(No Model.) 3 Sheets—Sheet 1.

J. QUINN, Jr., & V. ANGERER.

STREET RAILWAY CROSSING.

No. 439,426. Patented Oct. 28, 1890.

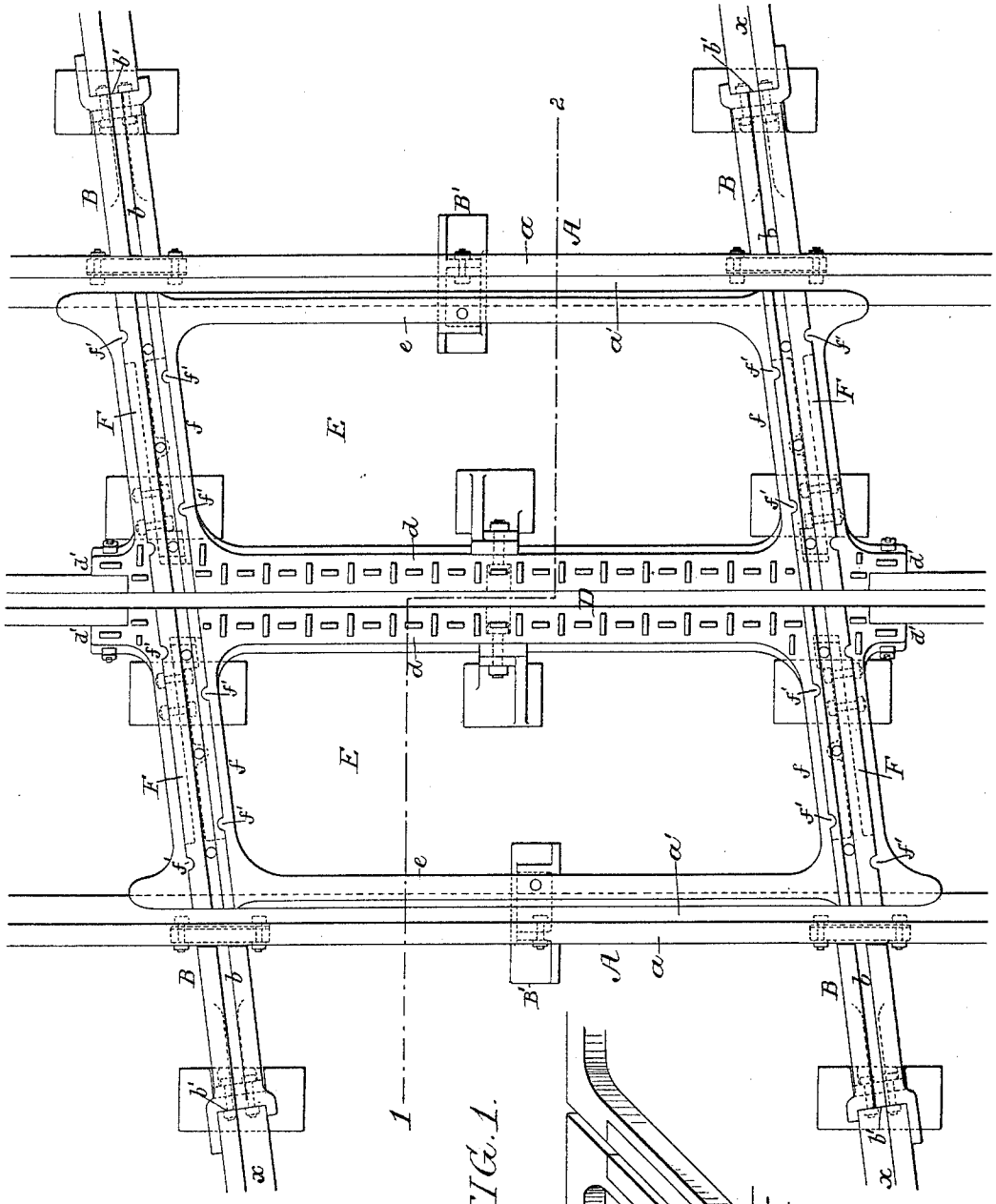


FIG. 1.

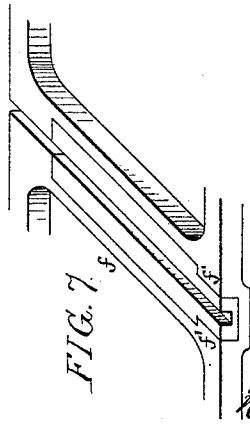


FIG. 7.

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Alex. Bartoff

Inventors:
James Quinn, Jr.
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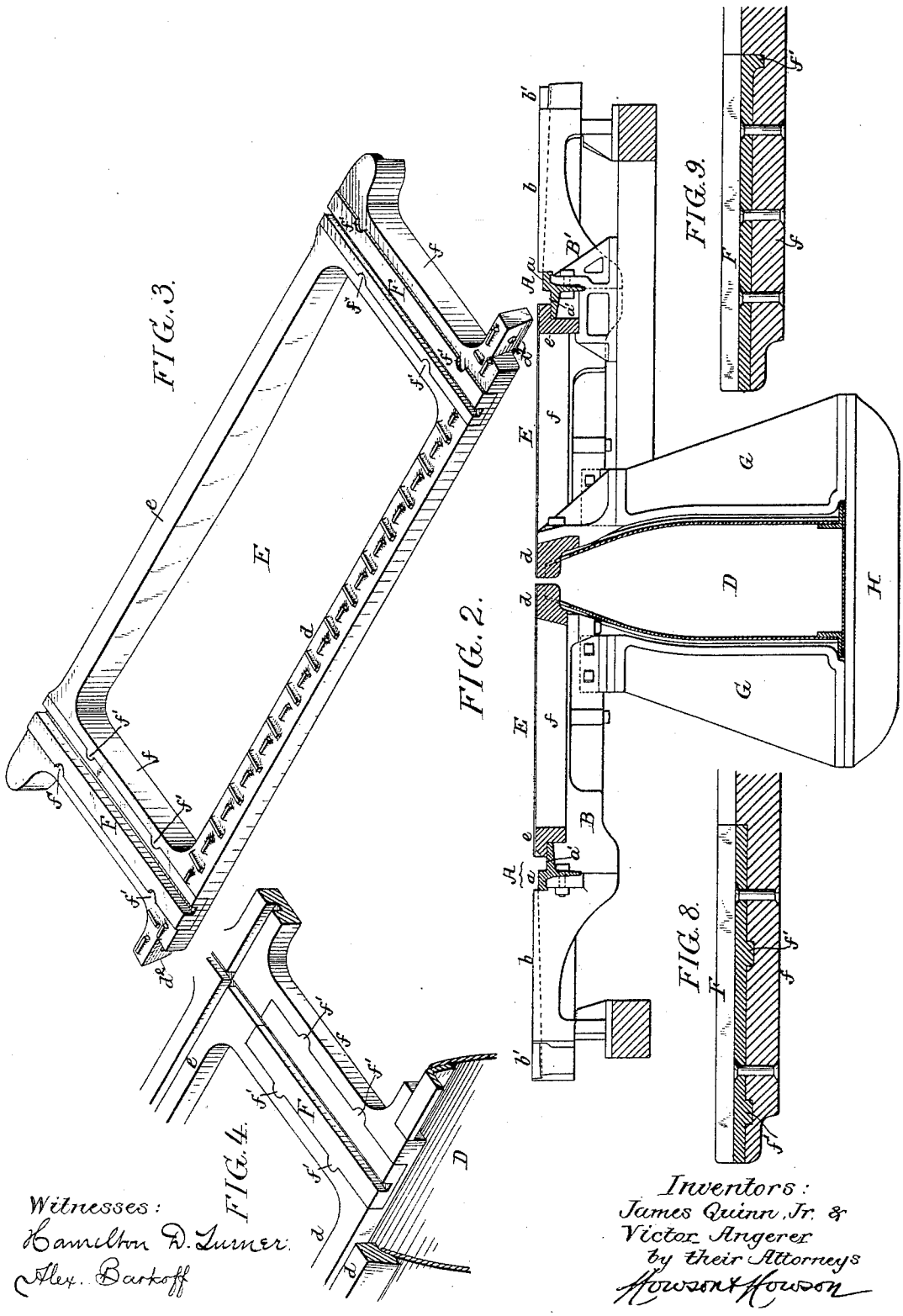
THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

(No Model.) 3 Sheets—Sheet 2.

J. QUINN, Jr., & V. ANGERER.

STREET RAILWAY CROSSING.

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(No Model.) 3 Sheets—Sheet 3.

J. QUINN, Jr., & V. ANGERER.

STREET RAILWAY CROSSING.

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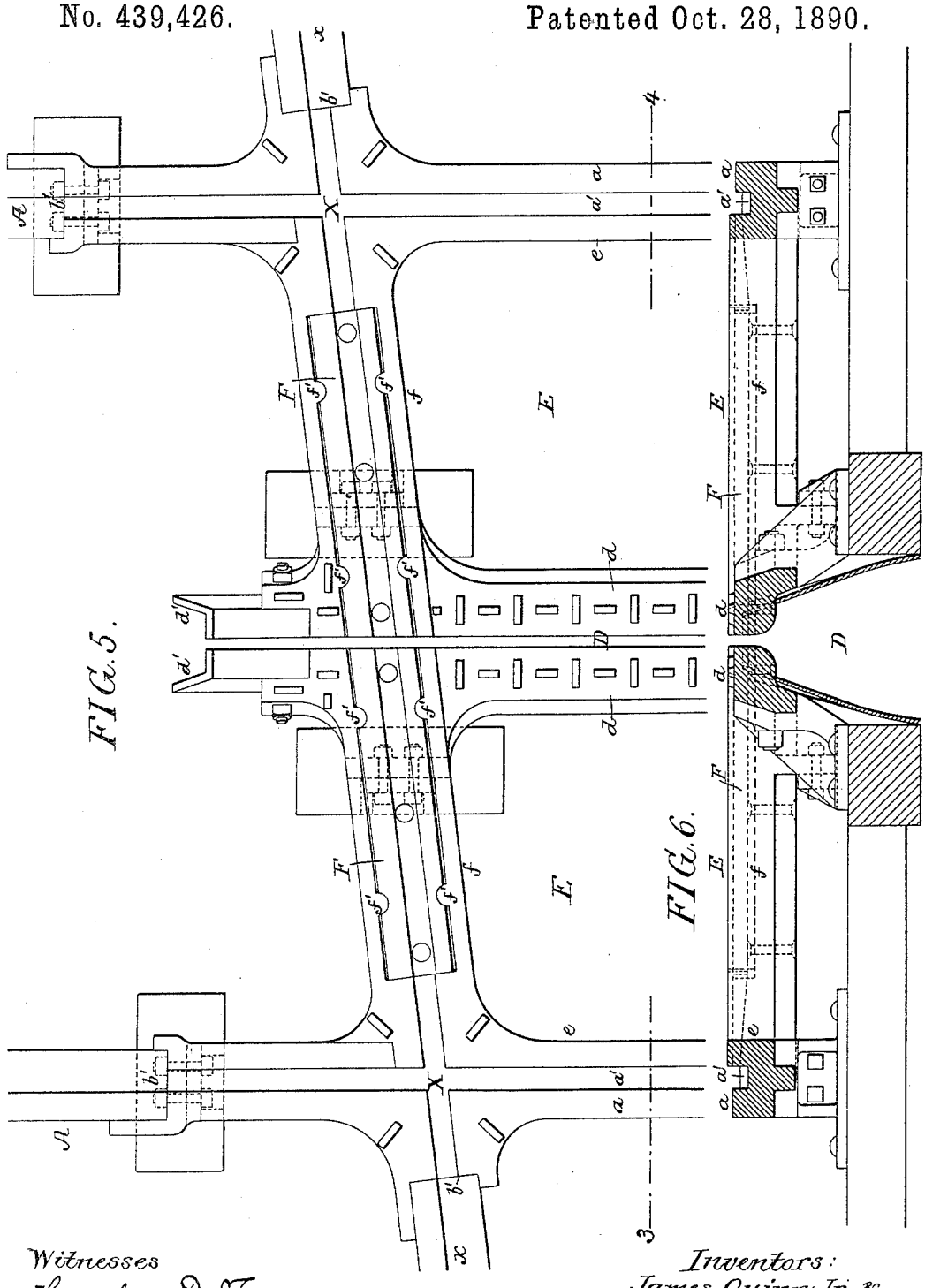


FIG. 5.

FIG. 6.

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THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

JAMES QUINN, JR., AND VICTOR ANGERER, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNORS TO WILLIAM WHARTON, JR., AND COMPANY, INCORPORATED, OF SAME PLACE.

STREET-RAILWAY CROSSING.

SPECIFICATION forming part of Letters Patent No. 439,426, dated October 28, 1890.

Application filed October 14, 1889. Serial No. 326,925. (No model.)

To all whom it may concern:

Be it known that we, JAMES QUINN., Jr., and VICTOR ANGERER, both citizens of the United States, and residents of Philadelphia, Pennsylvania, have invented certain Improvements in Street-Railway Crossings, of which the following is a specification.

Our invention relates to certain improvements in street-railway crossings, and especially to those in which an ordinary street-car track crosses the track of a cable or other railway using a conduit.

The object of the present invention is to facilitate the laying of the crossing, to insure the solidity and stability of the same, and to prevent distortion or displacement of any of the parts of the crossing, especially such parts as would, if displaced, close or obstruct the slot.

Our invention is based upon the same general principles as those set forth in the application of Edward Samuel, filed September 21, 1888, Serial No. 285,979.

In the accompanying drawings, Figure 1 is a plan view of a crossing constructed in accordance with our invention. Fig. 2 is a transverse section on the line 1 2, Fig. 1. Fig. 3 is a perspective view of a casting constituting one of the frames of the crossing with parts of the transverse rails in place thereon. Fig. 4 is a perspective view illustrating a feature of our invention. Fig. 5 is a plan view of a modified form of the crossing. Fig. 6 is a transverse section on the line 3 4, Fig. 5; and Figs. 7, 8, and 9 are views of modifications of details of our invention.

A A are the main or continuous rails forming part of the track of the cable or other conduit road. These rails, as shown in the drawings, are in the form of girder-rails of a special cross-section; but it will be understood in the outset that different forms of rails may be used without departing from our invention. The rails A have treads *a* for the wheels of the car and wagon-treads *a'*, and are secured to and supported by girders B B, crossing the rails at an angle, chairs B' also serving to support the rails A at points intermediate of the girders B. The latter have outside of each of the rails A grooved rail-sections *b*, and each of such sections is provided with a socket *b'* for the reception of the end of one of the rails *x* of the crossing track. D is a conduit of any of the well-known forms, that shown in the drawings being of sheet metal.

The crossing structure between the rails A consists of two castings E E, each of quadrangular shape, as shown in Fig. 3, the side *d* forming the slot-iron for one side of the conduit, the side *e* forming the wagon-tread for one of the continuous rails, and the two ends *f f* uniting the two side frames *d* and *e*, and each having a recess for the reception of the grooved-rail section F, which forms part of the transverse or crossing track. The side *e* of the section E, besides forming the wagon-tread for one of the continuous rails A, also ties the girders B B together, as in the aforesaid application of E. Samuel. The wagon-treads *e*, however, are not absolutely necessary in all cases. The girders B B are discontinued at the conduit, and are supported at their inner ends on standards G G, each of which is flared at the base and secured to a cross-beam H beneath the conduit, as shown in Fig. 2, although it will be understood that different forms of standards may be used without departing from our invention. For instance, in Fig. 6, in place of the standards we have shown the girders as supported by ordinary stringer-beams of wood. The slot-irons *d* are also supported at the center on the standards or stringer-beams, and they extend beyond the end bars *f*, and are cut away on a bevel, as at d^2, in order to fit over the ordinary conduit slot-irons *d'*. (Shown in Figs. 3 and 5.)

To prevent the rail-sections F from moving longitudinally in their recesses and obstructing the passage of the grip or contact bar through the slot, we form lugs or projections *f'* on the frames *f*, which enter recesses in the rails, as shown in Figs. 5 and 7, or the lugs may be formed on the rails, as shown in Fig. 4, or the bottoms of the recesses may be grooved for the reception of lugs on the bases of the rails, as shown in Figs. 8 and 9, so that if by constant jar and gradual working the bolts

which retain the rails should become loose the rails cannot move so as to close or partially close the slot.

In referring to Fig. 1 it will be noticed that the crossing is what is termed a "made-up" crossing—that is to say, it is composed partially of rolled rails and partially of castings. In Figs. 5 and 6, however, we have shown the two castings E E as forming not only the slot-irons, but also the main and crossing-rails, so that two castings when placed together will form a complete crossing. We have shown in Figs. 5 and 6 the transverse rail-sections F inserted in the castings, but stopping short of the crossing-points X; but the the section F may extend to the crossing without departing from our invention.

We claim as our invention—

1. The combination, in a railway-crossing, of a conduit, the main-track rails, and the crossing-track rails with castings, one on each side of the conduit, each casting having a slot-iron for one side of the conduit, an outer bar forming a wagon-tread for one of the main-track rails, and end bars in line with the crossing-track rails, substantially as specified.

2. The combination, in a railway-crossing, of a conduit, the main-track rails, and the crossing-track rails with castings, one on each side of the conduit, each casting having a slot-iron for one side of the conduit, recessed end bars in line with the crossing-track rails, and crossing-rail sections secured in the recesses of said end bars, substantially as specified.

3. The combination, in a railway-crossing, of a conduit, the main-track rails, and the crossing-track rails with castings, one on each side of the conduit, each casting having a slot-iron for one side of the conduit, an outer bar parallel with the main-track rails, recessed end bars in line with the crossing-track rails, and crossing-rail sections secured in the recesses of said end bars, substantially as specified.

4. The combination, in a railway-crossing, of a conduit, the main-track rails and the crossing-track rails with castings, one on each side of the conduit, each casting having a slot-iron for one side of the conduit, recessed end bars in line with the crossing-track rails, and crossing-rail sections secured in said recesses of the end bars, the latter and the rail-sections having engaging-lugs and recesses to prevent longitudinal displacement of the rail-sections, substantially as specified.

In testimony whereof we have signed our names to this specification in the presence of two subscribing witnesses.

JAS. QUINN, JR.
VICTOR ANGERER.

Witnesses:
W. J. BURNS,
HARRY SMITH.