

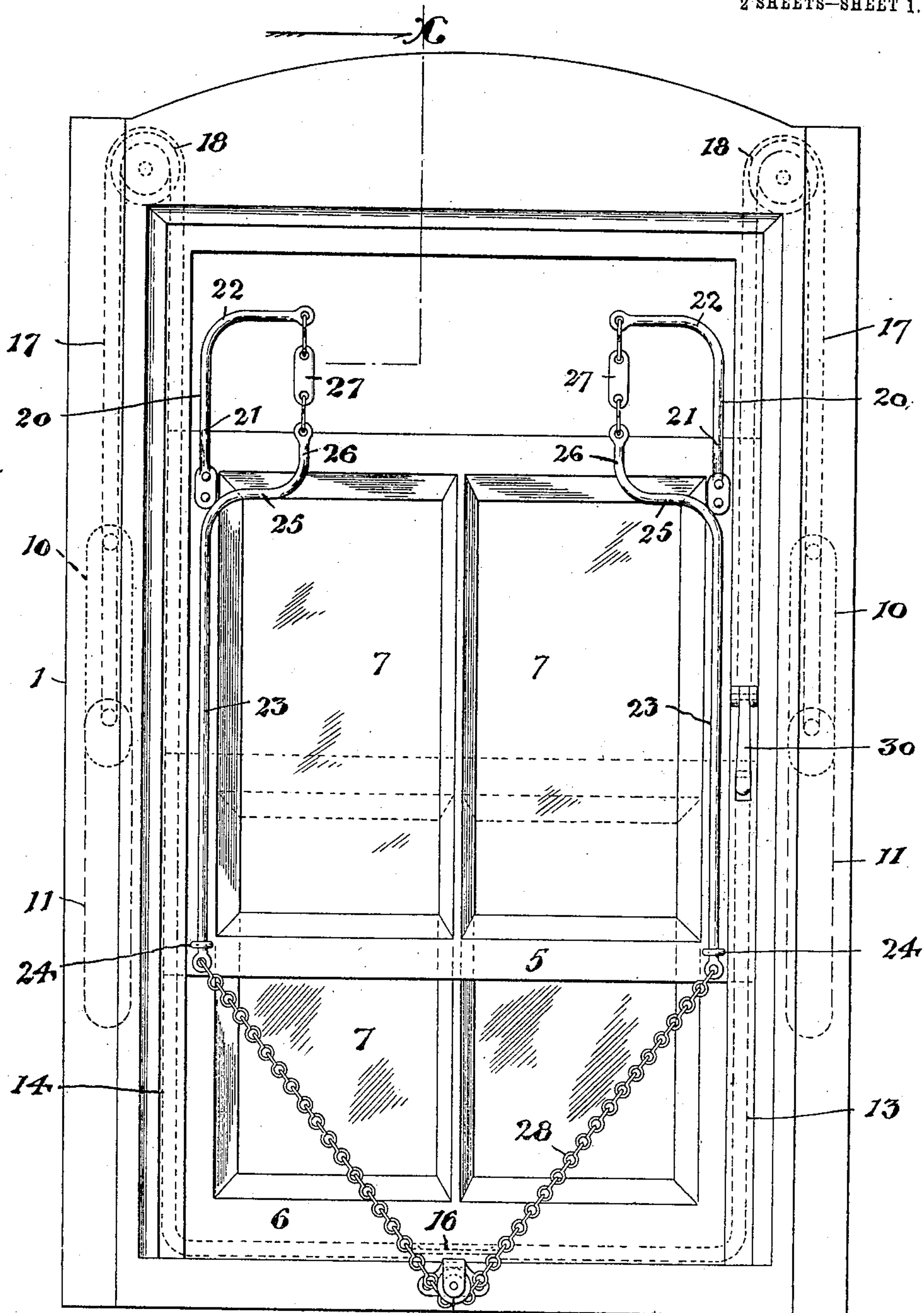
No. 810,595.

PATENTED JAN. 23, 1906.

G. YUNKER & G. SCHWING.
AUTOMATIC FIRE WINDOW.

APPLICATION FILED OCT. 9, 1905.

2 SHEETS—SHEET 1.



WITNESSES:

Fig. 1.

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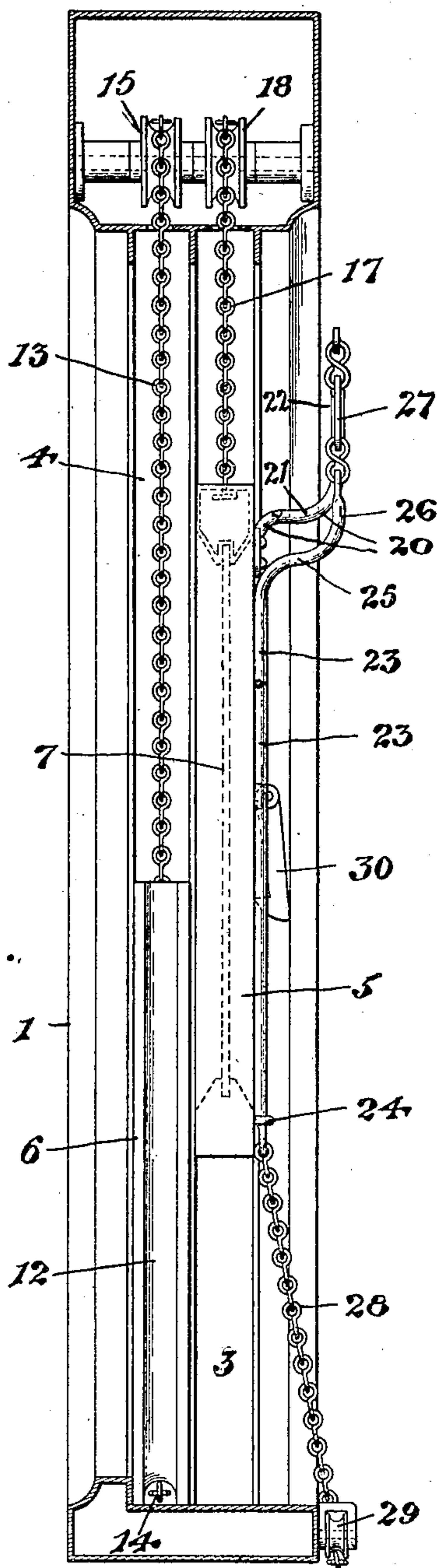
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2 SHEETS—SHEET 2.

Fig. 2.



WITNESSES.

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UNITED STATES PATENT OFFICE.

GOTTLIEB YUNKER AND GEORGE SCHWING, OF NEWARK, NEW JERSEY,
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PORATION OF NEW JERSEY.

AUTOMATIC FIRE-WINDOW.

No. 810,595.

Specification of Letters Patent.

Patented Jan. 23, 1906.

Application filed October 9, 1905. Serial No. 281,937.

To all whom it may concern:

Be it known that we, GOTTLIEB YUNKER and GEORGE SCHWING, citizens of the United States, residing at Newark, in the county of Essex and State of New Jersey, have invented certain new and useful Improvements in Automatic Fire-Windows; and we do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to numerals of reference marked thereon, which form a part of this specification.

This invention relates to automatic fire-windows, such as are shown in our prior patent, No. 776,948, issued November 9, 1904; and the objects of the present improvements are to provide means for automatically releasing the upper sash, which shall be independent of the lower sash and at the same time exposed to flames or heat above the said top sash—in other words, to provide fusible releasing means upon the top sash which shall when said sash is lowered be exposed above the sash; to thus obviate the objection of either sash in normal position protecting the fusible releasing means of the other sash from the flames, such as would be the case in the patent above referred to if the lower sash were closed when the upper one was open; to secure a simple and convenient construction, and to obtain other advantages and results, some of which may be referred to hereinafter in connection with the description of the working parts.

The invention consists in the improved automatic fire-window and in the arrangements and combinations of parts of the same, all substantially as will be hereinafter set forth and finally embraced in the clauses of the claim.

Referring to the accompanying drawings, in which like numerals of reference indicate corresponding parts in each of the figures, Figure 1 is an elevation of a window of my improved construction from the outside thereof, the upper sash being shown lowered; and Fig. 2 is a vertical section of the window-frame upon lines *x x*, Fig. 1, the sashes being entire, and therefore seen in edge view.

In said drawings, 1 indicates a window-

frame of any construction suited to fire-windows, preferably of sheet metal, as shown in the drawings, and of any well-known formation. Said frame provides at the inner faces of its upright sides channels 3 4 for the upper and lower sashes 5 6 to run in, said sashes being also formed of sheet metal, with panes of glass 7 mounted therein. The said sashes, it will be understood, are free to slide vertically one past the other from the top to the bottom of the window-frame, as is common in ordinary windows, the window-frame 1 providing at its sides the usual weight-pockets for the weights 10 11, by which the said sashes are hung.

The lower sash 6 is mounted as shown and described in our earlier patent above referred to, having at its side and bottom edges grooves 12 to receive chains 13 14, which extend over pulleys 15 15 at the top of the window-frame and carry the weights 10 10 at the sides of the frame. Said chains are at the center of the bottom of the sash connected by a fusible link 16, so that upon the passage of heat beneath the sash when raised the weights will be released and the sash closed by gravity.

The upper sash 5 is supported at its sides by chains 17 17, which also extend over pulleys 18 18 at the sides of the window-frame and receive the weights 11, which normally hold the sash closed. When the said upper sash is open or lowered, it is necessary to positively hold it in open position, and for this purpose we employ the means which form more particularly the subject-matter of the present invention.

At the opposite sides of the sash and close to its top are brackets 20 20, which bend outwardly each, as at 21, to clear the top of the window-frame when the sash is closed and have their upper ends turned inwardly toward each other, as at 22. Upon the opposite lateral margins of the window-sash are rods 23 23, each of which passes through an eye 24 at the lower end of the sash and is joined at its lower end to a chain adapted to be hooked upon the window-sill to hold the sash lowered. The upper ends of said rods 23 are bent inward toward each other, as at 25, and then upward, as at 26, to lie beneath the ends of the brackets 20 20, respectively. Fusible links 27 27 then connect the said upper ends

of the rods 23 to the brackets, and thus lie above the top edge of the upper sash. Obviously, therefore, when the upper sash is lowered, as shown in the drawings, a flame sweeping through the upper open part of the window will melt the fusible links 27, so that the upper sash will be immediately closed by its weights, the eyes 24 sliding upon the rods 23, as will be understood.

10 Preferably a single piece of chain 28 connects the lower ends of the rods 23 and is of suitable length to be hooked to the sill, preferably over a pulley 29, so that even if only one fuse melted the sash would still be closed, 15 the rods 23 being long enough for this purpose.

A gravity-catch 30, fully described in our prior patent above referred to, is also employed to hold the upper sash when closed.

20 Having thus described the invention, what we claim as new is—

1. In a window, the combination of a frame, an upper sash therein, a bracket projecting from said sash above its top, a fusible 25 link depending from said bracket, means normally holding the sash closed and means extending from said link below the bottom of the sash and adapted to secure the same in open position.

30 2. In a window, the combination of a frame, an upper sash therein, a bracket projecting from said sash above its top, a fusible link depending from said bracket, means normally holding the sash closed, and means at- 35 tached to said link for holding the sash in open position.

3. In a window, the combination of a frame, an upper sash therein, a bracket projecting from said sash above its top, a fusible 40 link depending from said bracket, means normally holding the sash closed, a slideway upon the side of said sash, and means extending through said slideway from said link below the bottom of the sash and adapted to 45 hold the sash in open position.

4. In a window, the combination of a frame, an upper sash therein, a bracket projecting from said sash above its top, a fusible

link depending from said bracket, means normally holding the sash closed, a slideway 50 upon the side of the sash, a rod slidably mounted in said slideway and connected at its upper ends to said link, and means connected to the lower end of said rod for fastening the sash in open position. 55

5. In a window, the combination of a frame, an upper sash therein, brackets projecting from said sash above its top, fusible links depending from said brackets, means 60 normally holding the said sash closed, slideways upon the opposite sides of the sash, rods slidably mounted one in each slideway and connected at their upper ends to said links, and a chain connecting the lower ends of said rods. 65

6. In a window, the combination of a frame, an upper sash therein, brackets projecting from said sash above its top, fusible links depending from said brackets, means 70 normally holding the sash closed, eyes upon the opposite sides of said sash near its lower end, rods slidably mounted in said eyes and connected at their upper ends to said links a chain connecting the lower ends of said rods, and means upon the window-frame for en- 75 gaging said chain.

7. In a window, the combination of a frame, an upper sash therein, brackets projecting from said sash above its top, fusible links depending from said brackets, means 80 normally holding the sash closed, eyes upon the opposite sides of said sash near its lower end, rods slidably mounted in said eyes and connected at their upper ends to said links a chain connecting the lower ends of said rods, 85 and a pulley upon the lower end of the window-frame over which said chain may be hooked.

In testimony that we claim the foregoing we have hereunto set our hands this 3d day of 90 October, 1905.

GOTTLIEB YUNKER.
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Witnesses:

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CHARLES H. PELL.