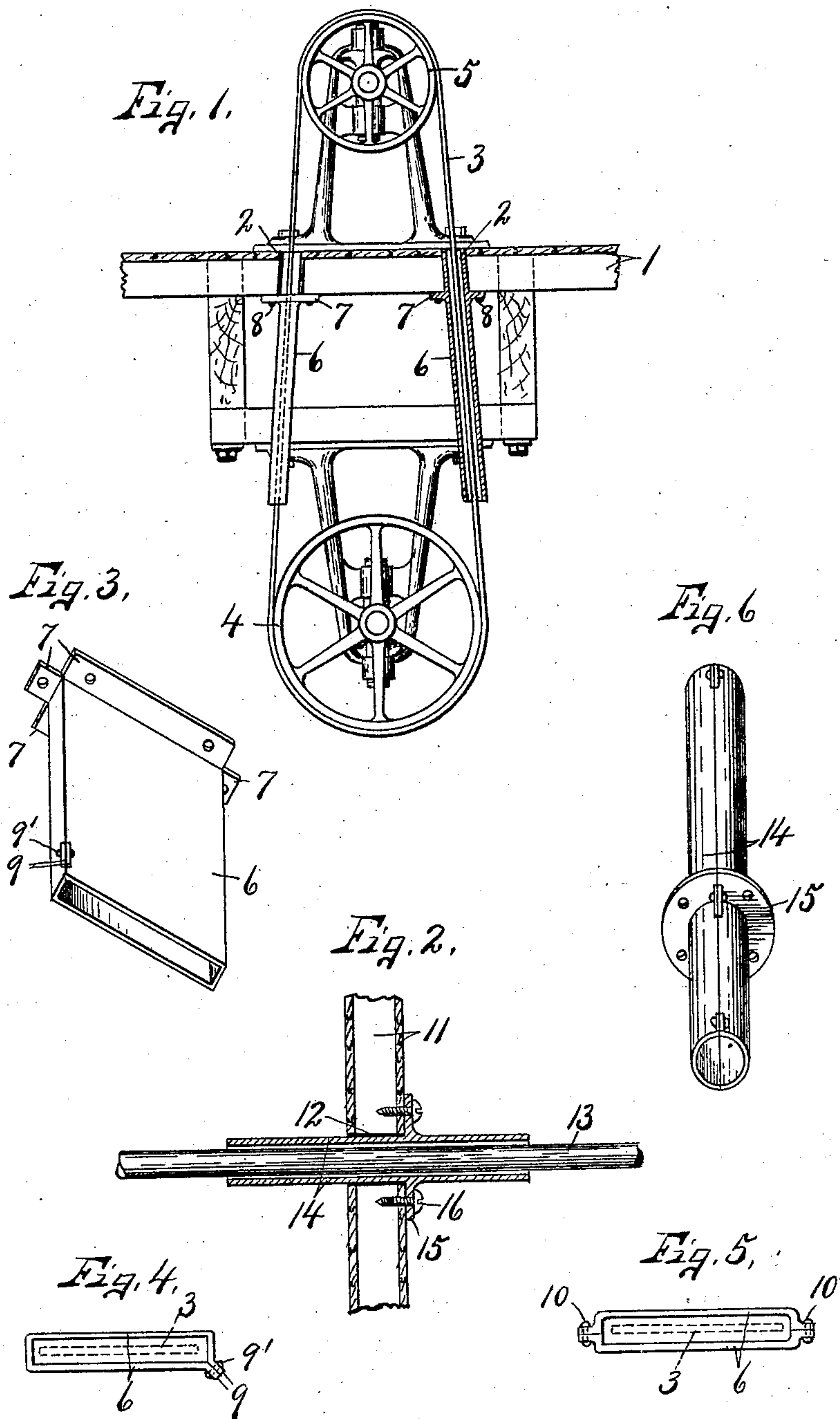


No. 848,583.

PATENTED MAR. 26, 1907.

D. S. WATSON.
FIRE SHIELD.

APPLICATION FILED FEB. 5, 1906.



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DAVID S. WATSON, OF CANASTOTA, NEW YORK.

FIRE-SHIELD.

No. 848,583.

Specification of Letters Patent.

Patented March 26, 1907.

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To all whom it may concern:

Be it known that I, DAVID S. WATSON, of Canastota, in the county of Madison, in the State of New York, have invented new and useful Improvements in Fire-Shields, of which the following, taken in connection with the accompanying drawings, is a full, clear, and exact description.

This invention relates to improvements in fire-shields for floor and partition openings, the principal purpose of which is to retard or check direct draft through the belt and shaft openings in the floors and partitions of the building, so as to prevent as far as practical direct passage of the flames through such openings from one room to another of the building in case of fire. In other words, I have sought to prevent the spreading of the fire from floor to floor or room to room by shields of fire-resisting material inclosing said openings and projecting a sufficient distance into the room to prevent the flames from being drawn by air-draft directly through said openings, thereby practically confining the fire to the room in which it originated.

Another object is to reduce insurance rates of factories and similar hazardous risks by closing as far as possible direct fire communication between the rooms of the building.

In the drawings, Figure 1 is an elevation of a portion of a building, showing a belt and openings in the floor through which the belt passes, together with my improved fire-shields for preventing direct draft through such openings. Fig. 2 is a sectional view of a partition of a building having a shaft-opening and a modified form of shield surrounding such openings and projecting some distance into the room. Fig. 3 is a perspective view of one of the shields seen in Fig. 1. Fig. 4 is an inverted end view of the shield seen in Fig. 2. Fig. 5 is an end view of a modified form of shield adapted to be substituted for that shown in Fig. 1 and which is made in halves instead of being made in one piece, as seen in Figs. 1, 3, and 4. Fig. 6 is a perspective view of the shield seen in Fig. 2.

In Fig. 1 I have shown a floor 1 of a building as provided with a belt-opening 2, through which a belt 3 is passed and mounted upon suitable pulleys 4 and 5, respectively beneath and above the floor. Secured to and depending from the under side or ceiling of the floor 1 are fire-shields 6, preferably of fire-resisting material, such as metal, til-

ing, or it might be made of wood covered with a coating of fireproof material, such as asbestos or fireproof paint. When used to protect the opening in the floor of the building, the upper ends of the shields are preferably formed with a flange 7 for receiving fastening-screws, as 8, by which they may be secured to the under side of the floor or ceiling, and are made to entirely inclose the lower ends of their respective openings and adjacent portions of the belt and project some distance downwardly into the room, sufficient to prevent the direct passage of the products of combustion or flames through the openings in the floor. When used as a shield or fire-baffle for belt-openings, as shown in Fig. 1, they usually consist of tubes which are rectangular in cross-section and have their central opening of slightly greater cross-sectional dimensions than the belt which passes therethrough, sufficient clearance being left to permit the belt to travel freely in the tubular shield without friction.

The particular shield or baffle-plate shown in Figs. 1, 3, and 4 consists of a one-piece sheet-metal tube bent into rectangular form, having its ends meeting at one corner and provided with lugs or ears 9 for receiving a clamping-bolt 9', one end of the sides of the tube being offset laterally for forming attaching-flanges 7. It is therefore apparent that the tubular shield is split longitudinally through one of its sides, which enables it to be sprung open and passed around the belt without detaching the ends of the belt when placing it in operative position. The shield seen in Fig. 5 is for the same purpose, but is made in halves to enable it to be placed around opposite sides of the belt and afterward bolted together by suitable bolts or rivets 10. When thus formed, it may be made of vitrified clay, commonly known as "tiling," or of any other fireproof material.

In Fig. 2 I have shown a portion of a partition 11 of a building as provided with a shaft-opening 12, through which is passed a shaft 13, and a tubular fire-shield 14, encircling the adjacent portion of the shaft and extending in opposite directions some distance beyond the opposite sides of the partition, so as to prevent direct draft or passage of the fire through the opening 12. This baffle-tube or shield 14 is provided with a suitable flange 15, by which the shield may be attached or secured by screws 16 to one side of the partition. The object of making this shield

continuous through the partition is to prevent any liability of the fire passing upwardly between the partition-joists; but I may in some instances prefer to make it in 5 sections arranged end to end, in which case each section will be provided with an annular flange, as 15, for securement to one side of the partition. This shield 14 is also made in halves or split longitudinally through one or 10 both sides to enable it to be placed in operative position without disturbing the shaft.

I have shown and described the fire-shields as used in connection with belt and shaft openings; but they are obviously equally applicable for use in connection with any floor 15 or partition opening which must necessarily be open all of the time, and in all cases the shield will be made to conform to the shape of the opening, so as to occupy a minimum 20 space, and will project into the room a suffi-

cient distance from the floor or partition to prevent direct draft or passage of the fire through such opening.

What I claim is—

A fire-shield for belt or similar openings in 25 floors and partitions of buildings, said fire-shield being divided longitudinally through one side to permit it to be placed around the belt or other device which may pass through said opening, and means for securing said 30 shield to the floor or partition in line with the opening so as to project some distance into the room.

In witness whereof I have hereunto set my hand this 20th day of January, 1906.

DAVID S. WATSON.

Witnesses:

F. D. KEISLER,
RALPH HARRISON.