

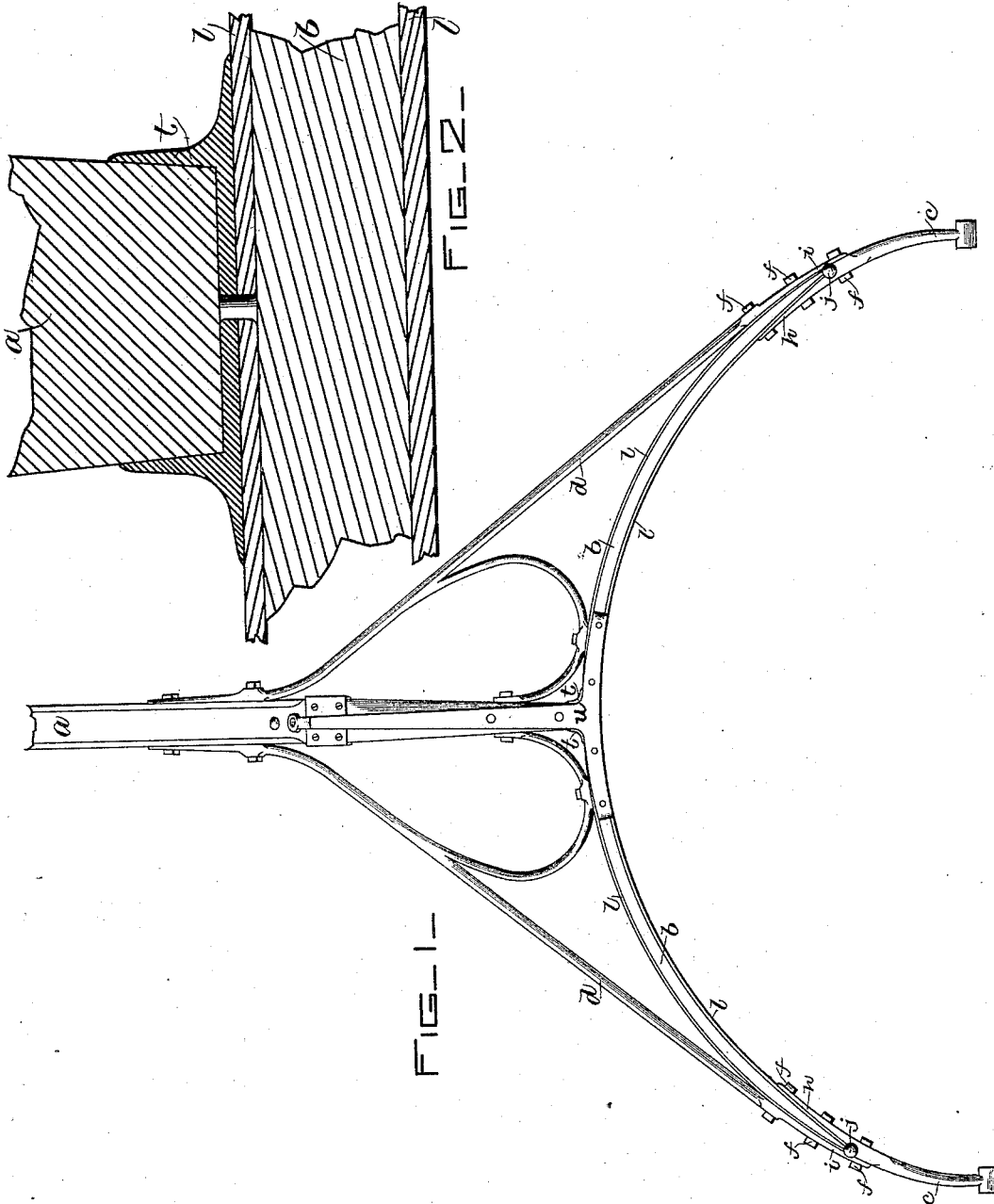
(No Model.)

4 Sheets—Sheet 1.

S. R. BAILEY.
VEHICLE POLE.

No. 419,984.

Patented Jan. 21, 1890.



WITNESSES

Adrian
Eugene Humphrey

INVENTOR

Samuel R. Bailey
per J. W. Porter Atty

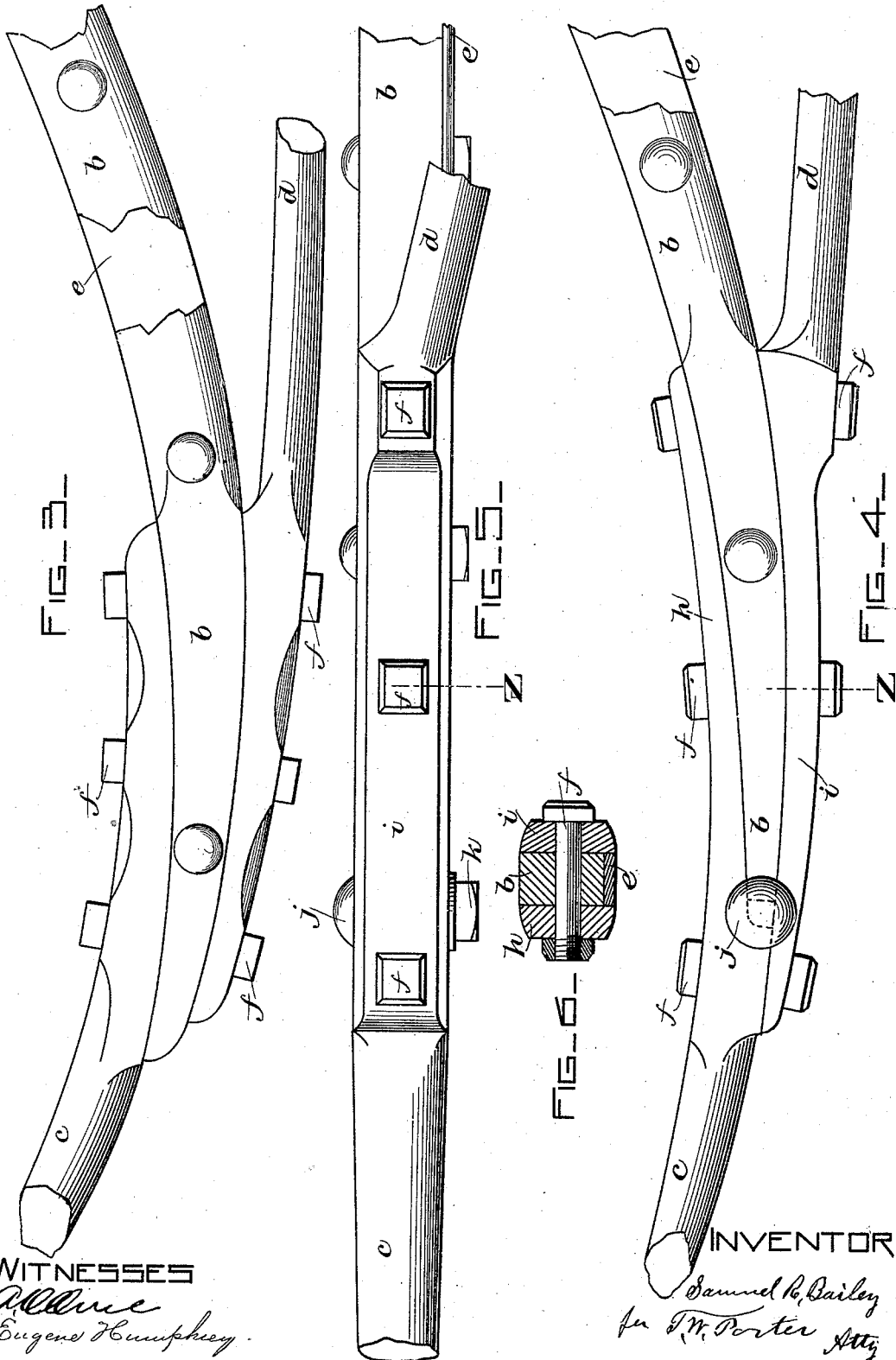
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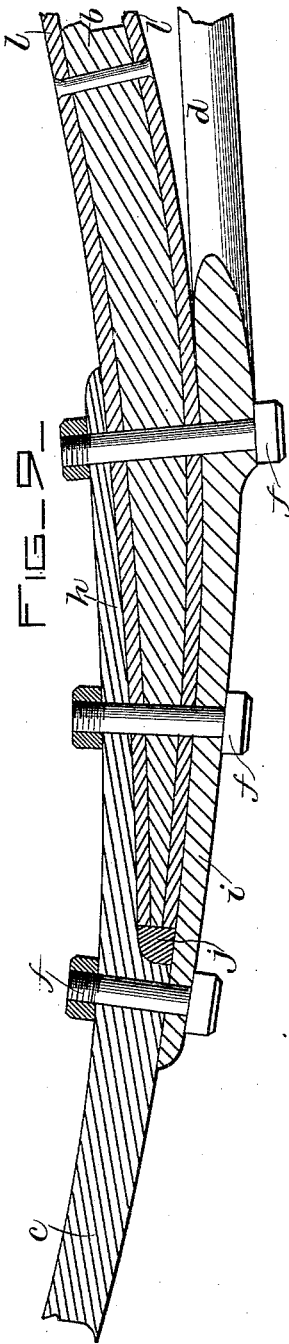
(No Model.)

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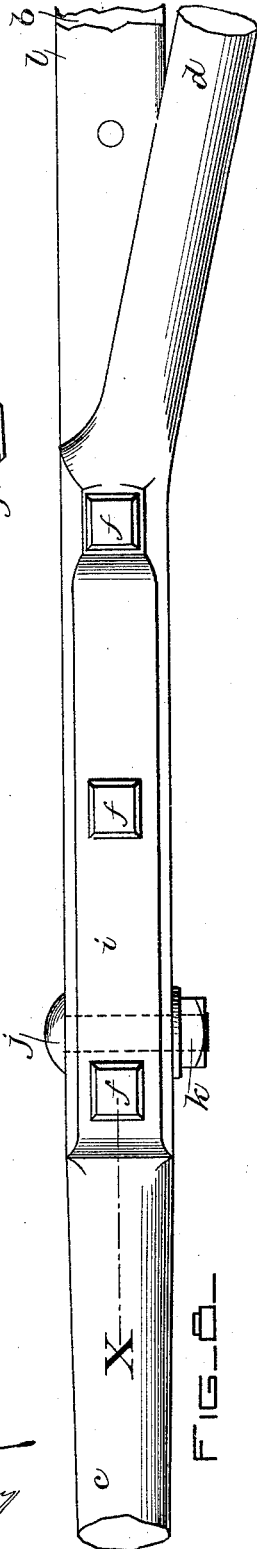


FIG. 8.

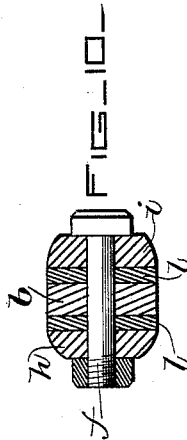


FIG. 10.

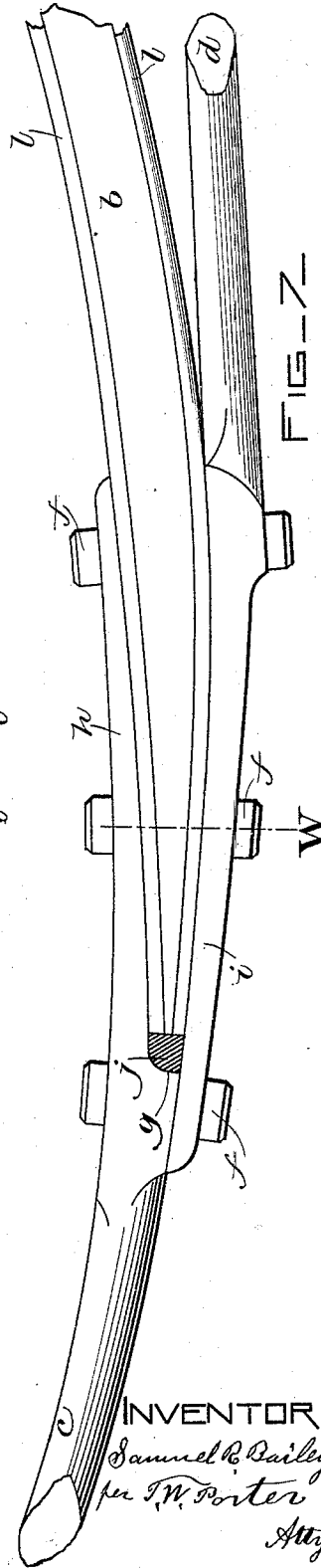


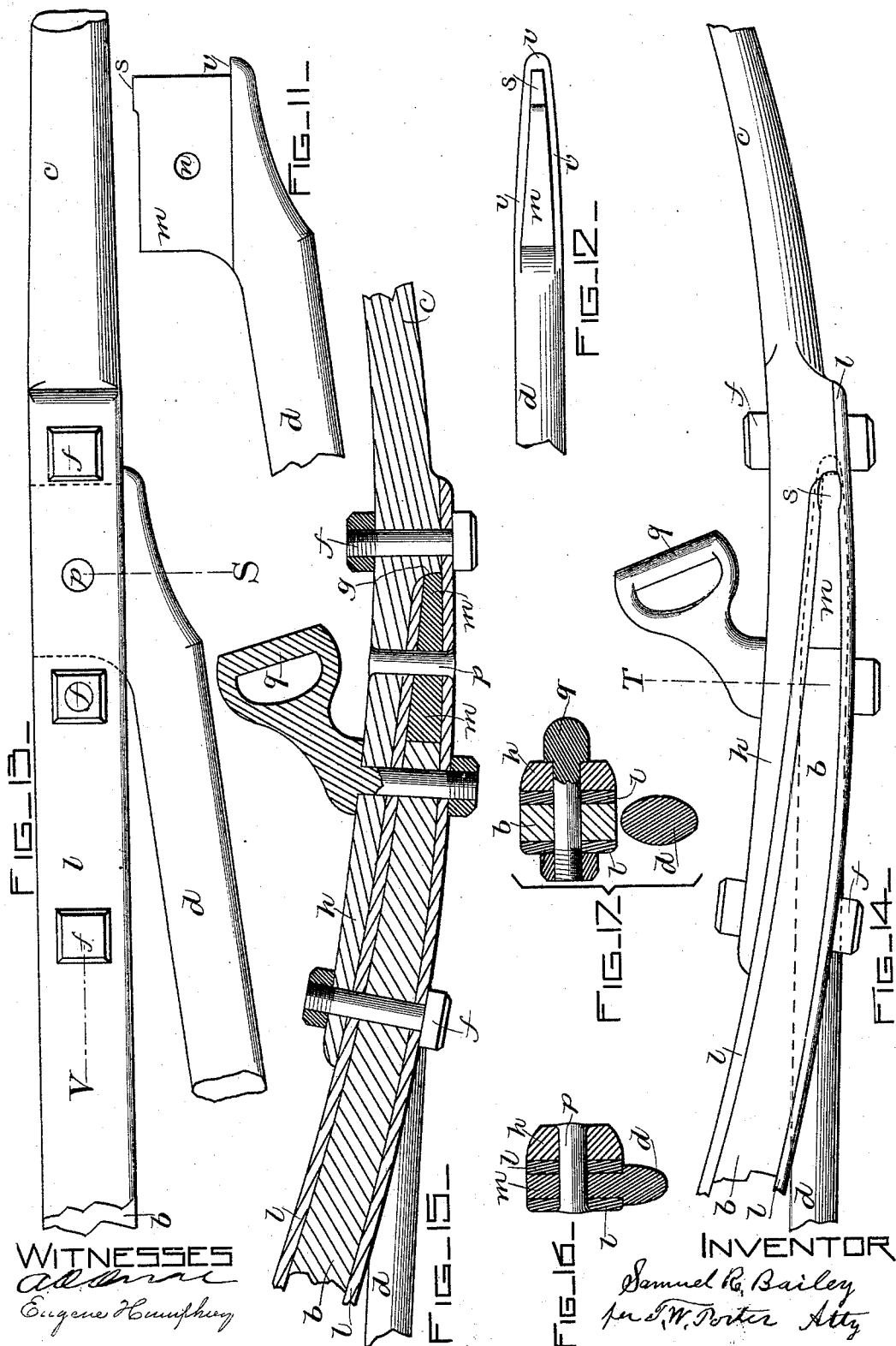
FIG. 7.

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UNITED STATES PATENT OFFICE.

SAMUEL R. BAILEY, OF AMESBURY, MASSACHUSETTS.

VEHICLE-POLE.

SPECIFICATION forming part of Letters Patent No. 419,984, dated January 21, 1890.

Application filed March 15, 1889. Serial No. 303,474. (No model.)

To all whom it may concern:

Be it known that I, SAMUEL R. BAILEY, of Amesbury, in the county of Essex and State of Massachusetts, have invented a new and useful Improvement in Vehicle-Poles, which will, in connection with the accompanying drawings, be hereinafter fully described, and specifically defined in the appended claims.

In said drawings, Figure 1 is a top plan view showing a vehicle-pole embodying my improvements, the front portion of the pole proper being broken away and the evener and whiffletrees omitted. Fig. 2 is an enlarged detached horizontal section taken through the rear portion of the pole and central portion of the cross-bar and showing my improved method of uniting the pole and cross-bar. Fig. 3 is a detached top plan view showing a portion of the end part of the cross-bar, the draft-iron, and the stay as heretofore formed and united. Fig. 4 is a top plan view showing my improved method of forming and uniting the parts shown in Fig. 3 when the re-enforce plate is arranged beneath the cross-bar. Fig. 5 is a side elevation of Fig. 4, viewed as from the near margin of the sheet when it is turned to the right. Fig. 6 is a transverse section taken on line Z, Fig. 4. Fig. 7 is a view similar to Fig. 4, but showing an improved method of re-enforcing the cross-bar, with the vertical bolt in transverse section. Fig. 8 is a side elevation of Fig. 6, viewed as from near the margin of the page when it is turned to the right, the vertical bolt being in place. Fig. 9 is a longitudinal horizontal section taken on line X, Fig. 8. Fig. 10 is a transverse section taken on line W, Fig. 7. Fig. 11 is a side elevation of the rear portion of my improved stay. Fig. 12 is a top plan view of Fig. 11. Fig. 13 is a view similar to Figs. 5 and 8, showing my improved stay in connection with coacting parts. Fig. 14 is a top plan view of Fig. 13. Fig. 15 is a horizontal longitudinal section taken on line V, Fig. 13. Fig. 16 is a transverse section taken on line S, Fig. 13. Fig. 17 is a similar section taken on line T, Fig. 14, and viewed as from the right therein.

This invention relates to that class of vehicle-poles known as "shifting-poles," which embody the pole proper, a cross-bar or "cir-

cle-bar," as it is indifferently termed, secured to the rear end of the pole, stays which connect with the pole and circle-bar, and draft-irons extending from the circle-bar and terminating in eyes to receive the shackle-bolt of the vehicle; and it consists in features of novelty that will be hereinafter fully described, and pointed out in the claims.

Referring again to said drawings, *a* represents the pole proper. *b* is the circle-bar or cross-bar. *c c* are the draft-irons having eyes at their rear ends for the shackle-bolt, and *d d* are the stays.

In Fig. 3 is shown the manner heretofore practiced of uniting said parts *b*, *c*, and *d*, the wooden bar *b* having a bearing against *c* of greater extent than parts *c* and *d* overlap each other, and its ends being unconfined, except by lateral pressure, a re-enforce plate *e* being arranged beneath and bolted to bar *b*, as shown. This method of uniting *b*, *c*, and *d* has ever been objectionable on the score of lacking that symmetry and neatness which in carriage construction has long been a desideratum, besides which the ends of the bar are liable to split in a horizontal line through the holes that receive the securing-bolts *f*. To obviate this faulty and objectionable feature I form irons *c* at their front portion with a recess or reduced thickness, (shown at *h*), thus forming a shoulder *g*, and I reduce the thickness of bar *b* near its ends and terminate it at said shoulder, leaving room, however, between the two for a bolt *j*, the head of which rests upon the three parts *b c d*, while its nut bears upon *c* and *d*, as also upon plate *e*, which latter conforms to the outline of *b* and terminates therewith. By this construction the end of bar *b* and plate *e* are confined and compressed upon every side, thereby securing the bar from splitting, while the thinner strap-like portion *i* of stays *d* is extended past shoulder *g* of stay *c*, and is secured to the latter by one of the bolts *f*, thus forming a close, compact, solid, and very neat connection, obviating the double offset, before necessary, as shown in Fig. 3, at the termination of *b* and *d*, while the strap-like portion *h* of draft-iron *c* is extended along the inner face of bar *d* and is secured to the bar and stay by other bolts *f*, as heretofore.

These two different constructions are clearly shown by contrast in Figs. 3 and 4, while Fig. 5 is a near side elevation of Fig. 4, and Fig. 6 is a section on line Z, Figs. 4 and 5.

5 A further feature of my improvements consists in re-enforcing bar *b* at the sides thereof with the metal plates *l*, which terminate with the bar at bolt *j*, and are held in place by bolts *f* and *j*, and are in their middle portion riveted to the bar. When these plates 10 *l* are employed, the underplate *e* may or not be employed, but for strength is not required. This feature is clearly shown in Figs. 7 and 9 of the drawings, Fig. 8 being a near side elevation thereof, and Fig. 10 a transverse section on line W.

Instead of bolting stays *d* to the outer side of bar *b*, as already described, I prefer to form the stay with a wing *m*, having one or more 20 holes *n*, in which case the outer metal plate *l* is extended back and receives the rear bolt *f*, which passes through iron *d*, said wing *m* fitting closely between plates *ll* and between shoulder *g* and the rear end of bar *b*, as shown in Figs. 13, 14, and 15, a rivet or rivets 25 *p* passing through *c*, *l*, and *m*, as shown, and a slightly-raised portion *s* is riveted closely down upon draft-iron *c*. A safety-strap loop *q* may be employed to serve as a substitute 30 for one of bolts *f*, but is not claimed as novel.

For the purpose of securing the rear end of pole *a* to circle-bar *b* in a strong, neat, and effective manner I employ a coupling *t*, preferably of cast metal, which is riveted either 35 to the front plate *l*, as shown in Fig. 2, or direct to the bar, as preferred, and in this coupling the rear end of the pole is seated, a T-iron *u*, which may be duplicated at the under side, also serving to secure the pole and 40 bar together.

It will be obvious that when the side plates *l* are employed and are rigidly secured to the draft-iron by bolts passing through both but very slight vertical strain will be brought upon 45 bar *b*, as the vertical rigidity of the re-enforce irons receives and resists the same, and,

further, when shoulder *v* at the base of wing *m* bears against the under side of iron *c*, and projection *s* is riveted upon the top side of *c*, that then the parts are secured together in 50 the same manner as when bolt *j* is employed.

I claim as my invention—

1. In a vehicle-pole, the combination of draft-iron *c*, formed with a recess and shoulder *g*, the bar *b* and its iron re-enforce fitted 55 in said recess and conforming to said shoulder, and an outside iron overlapping said shoulder and bolted to said cross-bar and to iron *c* in rear of the shoulder, substantially as specified. 60

2. In a vehicle-pole, the combination of draft-iron *c*, formed with a recess and shoulder *g*, bar *b* and its re-enforcing plates *l*, coinciding with said recess and shoulder, and an outer iron overlapping said shoulder and 65 at its rear end bolted to iron *c*, substantially as specified.

3. The combination of draft-iron *c*, recessed and shouldered, as specified, cross-bar *b*, its re-enforce irons *l*, and stay *d*, formed 70 with wing *m*, all substantially as specified.

4. The draft-irons *c*, formed with a side recess and shoulder *g*, with a reduced portion *h* upon one side thereof, and having a perforated enlargement or seat adjacent to said 75 shoulder to receive the outside re-enforcing iron, and a securing-bolt *f*, substantially as specified.

5. The combination of iron *c*, recessed at one side thereof to form shoulder *d*, and with 80 a strap-like extension at the opposite side, the bar *b*, seated in said side recess, with a re-enforcing iron secured by a horizontal bolt to iron *c*, adjacent to said shoulder, and a vertical bolt *j*, inserted between said shoulder *g* and the end of bar *b*, substantially as 85 specified.

SAMUEL R. BAILEY.

Witnesses:

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EUGENE HUMPHREY.