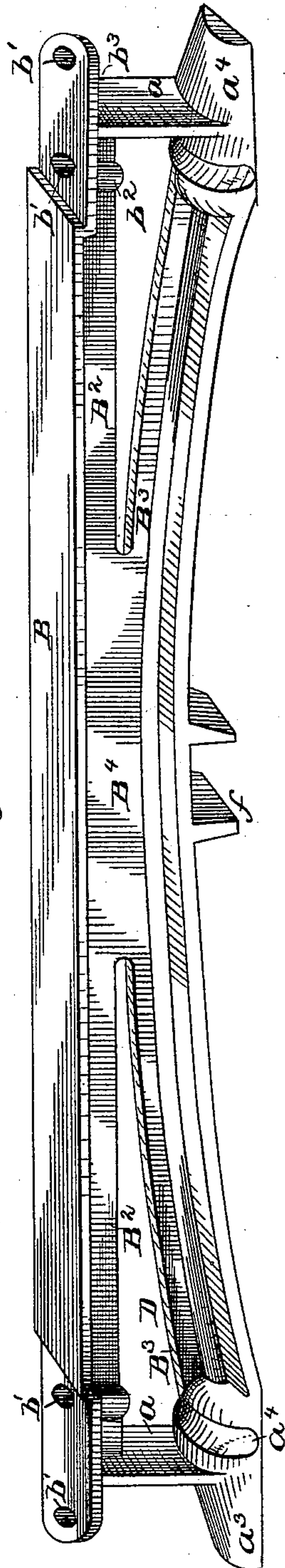


Fig. 6.

WITNESSES

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UNITED STATES PATENT OFFICE.

ROBERT C. PARVIN, OF MOUNT HOLLY, NEW JERSEY.

VEHICLE RUNNING-GEAR.

SPECIFICATION forming part of Letters Patent No. 297,439, dated April 22, 1884.

Application filed July 31, 1883. (No model.)

To all whom it may concern:

Be it known that I, ROBERT C. PARVIN, a citizen of the United States, residing at Mount Holly, in the county of Burlington and State of New Jersey, have invented certain new and useful Improvements in Running-Gear for Wagons, of which the following is a specification, reference being had therein to the accompanying drawings.

My invention relates to certain new and useful improvements in running-gear for wagons; and it consists in forming the axle-bed and bolster in one piece and of steel or iron, the bolster-body with bearings for standards, and the axle-bed arched, with end bearings near the axle-shoulders and center guide for reach.

It consists, further, in forming the front axle-bed and sand-plate or wear-plate in one piece, arched, and having end bearings near the shoulders of the axle, the front bolster being formed separate, but both the bolster and axle-bed being formed of iron or steel; and, further, all the parts of the running-gear except the reach, as will hereinafter be more fully explained, are formed of steel or iron.

The object of my invention is to substitute metal for wood in the construction of running-gear for wagons, so as to reduce the expense and increase the efficiency and durability of the same. I attain this object by means of the peculiar arrangement and construction of the various parts of my invention, which will be more fully pointed out and described in the specification and claims, reference being had to the drawings accompanying this application and forming part of the same, in which—

Figure 1 is a perspective view of my invention, showing all the parts in place. Fig. 2 is a view, partly in section, showing the rear axle-bed, bolster, guide, standards, and section of shields. Fig. 3 is a view of the front axle, axle-bed, bolster, standards, and shields. Fig. 4 is a perspective view of the front bolster. Fig. 5 is a perspective view of the front axle-bed. Fig. 6 is a perspective view of the rear axle-bed. Fig. 7 is a detail view of one of the standards with staples attached. Fig. 8 is a longitudinal sectional view showing hounds and connections. Fig. 9 is a detail view of one of the hounds. Fig. 10 is a detail sectional view of reach and tie-bolt. Fig. 11

is a detail view of clamp-bolt with burrs. Fig. 12 is a sectional view of rear bolster. Fig. 13 is a cross-sectional view of front bolster.

Similar letters refer to similar parts throughout the drawings.

Referring to the drawings, A represents a set of standards or bolster-stakes formed of metal, the bases of said standards being formed with flat under bearing-surfaces and inner angular edges, their outer edges being rounded in form, circular perforations with angular outer faces, *b'*, formed in the same for the reception of bolts, as will be hereinafter described. Vertical inner faces, *c'*, are formed at right angles with the bases, and the outer edges of said faces are inclined from the base to the top of the same. A fin or stiffening-rib, *c''*, extends outward from the center of the vertical face *c'* its entire length, thus forming the standards T-shaped in cross-section. Perforations are made in the ribs or fins *c''*, into which are inserted staples *c*, for the purpose of holding wooden stakes when desired, as shown in Figs. 3 and 7.

The rear bolster, B, and the arch or bridge piece B³ are formed in one piece of metal, of steel or iron, (and preferably cast,) the upper face of said bolster being flat or plain to a point near the outer ends of the same, where a downward vertical shoulder, *b*, is formed, from the base of which the flat surface is continued to the outer ends of the bolster, terminating in rounded form. The flat surfaces beyond the shoulders *b* form the bearings for the standards A, and are perforated to register with the perforations in the base of said standards. The depth of shoulders *b* is formed just equal to the thickness of the base of the standards A, so that the upper surface of the base, inside the vertical face *c'*, will be flush with the upper surface of bolster B. Said standards are held in place by screw-threaded bolts and nuts *b'*. The lower portion of the bolster forming the bridge B³, being arched-shaped, and having end bearings, *a'*, is joined to the bolster part proper by the thin web part B⁴. The under face of bearings *a'* are formed flat to fit closely on the upper face of axle B', the extreme outer ends of said bearings abutting against the inner face of the collars on the arms of said axle. The upper

surface of said bearings are formed oval in shape and inclined outward to the collars of the axle. From the center of each bearing-surface rise vertical cross-walls a , that connect and support the ends of the bolster B directly under the standards A, the same being formed integral with the bolster B and the arch B³. Caps or hub-covers a^2 , hollow and circular in shape, with inward rear flange projections, have perforations by which they are secured to cross-walls a by means of screw-bolts a' . The central portions of bolster B and arch B³ are joined by the thin vertical portion B⁴, from which is formed a V-shaped opening, K, separating the web B⁴ into two parts and terminating against the inner face of the vertical cross-walls a , thereby making the bolster and arch light and airy in appearance, without detracting from the requisite strength, and, besides, affording ample room for securing the bolts that attach the caps and standards, as shown in Figs. 1 and 2.

Near the inner face of cross-walls a circular grooves a^4 are formed in the outer surface of bearings a^3 , the purpose of which is to receive the clips a^5 , which are formed of round iron or steel and bent to conform to grooves a^4 , the outer ends of said clips being screw-threaded, and adapted to pass through a clip-iron beneath the axle, and to be held in place by nuts or burrs, as shown in Fig. 2; or the ends of said clips may pass through perforations in the ends of braces F, that extend from said clips to the center of reach E. The brace F is preferably V-shaped, as shown, and is secured to the reach by a bolt, f^2 , projecting upward from and made solid with a flanged plate, f' , which incloses the lower part of the reach, fitting the same. The bolt passes through the reach and brace F, and is secured by means of a hand-nut, f^3 . (See Fig. 10.) Tie-braces F' are secured at one end to brace F and at their opposite ends to bolster B by means of bolts b' , connecting bolster and standards. Projections f are formed on the lower face of arch B³, near the center of the same, for the purpose of receiving the rear end of reach E, said projections f serving as guides to keep the reach E in proper position.

Bolster B and arch B³, with their webs, cross-walls, bearings, perforations, grooves, and projections, may be made of iron or steel, (preferably cast,) usually formed in about the shape shown in Fig. 6, though I may vary the style and form as to lightness and strength without departing from the spirit of my invention, which consists in forming said parts integral or casting them in one piece. A cross-section illustrates the approximate weight and thickness of the parts.

The front arch, D², is formed of iron or steel, and similar in construction to the rear arch, B³, as to bearings and under surface, the central web, D³, however, having three circular enlargements, e' and e^2 , the lower ends of said enlargements resting on the upper face

of arch D², and their upper ends terminating against the under face of wear-plate e^5 . Said enlargements, wear-plate, and arch are perforated, the central one, e' , to receive a king-bolt, and the outer ones, e^2 , to receive binding-bolts. A short distance outward from enlargements e^2 wear-plate e^5 terminates in vertical shoulders e^6 , from which project horizontally bed-plates D, the outer ends of said plates D joining the upper ends of cross-walls a , the lower ends of said cross-walls resting on the upper surface of bearings a^3 , as shown in Fig. 5, said parts being strengthened by a stiffening fin or web, as shown in said Fig. 5.

Front bolster, C, is formed of iron or steel, and similar in cross-section to the part shown in Fig. 13, except the central portion, which has a flat under bearing-surface, e^4 , equal in size to the bearing surface e^5 on bed D. A central enlargement, e , formed between the part e^4 and the upper bed, serves to strengthen the center; and the bed, enlargement, and bearing e^4 are perforated to receive a king-bolt, e^3 . The upper face of said bolster is flat and terminates in shouldered bearings having perforations to receive bolts which bind standards A in place. A central stiffening fin or web, the lower edges of which are inclined outward from the bearing-plate e^4 , and near the outer ends of which are formed openings or square apertures d^3 , in which nuts d^2 may be inserted and applied to the binding-bolts holding the inner parts of the standard's base, is formed longitudinally on the under face of the bolster-bed. (See Fig. 3.) The front end of reach E, being rounded and perforated, is centrally held between the arch D² and the front axle, A', by means of the king-bolt e^3 , which passes through said perforation, said construction joining the front and rear parts. A short distance rearward on the upper surface of reach E is secured a staple, h' , being a loose ring to which one end of connecting-links h^2 is secured, the opposite ends of said links being attached to eyebolts h^3 , the outer ends of which are secured to bolster C, the purpose of which is to aid in connecting the front and rear parts, and also to prevent the sagging of the hounds.

Hounds G are formed of metal, curved as desired, and angular in cross-section, their outer ends having side and top perforations, i , and their inner ends top perforations, i' . The purpose of this construction is that the perforations will register with perforations in the braces I H H' and cross-bar J. Near the center of hounds G angular recesses G' are formed, as shown in Fig. 9, adapted to fit over axle A'. The rear ends of said hounds are connected by means of a cross-bar, J, having perforated ends, through which binding-bolts h pass, as shown in Figs. 1 and 8, connecting the hounds and cross-bar.

Top braces, I, their outer ends perforated and secured to hounds G by bolts g , extend rearward and downward to the top of hounds G, near the cross-bar J, and are secured to the

same by bolts g^3 . Said braces are also held to the bed D by bolts g' .

Braces H, secured by their outer ends to hounds G, extend rearward under the axle A', their rear ends being connected to hounds G by bolts g^3 , as shown in Figs. 1 and 8. Short side braces, H', are secured by their outer ends to hounds G by means of bolts g , and by their inner ends to clips a^5 .

10 All of the parts illustrated by drawings and described in this specification, except the reach, are constructed and formed of metal—iron or steel—and either forged or cast, (preferably cast.)

15 Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

1. In the running-gear of a wagon, a rear bolster and arched axle-bed formed in one piece, the axle-bed being constructed to bear at the extremities only, and being provided with central projections, f , in combination

with the axle B', braces F and F', and T-bolt f^2 , as described and shown.

2. In the running-gear of a wagon, in combination with standards A, having the bases, as shown, the bolster C, having depressions or seats at the extremities for standards, and apertures d^3 to receive nuts d^2 for the securing-bolts, as herein shown and specified.

3. In combination with the front axle of a wagon, the arched axle-bed D, formed, substantially as shown, with enlargements e' e^2 , perforated to receive king-bolt and securing-bolts, perforated vertical walls a , and hub-covers a^2 , and the bolster C, formed with perforated enlargement e and bearing-plate e^4 , substantially as shown and specified.

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

ROBERT C. PARVIN.

Witnesses:

JAMES LIPPINCOTT, Jr.,
HENRY W. JOBES.