No. 794,295. PATENTED JULY 11, 1905.

W. B. GERVAIS.

DOOR CONSTRUCTION.

APPLICATION FILED APR. 8, 1904. RENEWED JUNE 5, 1905.

Fig. 1.

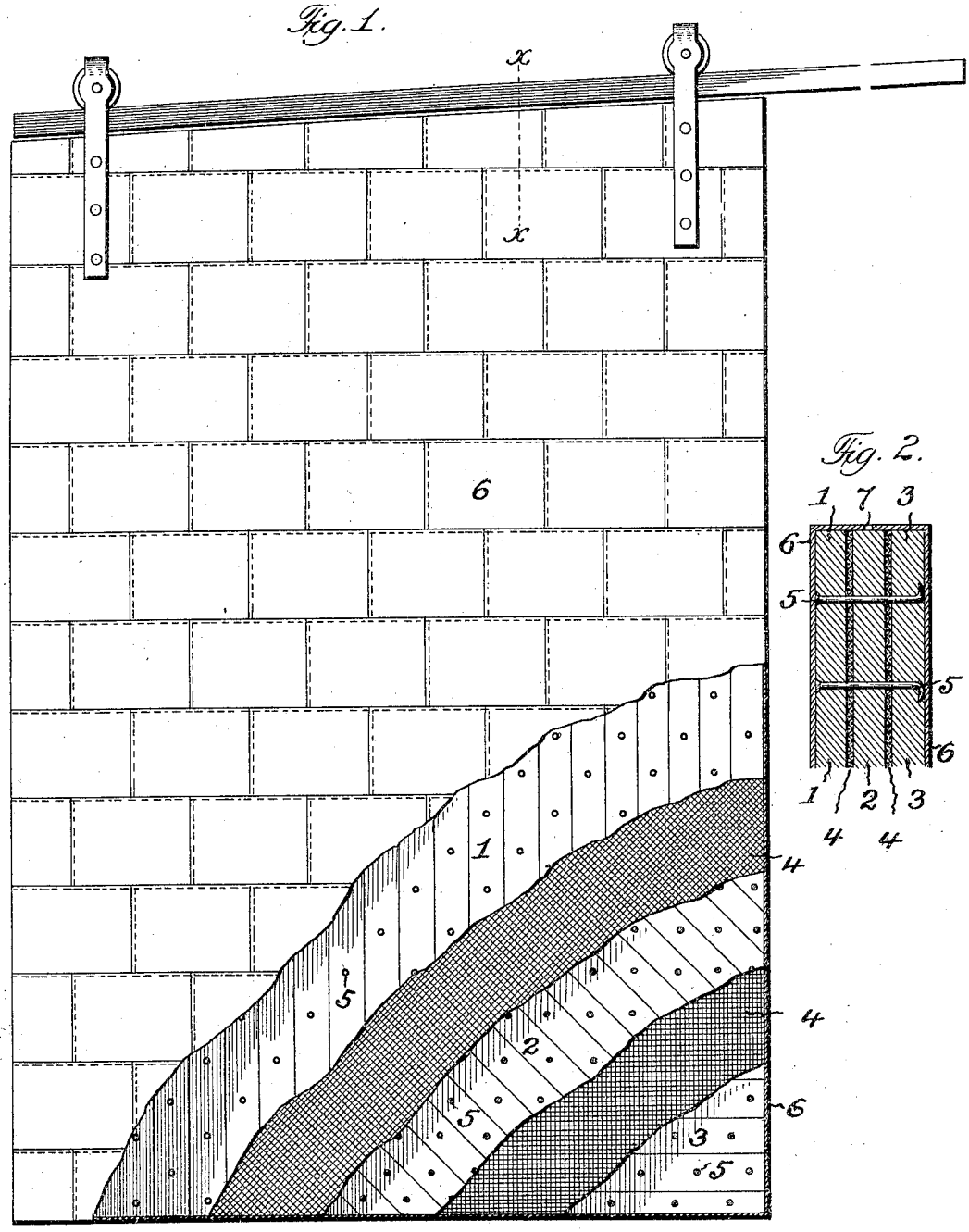

Fig. 2.

Attest.

John Enders.

M. A. Holmes.

Inventor:

Wainwright B. Gervais.

by Robert Burns

Attorney.

No. 794,295. Patented July 11, 1905.

UNITED STATES PATENT OFFICE.

WAINWRIGHT B. GERVAIS, OF CHICAGO, ILLINOIS.

DOOR CONSTRUCTION.

SPECIFICATION forming part of Letters Patent No. 794,295, dated July 11, 1905.

Application filed April 8, 1904. Renewed June 5, 1905. Serial No. 263,867.

To all whom it may concern:

Be it known that I, WAINWRIGHT B. GERVAIS, a citizen of the United States of America, and a resident of Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Door Constructions, of which the following is a specification.

The present invention relates to that class of doors for warehouses and the like in which a door formed of wood is incased in sheet metal to protect the same from combustion during a fire, and has for its object to provide a simple and efficient structural arrangement and combination of parts whereby the door is maintained in proper shape during and after a conflagration regardless of the fact that the interior combustible portion of the door has been reduced to charcoal during the passage of the door through the conflagration, all as will hereinafter more fully appear and be more particularly pointed out in the claims.

In the accompanying drawings, illustrative of the present invention, Figure 1 is a side elevation of a door embodying the present invention, layers of the door being broken away to illustrate the construction. Fig. 2 is an enlarged detail section at line x x, Fig. 1.

Referring to the drawings, 1, 2, and 3 represent a series of superimposed layers of wood boards affording the required thickness to the door, the boards in one layer extending in a direction across the boards in the other layers, as shown in Fig. 1, to afford the required stiffness to the structure, as usual in doors of the present class.

4 represents layers of perforate metal fabric, preferably ordinary open-mesh wire fabric, arranged between the aforesaid layers of boards, the whole being nailed together by nails 5, extending transversely and clenched upon an outer layer of boards, as shown.

6 is a casing of thin sheet metal inclosing the entire door to constitute the entire exposed surface of the completed door.

7 represents a series of small orifices in the upper end of the casing 6 for the egress of the vapors formed from the combustible interior of the door when exposed to fire.

With the present improved construction the layers 1, 2, and 3 of wood boards may be entirely carbonized and reduced to the nature of charcoal without the door collapsing and losing its shape, in that the interposed layers 4 of metal fabric, in conjunction with the transverse nails 5, will hold the carbonized material in proper place within the casing 6 to afford the requisite stiffness to the door and maintain the same in proper shape. The wire-fabric layers 4 also serve the additional purpose of forming ducts or passages for the escape of the vapors formed when the door is exposed to fire through perforations 7 and by such free escape prevent warping or swelling of the inclosed casing 6 due to such vapors being confined.

Having thus fully described my said invention, what I claim as new, and desire to secure by Letters Patent, is—

1. A door, comprising a series of layers of boards, a layer of perforate metal fabric interposed between such layers of boards, and an inclosing sheet-metal casing.

2. A door, comprising a series of layers of boards, a layer of perforate metal fabric interposed between such layers of boards, and an inclosing sheet-metal casing, the grain in one layer of boards crossing that in the other layers of boards.

3. A door, comprising a series of layers of boards, a layer of perforate metal fabric interposed between such layers of boards, a series of transverse nails fastening the different layers together, and an inclosing sheet-metal casing.

4. A door, comprising a series of layers of boards, a layer of perforate metal fabric interposed between such layers of boards, a series of transverse nails fastening the different layers together, and an inclosing sheet-metal casing, the grain in one layer of boards crossing that in the other layers of boards.

5. A door, comprising a series of layers of boards, a layer of perforate metal fabric interposed between such layers of boards, and an inclosing sheet-metal casing provided with outlet-orifices in its upper end.

6. A door, comprising a series of layers of

boards, a layer of open-mesh wire fabric interposed between such layers of boards, and an inclosing sheet-metal casing.

7. A door, comprising a series of layers of boards, a layer of open-mesh wire fabric interposed between such layers of boards, and an inclosing sheet-metal casing, the grain in one layer of boards crossing that in the other layers of boards.

8. A door, comprising a series of layers of boards, a layer of open-mesh wire fabric interposed between such layers of boards, a series of transverse nails fastening the different layers together, and an inclosing sheet-metal casing.

9. A door, comprising a series of layers of boards, a layer of open-mesh wire fabric interposed between such layers of boards, a series of transverse nails fastening the different layers together, and an inclosing sheet-metal casing, the grain in one layer of boards crossing that in the other layers of boards.

10. A door, comprising a series of layers of boards, a layer of open-mesh wire fabric interposed between such layers of boards, and an inclosing sheet-metal casing provided with outlet-orifices in its upper end.

Signed at Chicago, Illinois, this 6th day of April, 1904.

WAINWRIGHT B. GERVAIS.

Witnesses:
ROBERT BURNS,
M. H. HOLMES.