

(No Model.)

F. F. BAUMANN & J. WEINZ.  
SANDING DEVICE FOR STREET CARS.

No. 535,479.

Patented Mar. 12, 1895.

Fig. 1.

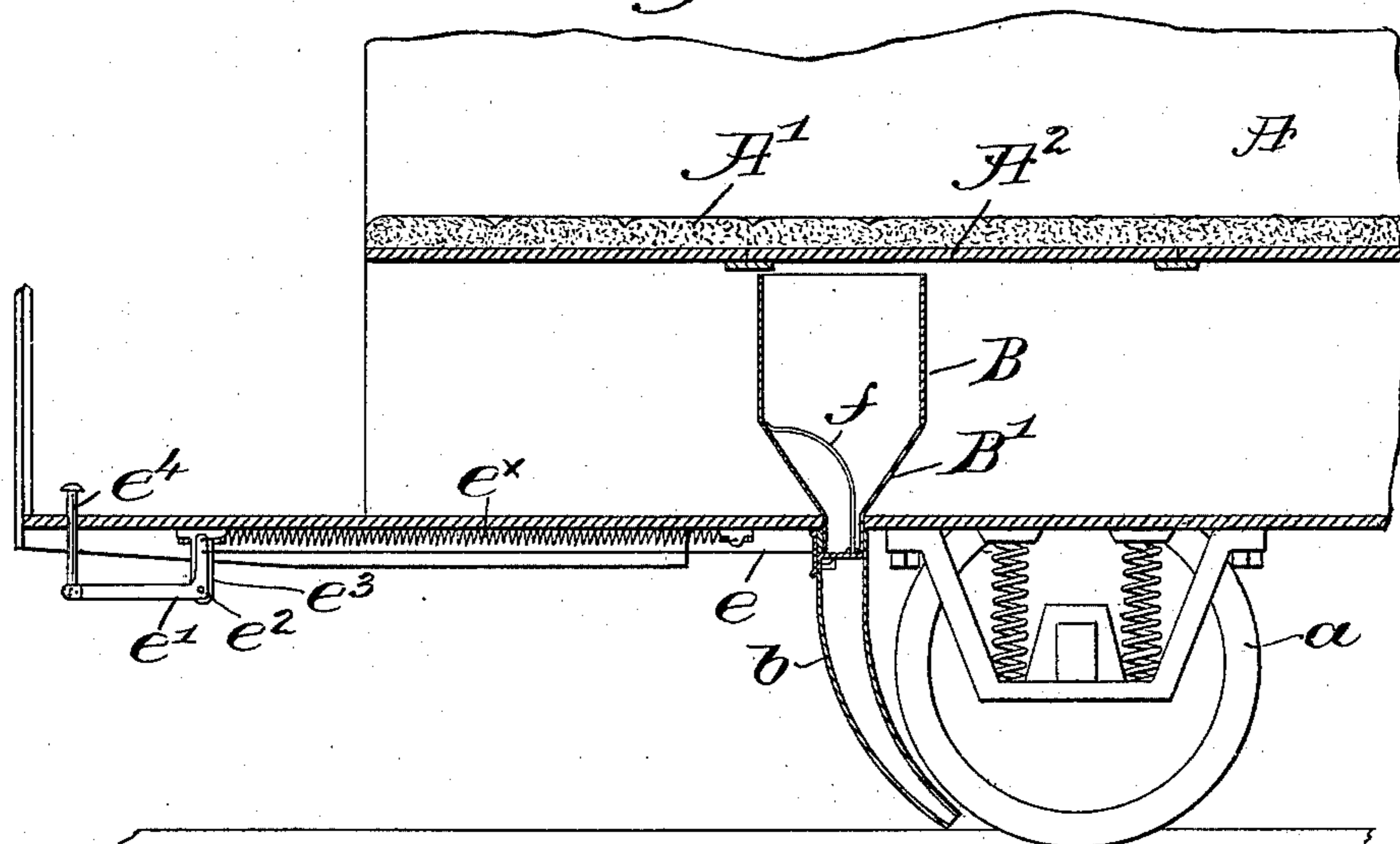


Fig. 2.

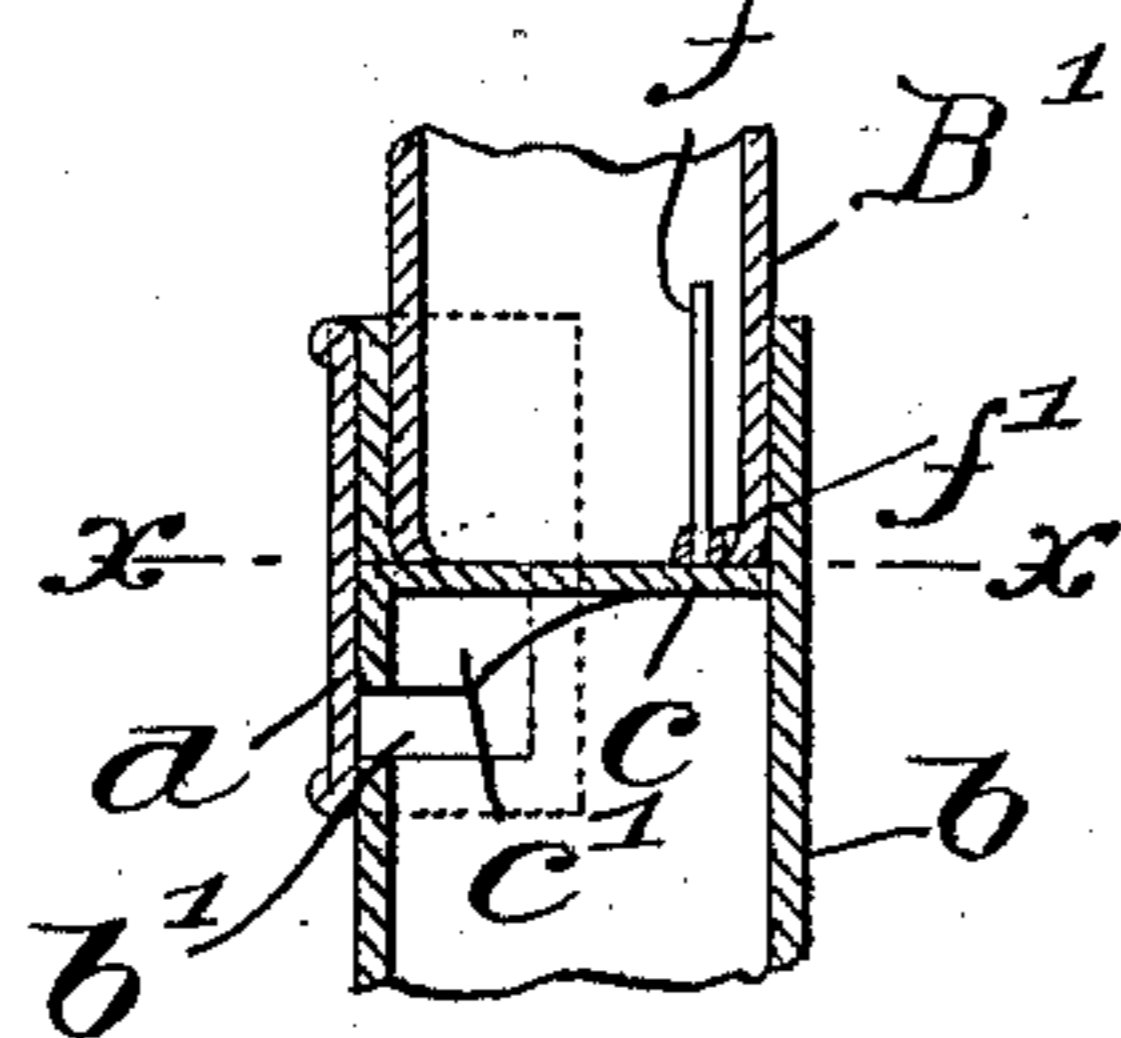
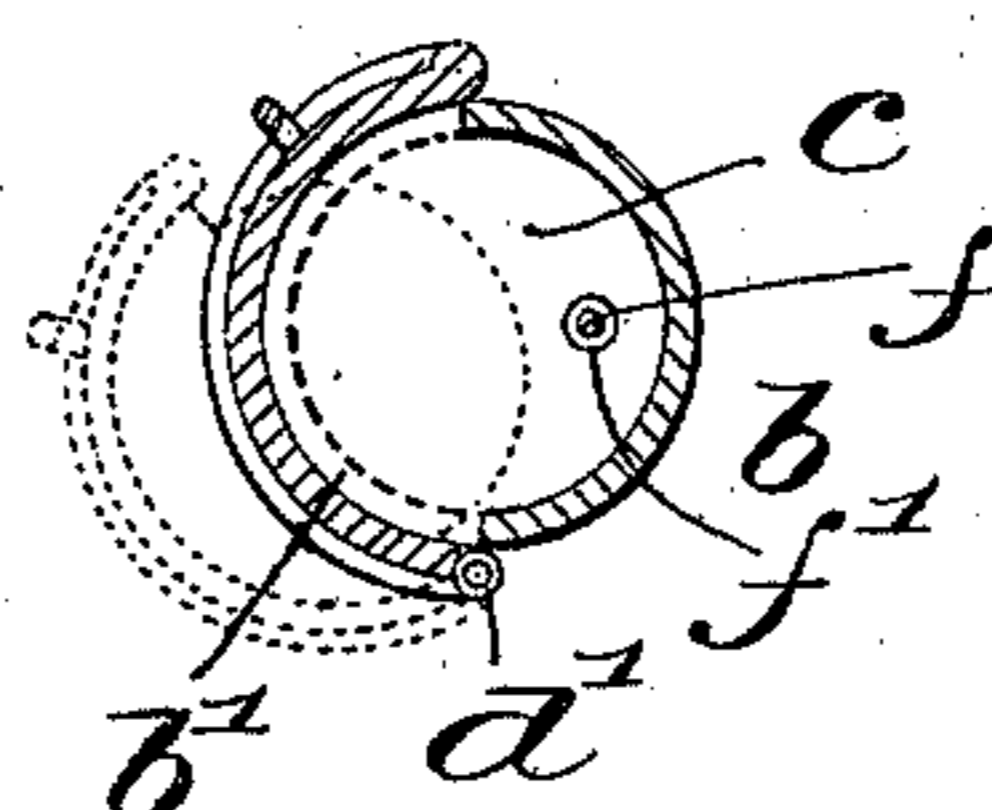


Fig. 3.



Witnesses.

Thomas J. Drummond  
Louis N. Gouwell

Inventors.

Fredrick F. Baumann,  
Jacob Weinz,  
by Crosby & Gregory  
Attys.

# UNITED STATES PATENT OFFICE.

FREDRICK F. BAUMANN AND JACOB WEINZ, OF BOSTON, MASSACHUSETTS;  
SAID BAUMANN ASSIGNOR OF ONE-HALF OF HIS RIGHT TO LOUIS WEIS  
AND JULIUS WEIS, OF SAME PLACE.

## SANDING DEVICE FOR STREET-CARS.

SPECIFICATION forming part of Letters Patent No. 535,479, dated March 12, 1895.

Application filed January 5, 1894. Serial No. 495,792. (No model.)

*To all whom it may concern:*

Be it known that we, FREDRICK F. BAUMANN and JACOB WEINZ, of Boston, county of Suffolk, State of Massachusetts, have invented an  
5 Improvement in Sanding Devices for Street-Cars, of which the following description, in connection with the accompanying drawings, is a specification, like letters on the drawings representing like parts.

10 This invention has for its object to provide an improved sanding device for street cars.

In accordance with this invention we provide one or more sand receiving hoppers or receptacles, preferably located beneath or  
15 within the car seats, and provide each of said hoppers with an outlet pipe leading to the rail, preferably immediately in front of the wheels.

Each delivery pipe is controlled by a peculiarly constructed valve hung in such manner  
20 as to permit easy yet effective opening and closing of the delivery pipe, all as will be hereinafter more fully described and claimed.

Figure 1 of the drawings represents in vertical section, a car equipped with a sanding  
25 device embodying this invention; Fig. 2, an enlarged sectional detail of a part of Fig. 1, and Fig. 3, an enlarged cross section taken on the dotted line  $x-x$ , Fig. 2.

30 Referring to the drawings, A represents one end of a usual street or other car mounted upon wheels, one of which is shown at  $a$ , Fig. 1.

B is the sand receptacle or hopper, preferably located beneath the car seat  $A'$ , and accessible for filling through an opening in said  
35 seat normally closed by a removable seat section or cover  $A^2$ . As many of these receptacles or hoppers may be provided as necessary, we preferring, however, to employ only two,  
40 one at each end of the car, and as both or all of them with their respective valves and controlling means are of the same construction, a detailed description of one will be sufficient.

The hopper B has preferably a tunnel or  
45 cone-shaped bottom  $B'$ , from the lowest portion of which leads a downwardly extended outlet pipe  $b$ , which pipe, terminates close to and above the rail, as shown.

50 The pipe  $b$ , preferably at a level just below the car bottom, as shown in Fig. 1, has a por-

tion removed to provide an opening  $b'$  of sufficient width and depth to admit the valve or cut-off  $c$ , disk-like in form and secured at its outer edge to the door or carrier  $d$ , semi-cylindrical in form and hinged at  $d'$  along one  
55 of its vertical edges to the pipe  $b$ .

The valve  $c$  is suitably braced to the carrier  $d$  at its under side by brackets  $c'$ .

When the valve is moved in as in full lines  
60 Figs. 2 and 3, closing the pipe  $b$ , the carrier  $d$  covers the opening  $b'$  in the pipe.

As one means of opening and closing the valve, we connect the carrier  $d$ , see Fig. 1, by a rod  $e$ , with one arm of a bell-crank  $e'$ , pivoted at  $e^2$ , to a bracket  $e^3$  secured to the under side of the car platform, the said bell-  
65 crank being operated by the foot rod  $e^4$  projecting upwardly through said platform, as shown, in position convenient for the person in control of the car. A spring  $e^x$  retains the  
70 rod  $e$  and lever  $e'$ , normally in position closing the valve.

The sand in the hopper is supported by the valve  $c$ , squarely closing the pipe  $b$ , giving no  
75 chance for leakage.

When it is desired to sand the rails, the operator depresses the foot rod  $e^4$  and turns the carrier  $d$  on its hinge to draw back the valve  
80 as shown by dotted lines Fig. 3, partially or wholly removing the support for the sand and permitting the latter to pass downwardly through the pipe  $b$  upon the rails.

The spring  $e^x$  returns the valve to its closed  
85 full line position when the foot rod is released.

It will be noticed that the valve is well supported by the brackets  $c'$ , to enable it to sustain the weight of the sand resting upon it, and that when permitted to close, the said  
90 valve cuts edgewise through the sand in the pipe, thereby closing easily and tightly.

To agitate the sand that it may more easily  
loosen and pass down into the pipe  $b$ , we have herein provided a spring rod  $f$ , shown as rigidly attached at its upper end to the inside  
95 of the hopper and at its lower end held loosely by a suitable retaining device, as the short tube  $f'$ , upon the valve. When the valve is opened, this spring rod is moved laterally through the sand and effectually loosens the  
100 same.

While we have herein shown the outlet end *b'* of the hopper as inserted in the upper end of the pipe *b*, yet the two in fact constitute a single pipe and might if desired be so made.

5 This invention is not limited to the particular construction of apparatus herein shown and described, for it is evident the same may be varied without departing from the scope of this invention.

10 We claim—

1. In a sanding device for cars, the combination with a sand receptacle having a delivery pipe, a hinged valve movable edgewise to close said pipe, a sand loosening device connected  
15 with and movable laterally or across said delivery pipe by opening and closing of the said valve and means to move said valve, substantially as described.

2. In a sanding device for cars, the combination with a sand receptacle having a delivery  
20 pipe with a side opening as *b'*, of an edgewise movable valve to close said pipe, a hinged carrier for said valve, a sand loosening device connected with and moved by said valve and  
25 means to move said carrier, the latter when in its position with the valve closing said pipe, itself covering said side opening, substantially as described.

3. In a sanding device for cars, a hopper  
30 having a delivery pipe provided with a side opening, an edgewise movable valve *c*, its vertically hinged carrier and bracket *c'*, the bell crank lever *e'* connecting devices between the

same and said carrier, and means to move said lever, substantially as described. 35

4. In a sanding device for cars, a hopper having a delivery pipe, and a valve to open and close the same, combined with a sand loosening device consisting of a resilient rod rigidly attached at its upper end and at its  
40 lower end loosely connected with and moved by said valve, substantially as described.

5. In a sanding device for cars, a hopper having a delivery pipe, and an edgewise movable valve closing the same, combined with  
45 the resilient rod *f*, rigidly held at its upper end, and a tube *f'* on the said valve to receive and hold the lower free end of said rod, substantially as described.

6. In a sanding device for cars, a hopper  
50 having a delivery pipe, and an edgewise movable valve to control the same, combined with an agitating device attached at its upper end to and within said hopper, and having its lower end loosely connected to said valve  
55 whereby said lower end is moved by and with said valve to loosen the sand, substantially as described.

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

FREDRICK F. BAUMANN.

JACOB WEINZ.

Witnesses:

FREDERICK L. EMERY,

AUGUSTA E. DEAN.