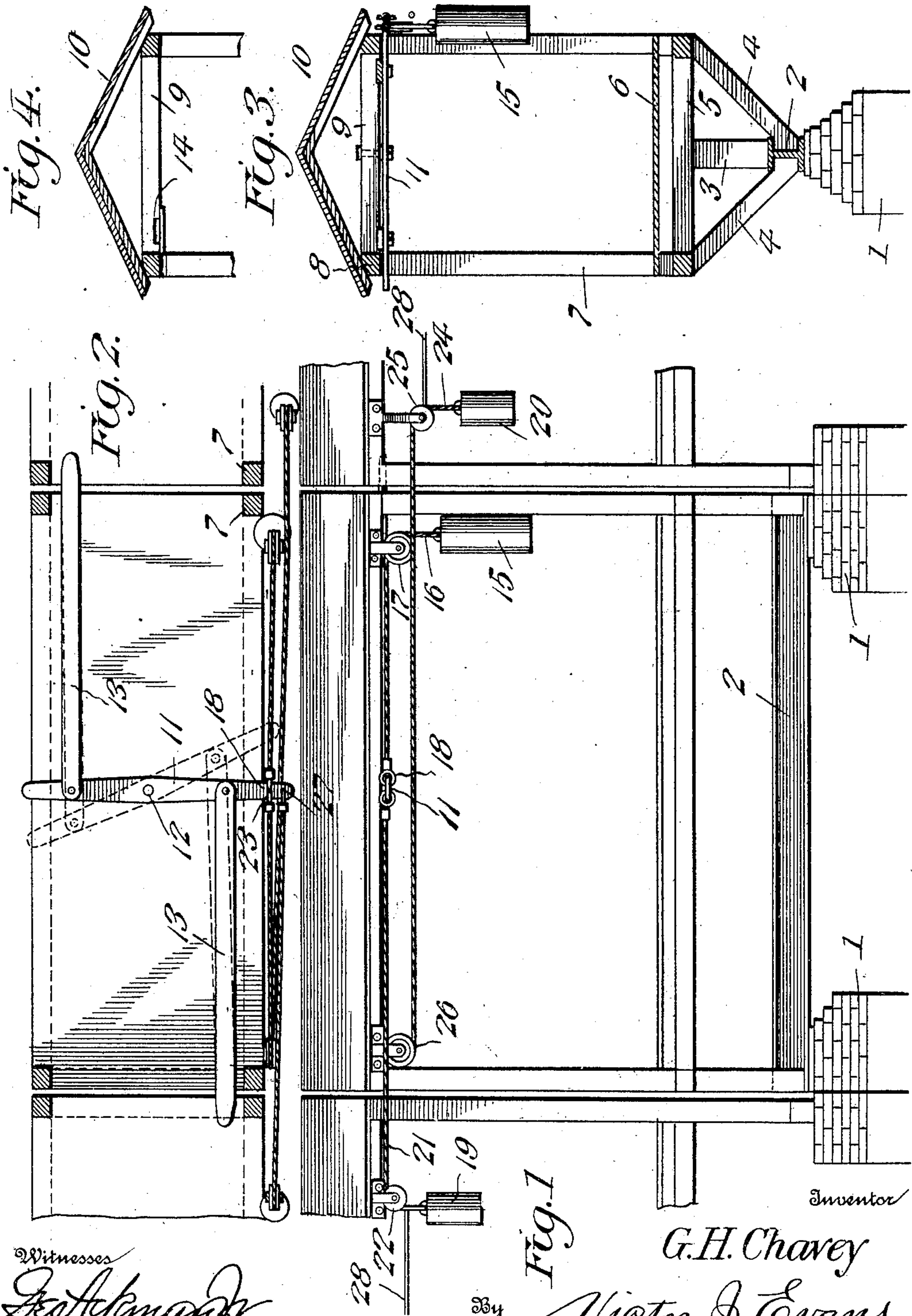


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G. H. CHAVEY.
BRIDGE.

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Fig. 1

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BRIDGE.

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To all whom it may concern:

Be it known that I, GEORGE H. CHAVEY, a citizen of the United States, residing at Winooski, in the county of Chittenden and State of Vermont, have invented new and useful Improvements in Bridges, of which the following is a specification.

This invention relates to bridges, and the object in view is to provide a bridge especially designed to be interposed between buildings or adjacent parts of buildings, the said bridge being constructed and mounted or supported in such manner and provided with holding means of such character that when a fire breaks out in one building or the other or any one portion or another of the same building the said bridge will automatically be thrown out of position to cut off communication between such buildings or portions of the same building, thereby preventing the spreading of the fire.

With the above and other objects in view, the nature of which will more fully appear as the description proceeds, the invention consists in the novel construction, combination, and arrangement of parts hereinafter more fully described, illustrated, and claimed.

In the accompanying drawings, Figure 1 is a side elevation of a bridge embodying the present invention. Fig. 2 is a sectional plan view thereof, showing the locking device. Fig. 3 is a cross-section through Fig. 1. Fig. 4 is a detail cross-section through the upper portion of the bridge, showing a portion of the locking device.

In constructing the bridge contemplated in this invention a suitable foundation 1 is provided having a narrow top, as shown in Fig. 3, which is of sufficient width to form a seat for the supporting-base 2 of the bridge, the said supporting-base extending longitudinally beneath the center of the bridge and being shown in the form of an ordinary I-beam, which need be only several inches in width.

Extending upward from the supporting-base 2 are posts 3 and also oblique braces 4, the said posts and braces supporting the floor-timbers 5, extending transversely of the bridge structure and having the floor or walkway 6 mounted thereon.

The bridge structure also comprises the uprights 7, connected at the top by longitudinal stringers 8 and cross-beams 9, which may either constitute the floor-supporting

beams of a second story or the rafters upon which a suitable roof 10 is mounted, as shown in Figs. 3 and 4. The whole bridge structure thus far described, as well as the major portion of the mechanism to be hereinafter described, is supported solely by the narrow central longitudinal supporting-beam 2, which rests on the foundation 1, which may be composed of one or more pedestals of masonry, as shown in Figs. 1 and 3.

The means for supporting the bridge in position embodies a locking device, which may be of various forms, that shown embodying a centrally-arranged latch-lever 11, fulcrumed centrally at 12 on the superstructure of the bridge and having connected to the opposite arms thereof latch-bars 13, which extend in opposite directions from the lever 11 to points beyond the opposite ends of the bridge, the extremities of the latch-bars being received in suitable keepers connected with the adjoining buildings or portions of the same building. Said latch-bars may, as shown in Fig. 4, work in guide-sockets 14, formed in the beams or rafters 9 at suitable points.

In order to throw the latch-bars out of engagement with the sockets 14, resort is had to a weight 15, from which extends a rope or cable 16, passing over a guiding-sheave 17 and connected to the projecting end of the latch-lever at the point 18. In order to provide for holding the latch-bars in engagement with the sockets 14, other weights 19 and 20 are employed, the weight 19 being connected to a rope or cable 21, which extends over a sheave 22 and thence outward from the building, where it connects to the lever 11 at the point 27. The other weight 20 is connected to one end of a rope or cable 24, which extends over a sheave 25 and thence outward from the building lengthwise of the bridge, where it passes over another sheave 26 and thence back to the lever 11, being attached thereto at the point 23. The combined weights 19 and 20 are in excess of the weight 15, so that said weights 19 and 20 hold the latch-bars in engagement to retain the bridge in position.

The ropes or cables to which the weights 19 and 20 are attached enter the opposite buildings or the opposite portions of the same building and may be extended to any portion of the building where such rope or cable will be subjected to the action of a fire,

so that the fire will burn the rope or cable in two, causing the weight 19 or 20 to drop, whereupon the weight 15, being heavier than the remaining weight 19 or 20, will draw
 5 upon the cable 16 and swing the latch-lever 11 in a direction to withdraw the latch-bars 13, whereupon the bridge as a whole will fall away to one side, said bridge being heavier on one side than the other, the excess of
 10 weight being conveniently provided for by locating all of the weights 15, 19, and 20 on the same side of the bridge, as shown in Fig. 2.

Instead of extending the ropes or cables 21 and 24 well into the buildings connected by
 15 the bridge fuses 28 may connect with said ropes or cables, and the fuses may be extended throughout the building, so that when either one of the fuses takes fire the flame is carried along rapidly by the fuse until it
 20 reaches and ignites one of the ropes or cables 21 and 24, with the same result as that just previously described.

It will of course be understood that the locking device hereinabove described is susceptible of considerable variation, also the
 25 location of the weights which control the locking device. These and other changes in the form, proportion, and minor details of construction may be resorted to without departing from the spirit or sacrificing any of
 30 the advantages of the invention.

I claim—

1. A bridge having a narrow supporting-base, in combination with locking means for
 35 holding said bridge in place, and a fusible device for releasing the locking means.

2. A bridge embodying a narrow supporting-base extending lengthwise of the bottom thereof, a locking device for holding the up-
 40 per portion of the bridge in position, and a

fusible connection for releasing said locking device.

3. A bridge embodying a narrow supporting-base extending lengthwise thereof, said bridge having its center of gravity located to
 45 one side of the center of the supporting-base, a locking device for holding the bridge in place, and fusible means for releasing said locking device.

4. A bridge having a central longitudinal
 50 supporting-base and having the center of gravity thereof located to one side of the center of said supporting-base, in combination with a locking device for holding the bridge in position, weights connected with the lock-
 55 ing device by ropes or cables, and fusible means whereby one of the ropes or cables is severed by contact with fire, substantially as described.

5. A bridge having a narrow central sup-
 60 porting-base and having its center of gravity located to one side of said supporting-base, in combination with bridge-locking mechanism for holding the bridge in place, said mechanism embodying a lever, means asso-
 65 ciated therewith for engaging a permanent part of an adjoining structure, ropes or cables leading from said lever to the adjoining structure or structures and provided with a weight or weights, and a lever - throwing
 70 weight connected to said lever and adapted to throw the same and unlock the bridge, substantially as and for the purpose described.

In testimony whereof I affix my signature in presence of two witnesses.

GEORGE H. CHAVEY.

Witnesses:

HENRY N. DEAVITT,
 NETTIE DEAVITT.