2 Sheets—Sheet 1.

D. C. PIERCE.

RAILROAD SWITCH-CHAIR.

No. 183,065. Patented Oct. 10, 1876.

Fig 1.

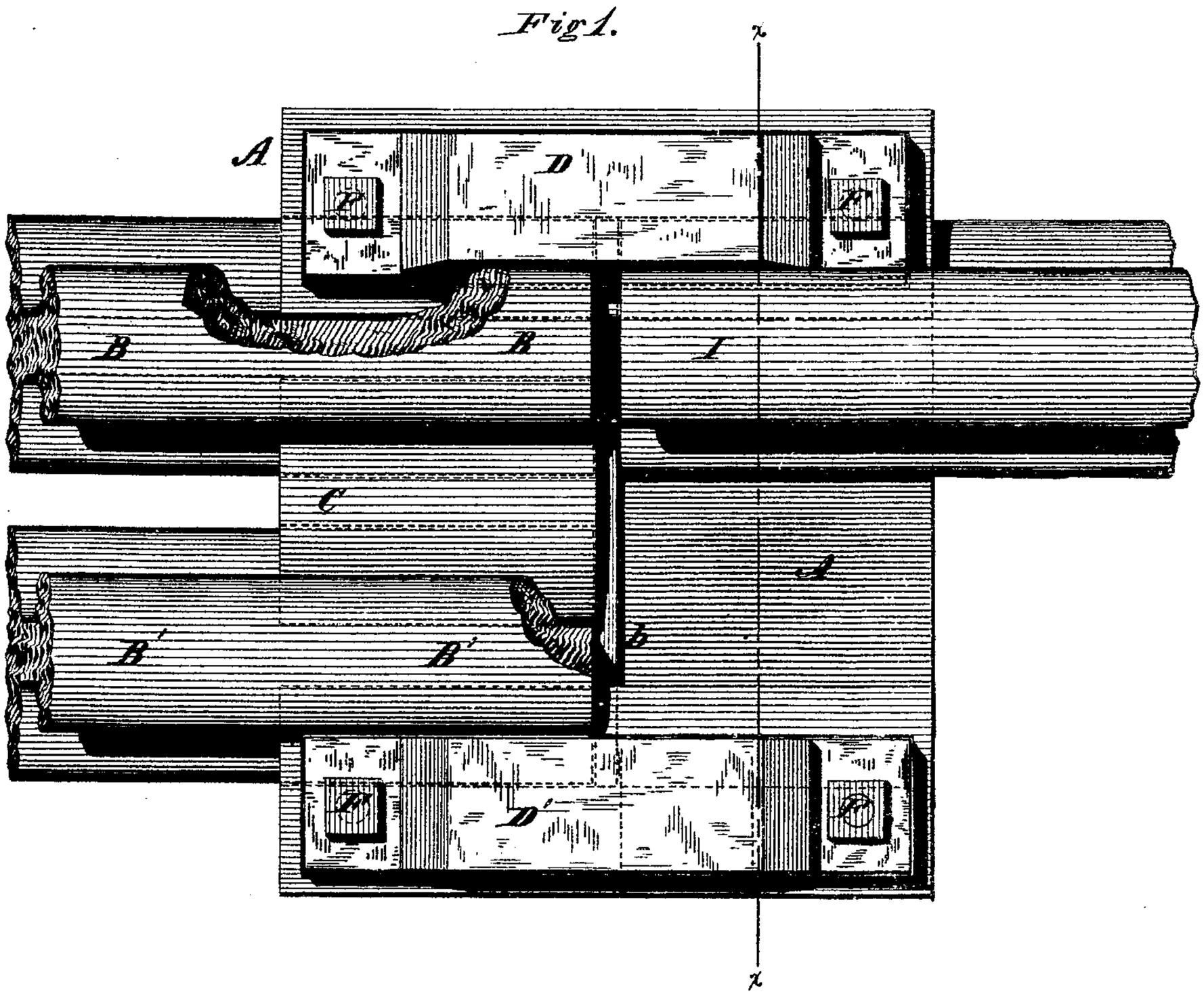
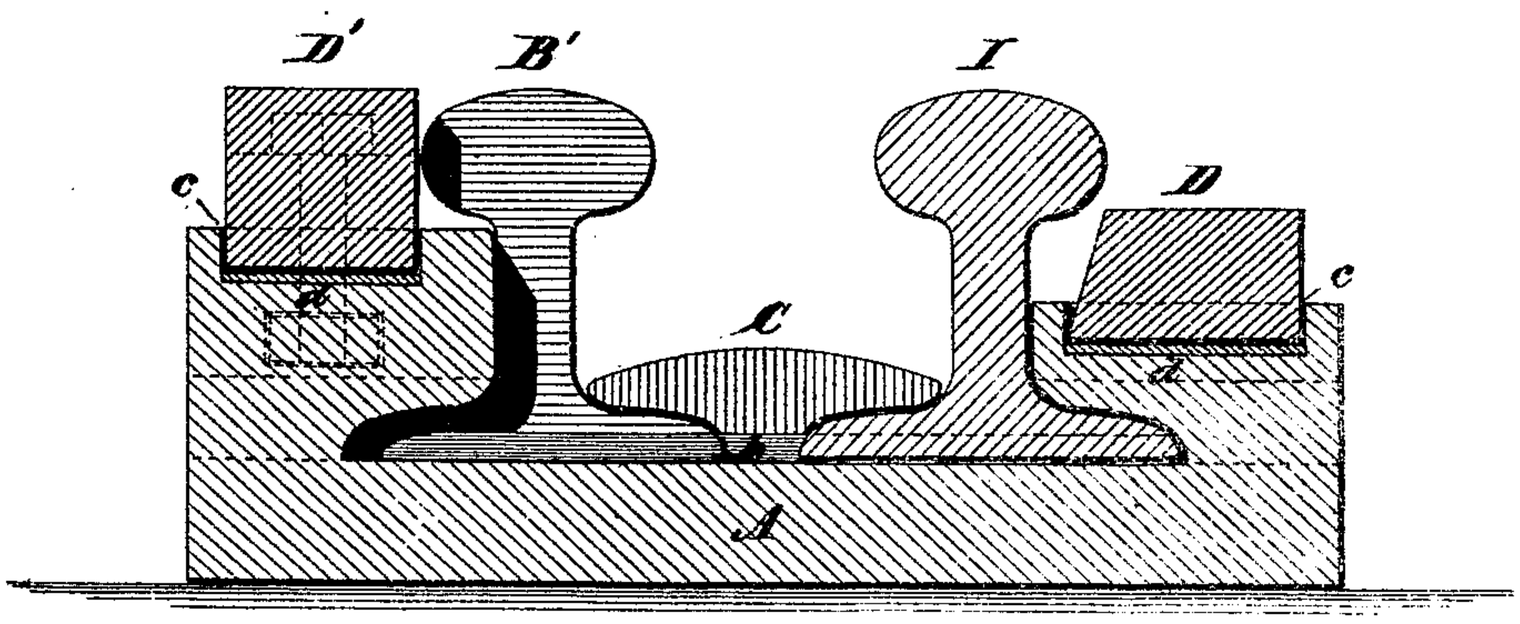


Fig 2.



WITNESSES
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2 Sheets—Sheet 2.

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Fig 3.

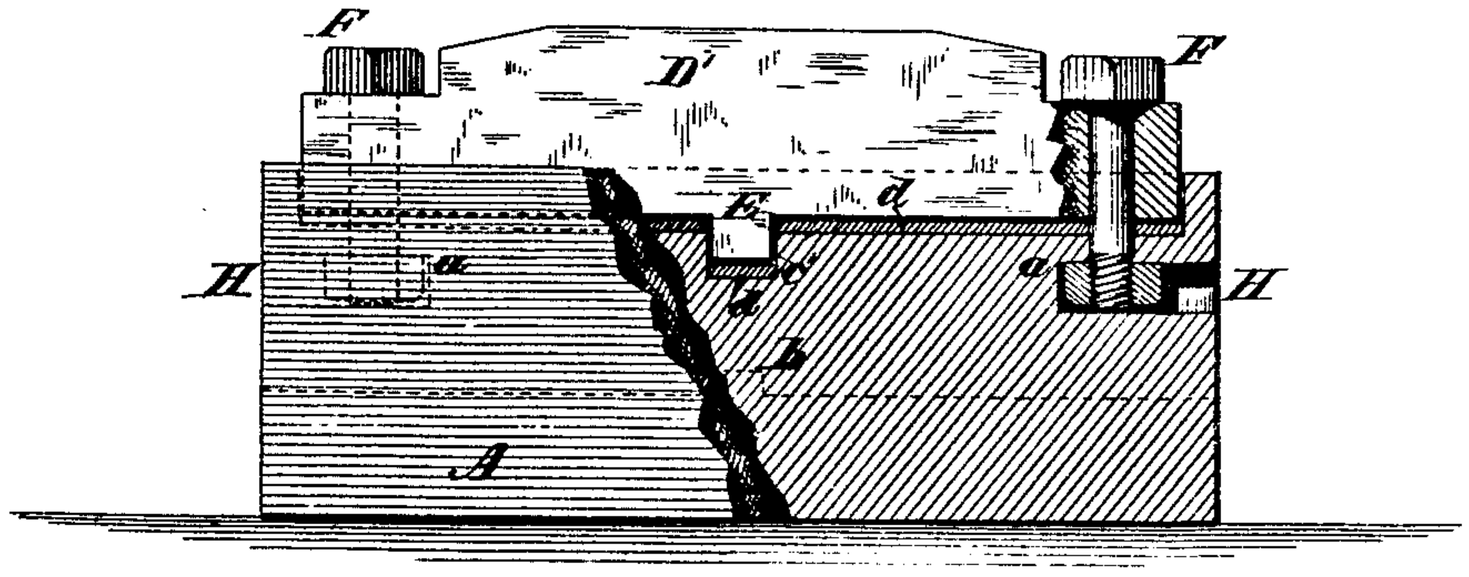


Fig 4.

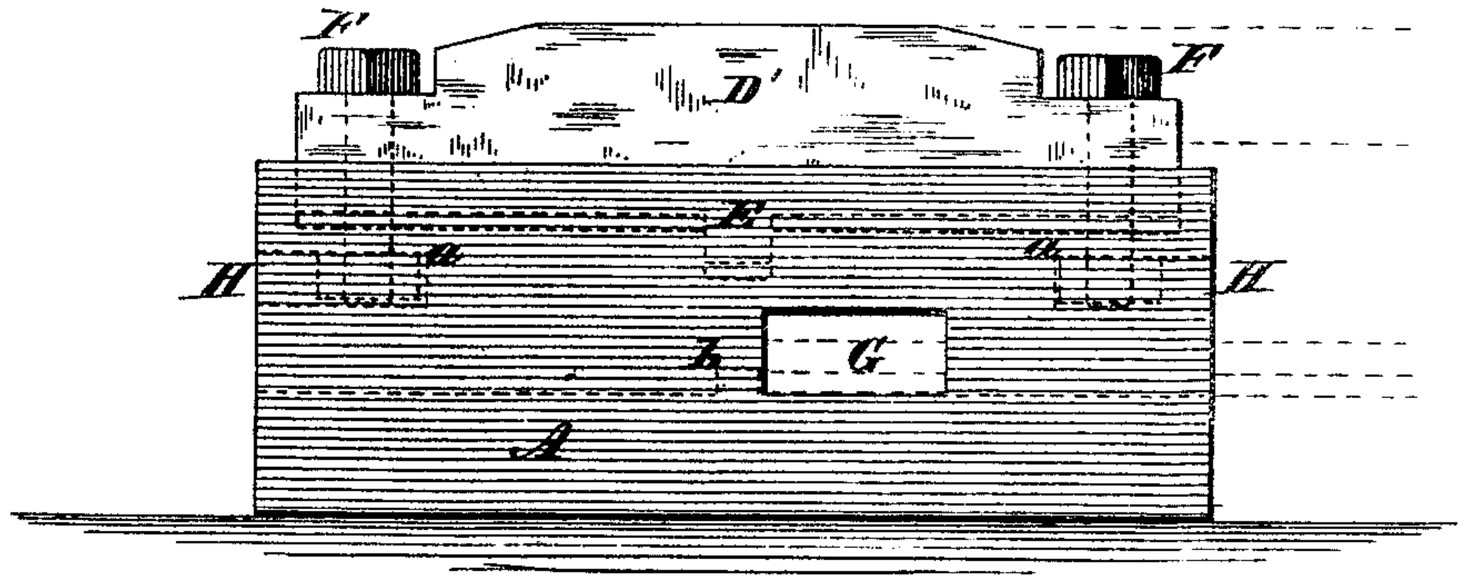
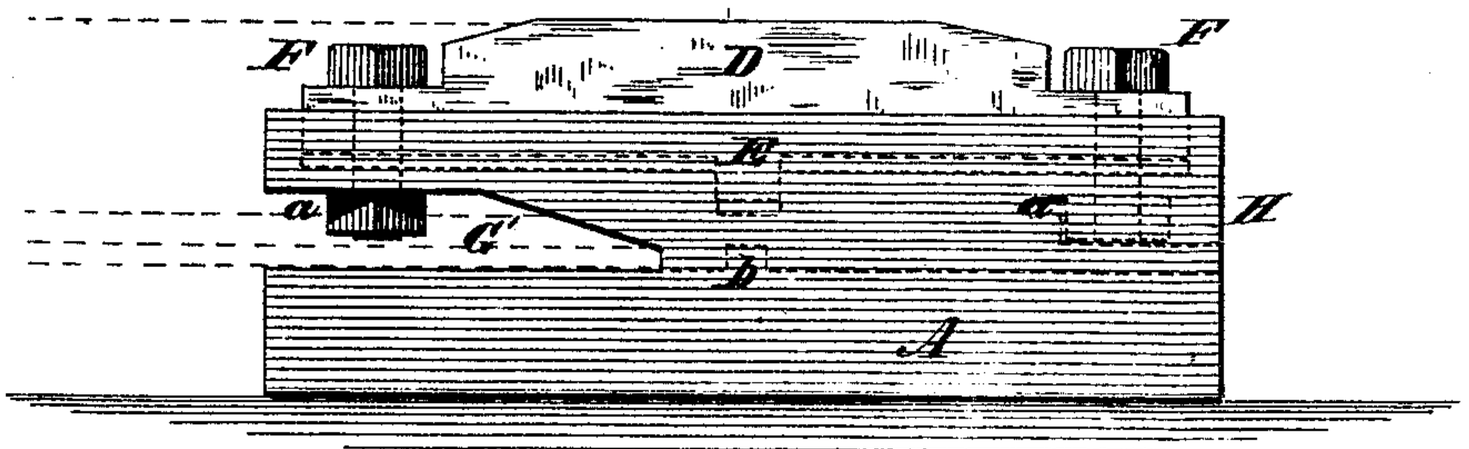


Fig 5.



WITNESSES

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UNITED STATES PATENT OFFICE.

DENISON C. PIERCE, OF CHICAGO, ILLINOIS.

IMPROVEMENT IN RAILROAD-SWITCH CHAIRS.

Specification forming part of Letters Patent No. **183,065**, dated October 10, 1876; application filed March 31, 1876.

To all whom it may concern:

Be it known that I, DENISON C. PIERCE, of Chicago, Cook county, State of Illinois, have invented certain Improvements in Railway-Switch Chairs; and I do hereby declare the following to be a full and correct description of the same, reference being had to the accompanying drawings, in which—

Figure 1 is a top-plan view of the chair, with a portion of the stationary rails of the track broken away. Fig. 2 is a vertical cross-section on the line *x x* of Fig. 1. Fig. 3 is a side elevation, with a portion broken away; and Figs. 4 and 5 are side elevations, showing openings for the escape and removal of dirt from the surface of the chair.

As is well known, the ordinary switch-chair for railways is so constructed as simply to allow the movable and stationary rails to be placed in line, and without any provision for protecting the adjoining ends of the rails on the chair from being injured by the hammering of the wheels of the cars passing over them.

The object of my invention is to protect the ends of the rails on the chair from injury, and to provide a convenient method of removing dirt from the inner surface of the chair; and it consists in attaching to the sides of the chair removable cushioned bearings, made of steel or other suitable material, arranged to be parallel with, and alongside of the adjoining ends of the rails, so as to receive the wheels of the passing cars, and thus relieve the ends of the rails from pressure, and protect them from injury. It also consists in providing the sides of the chair opposite the end of the movable rail with openings to allow the escape and removal of dirt from its surface.

In the drawings, A represents a railway-switch chair for receiving the ends of the two stationary rails B B′ and the end of the movable rail I, for connecting with them, as clearly shown in Fig. 1. The inner walls or sides of the chair are curved so as to receive one side of the foot of the rails, and a curved foot-holder, C, is placed between them for securing the opposite side of the foot of the stationary rails, as clearly shown in Fig. 2. The usual provisions for securing it in place are provided, but not shown. Its sides are made of different heights, as shown in Figs. 1 and 2, the outer reaching to the head of the adjoining rail, and the inner lower, the difference being the depth of the flange of a car-wheel, as shown in Fig. 2, and for a purpose hereinafter explained.

A rectangular bed or socket, *c*, with a cross-bed or socket, *c′*, is made in the tops of the sides of the chair, as shown in Figs. 2 and 3, and in dotted lines in Figs. 4 and 5, deep enough to receive and hold securely rectangular steel or other suitable metal blocks or bearings D D′, provided with a cross stay rib or projection, E, for entering the socket-bed *c′*, and also deep enough to admit the interposition of a thin layer of wood, *d*, or other substance suitable for a cushion between the bearing-blocks and the bottom of their beds, as shown in the same figures. The bearing-block D′ is placed in the top of the outer side of the chair, and is so made that when in position its upper surface will be on a level with the top of the adjoining rails, as well as near to, and parallel with, their adjoining ends when they are in line. The bearing-block D is placed in the opposite and lower side of the chair, and so that when in position its upper surface or top shall be below the upper surface or top of the adjoining ends of the rails, just the distance of the depth of the flange of a car-wheel, and shall also be near to and parallel with the rails when in line, as clearly shown in Figs. 1 and 2. These bearing-blocks are secured in place by bolts F, as shown in all the figures, the bolts being fastened by nuts *a* inserted in openings H made for that purpose in the sides of the chair, as shown in Fig. 3 and in dotted lines in Figs. 4 and 5.

In the sides of the chair opposite the end of the movable rail a rectangular opening, G, as shown in Fig. 4, or an irregular-shaped one, G′, as shown in Fig. 5, is made so as to allow the escape or removal of any dirt or other foreign substance from the bed of the chair that may be in the way of the movement of the end of the rail I. Across the center of the inner surface of the chair is placed the usual cross rib or bar *b* for fixing the distance to which the ends of the rails may be inserted.

When the chair thus made and constructed is placed in position and occupied by the rails, as shown in Fig. 1, its operation will be read-

ily understood; for, as will be seen, when the end of the movable rail is placed in line with the outer stationary rail, the tread of the wheels of the passing cars will bear on the block in the chair and not upon the ends of the rails; and when the end of the movable rail is placed in line with the inner stationary rail, the flange of the wheels will bear upon the blocks in the opposite side of the chair, and not upon the ends of the rails, and that thus in both cases the ends of the rails will be protected from injury.

It will also be seen that these bearing-blocks can be readily removed, in case of injury, and replaced by others without interfering in any way with the passing cars, and that all longitudinal motion of the bearings will be effectually prevented by their cross stay-rib.

Having thus described my invention, what I claim is—

1. A railway-switch chair, provided with side bearings of different heights for receiving the tread of the wheels on one side, and the flange of the wheels on the other, of passing cars, as set forth.

2. In combination with a railway-switch chair, adjustable and removable bearing-blocks, arranged as described, and for the purpose set forth.

3. In combination with a railway-switch chair constructed as herein described, bearing-blocks, provided with a cross stay-rib, E, for preventing any longitudinal motion of the same, as described.

4. A railway-switch chair, provided with openings in its sides opposite the end of the movable rail, as and for the purpose set forth.

The above specification of my said invention signed and witnessed at Washington, D. C., this 31st day of March, A. D. 1876.

DENISON C. PIERCE.

Witnesses:

H. B. MUNN,

W. P. BELL.