Dec. 17, 1935. E. G. AMESBURY 2,024,904

CATWALK

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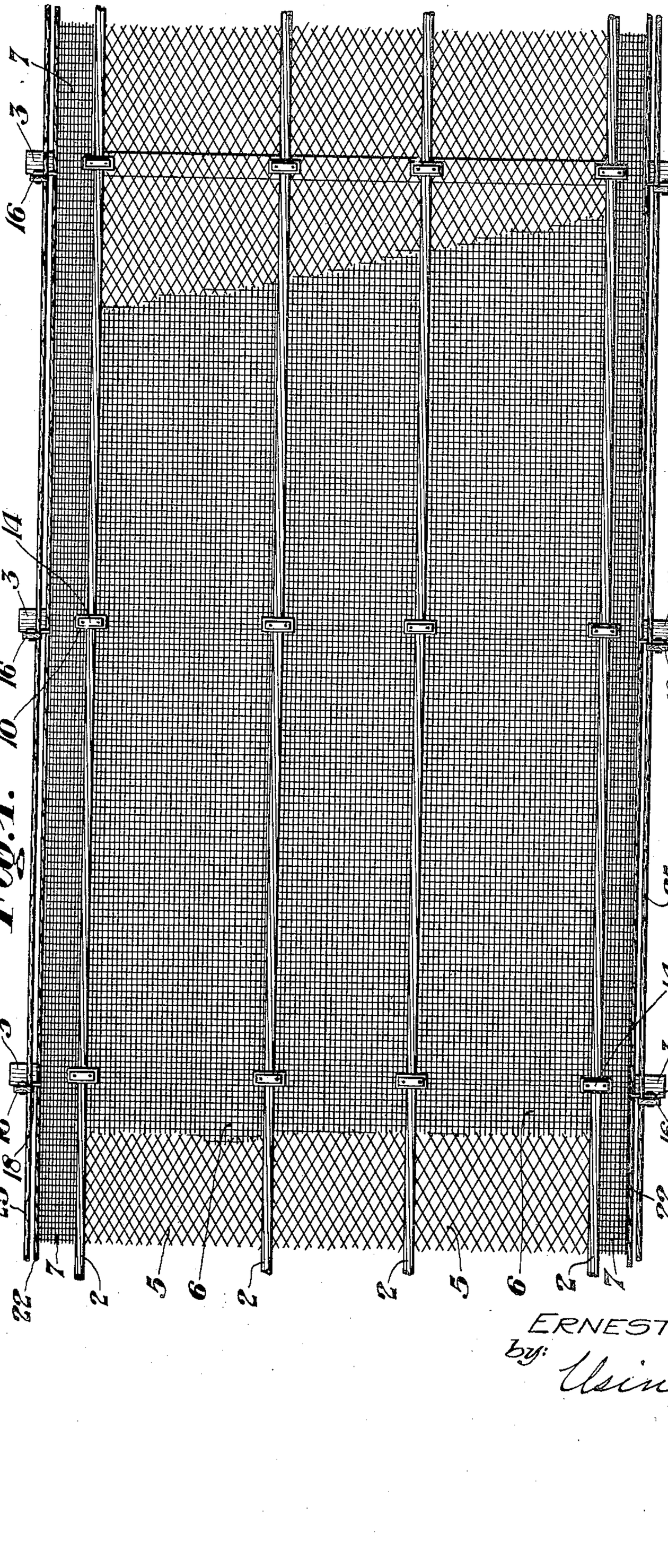

FIG. 1.

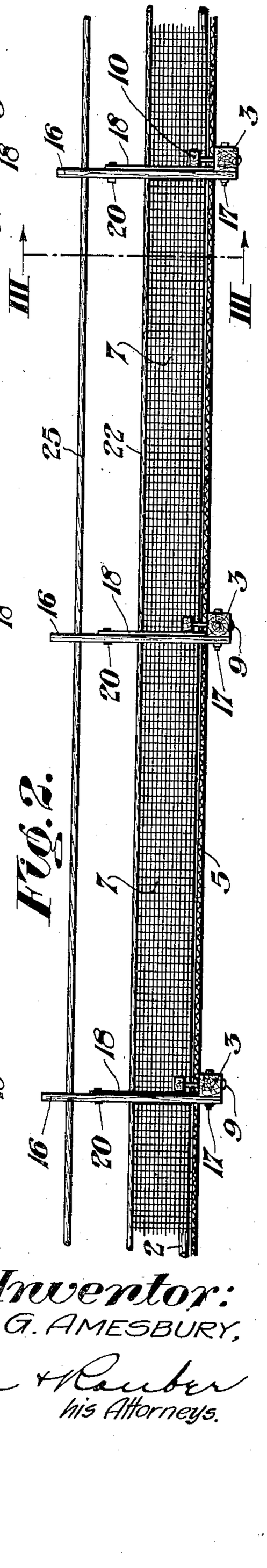

FIG. 2.

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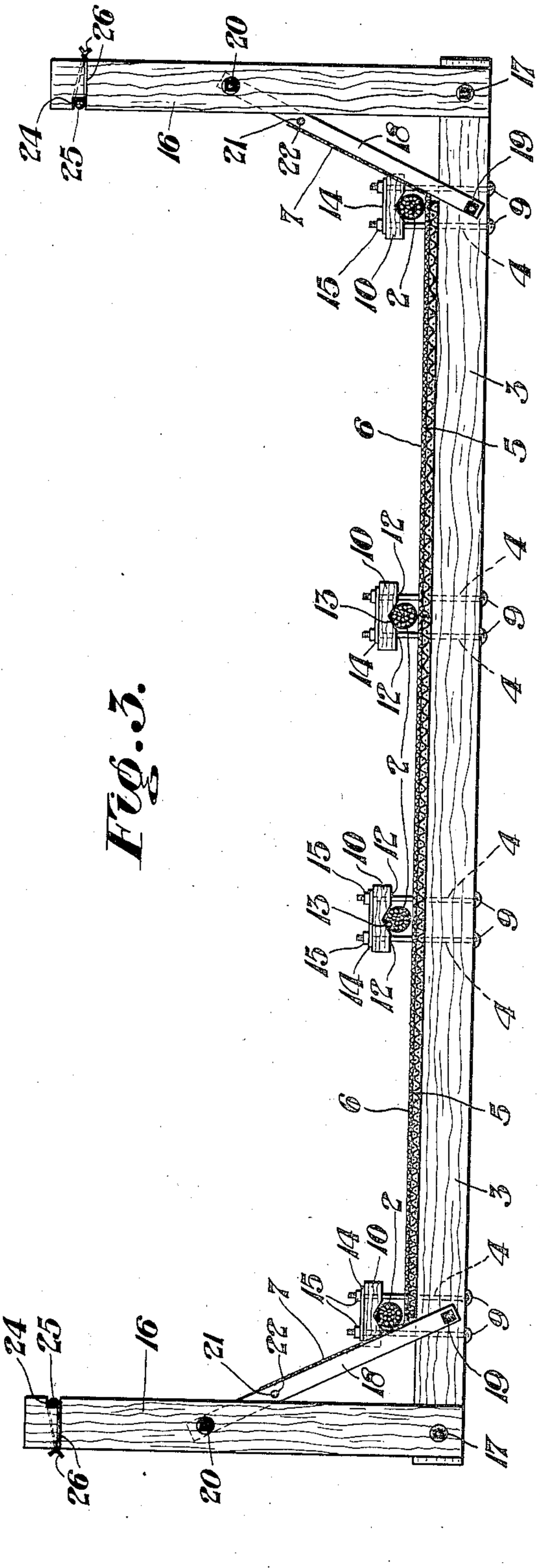

Fig. 3.

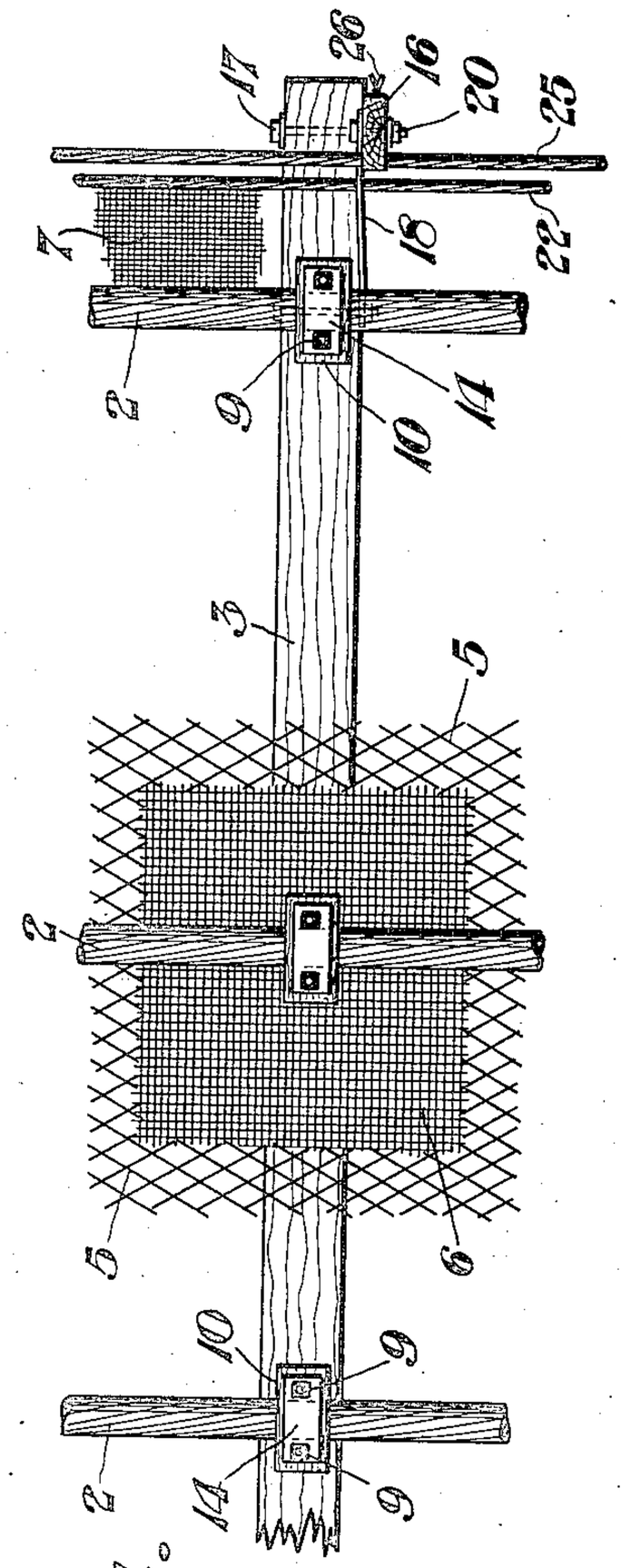

Fig. 4.

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Fig. 5.

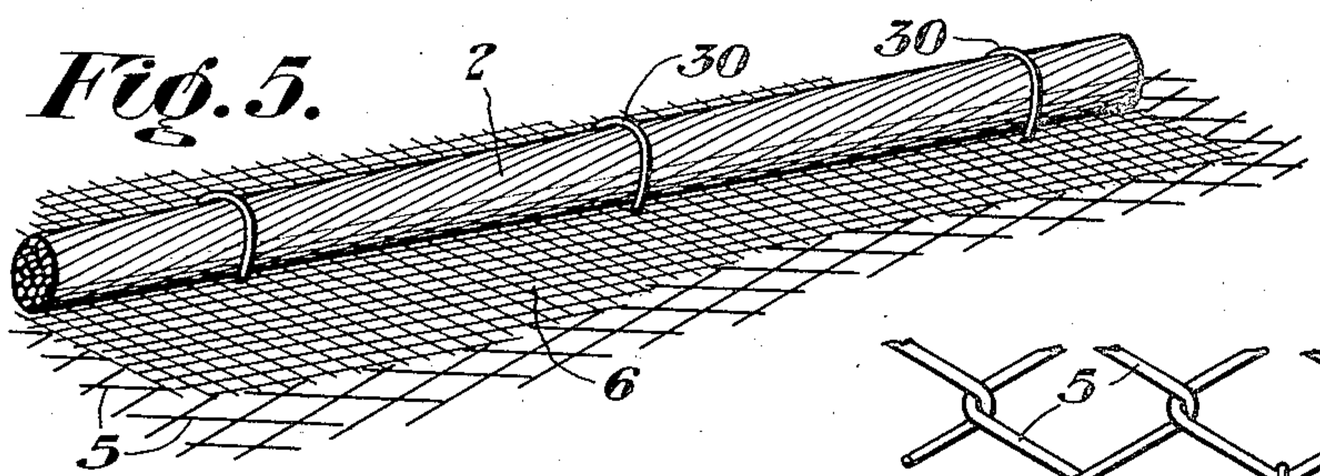


Fig. 6.

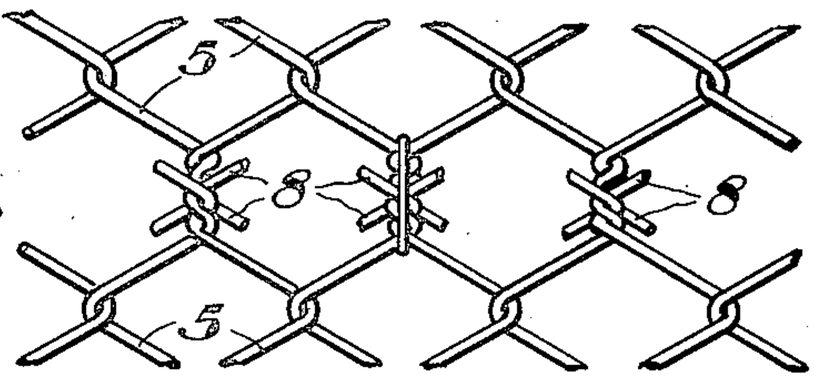


Fig. 7.

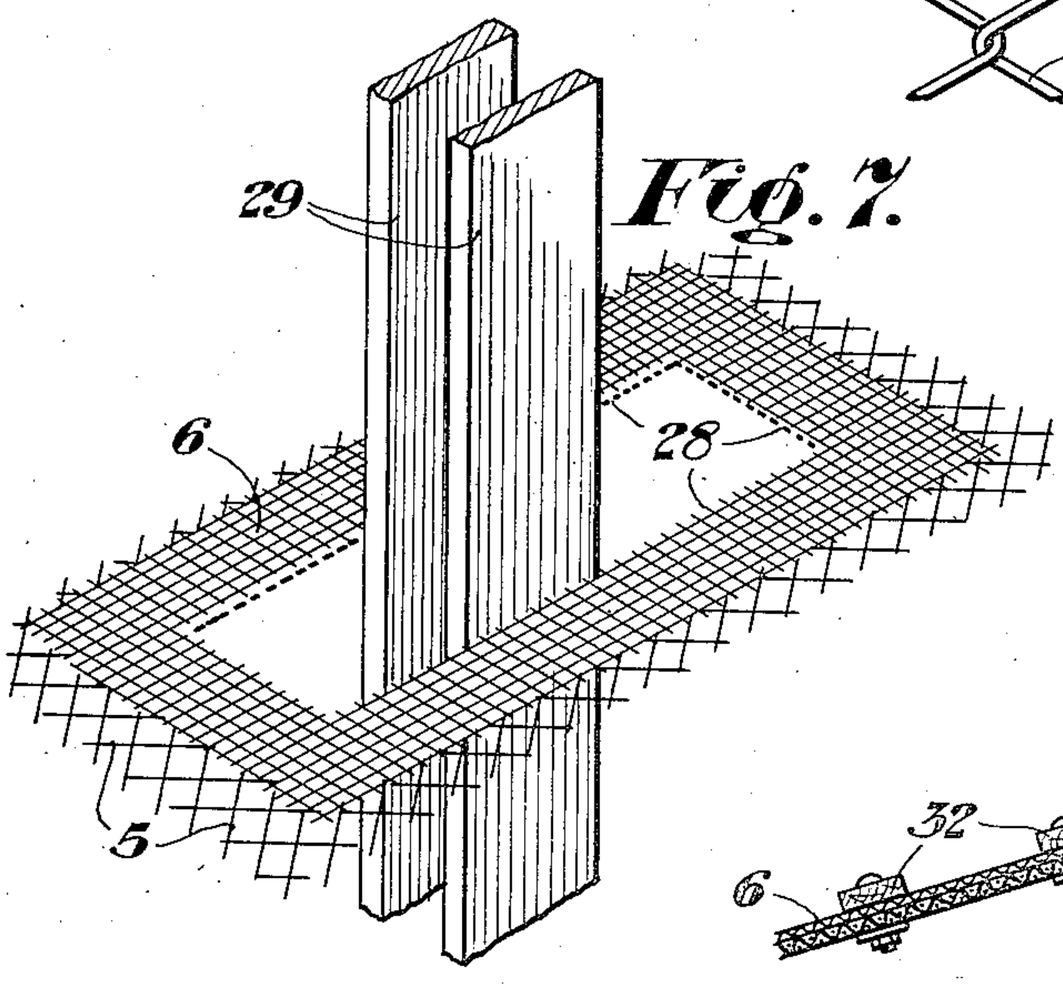


Fig. 8.

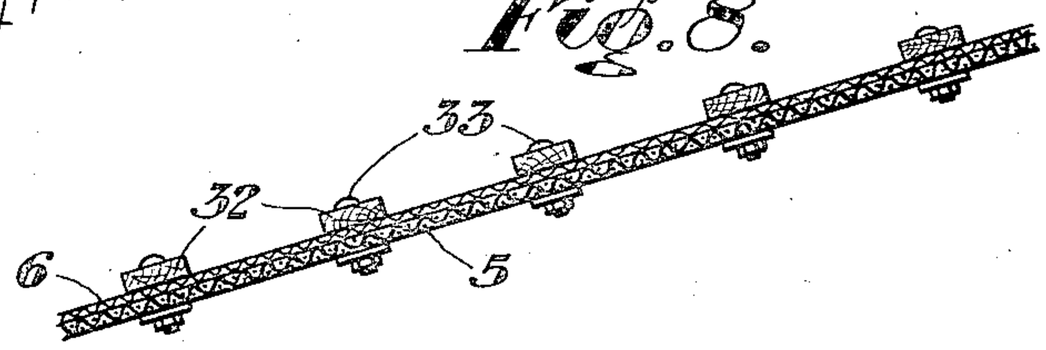
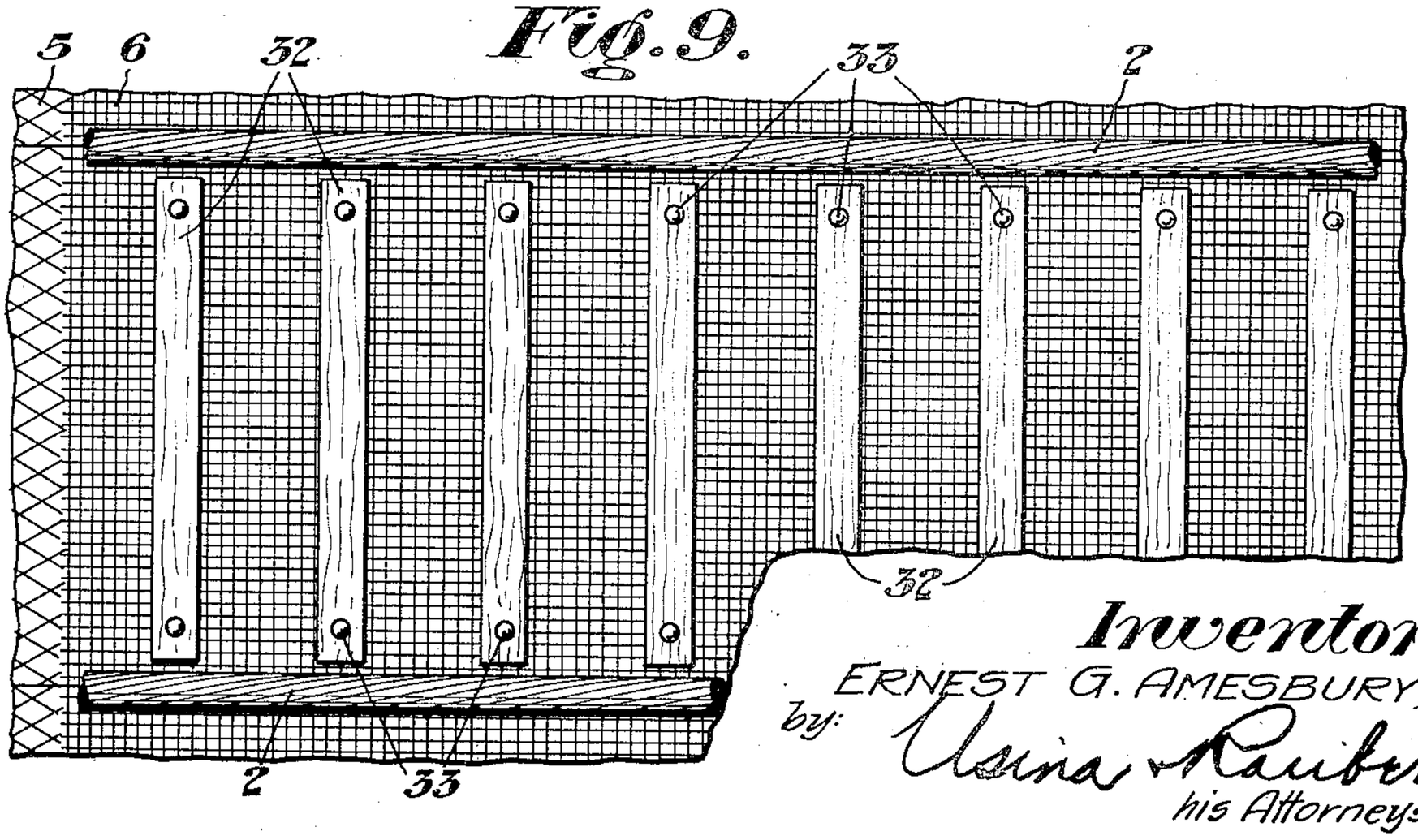


Fig. 9.



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Patented Dec. 17, 1935 2,024,904

UNITED STATES PATENT OFFICE

2,024,904

CATWALK

Ernest G. Amesbury, Pittsburgh, Pa.

Application September 27, 1934, Serial No. 745,795

6 Claims. (Cl. 304—15)

This invention relates to a novel catwalk, and more particularly to those which are readily adaptable for supporting workmen while erecting, repairing or dismantling elevated structures, such as cables of suspension bridges, and the like.

One object of the present invention is the provision of a novel catwalk which is composed, for the most part, of metallic elements, thereby decreasing the possibility of its being destroyed by fire.

Another object is to provide a construction of the class described which may be very inexpensively erected, being of little weight and presenting relatively small wind area, and one which will prove to be very safe and durable in service.

A further object is to provide a novel catwalk having a flooring which precludes the possibility of tools and small objects dropping therethrough and subjecting those immediately below to injury, or becoming lost.

A still further object is the provision of a novel catwalk having a flooring which will permit snow or rain to pass through it, instead of accumulating in substantial quantities and freezing over, thus rendering it very dangerous, as is the case in conventional designs.

These and still further objects will be apparent after referring to the drawings, in which:

Figure 1 is a fragmentary plan of the construction of the invention.

Figure 2 is a side elevation of the construction of Figure 1.

Figure 3 is a sectional view on the line III—III of Figure 2.

Figure 4 is a fragmentary plan.

Figures 5, 6 and 7 are fragmentary views of various details of the construction of the invention.

Figures 8 and 9 are a side elevation and plan, respectively, of the modification.

Referring more particularly to the drawings, the numeral **2** designates a plurality of cables, or ropes, disposed in spaced parallel relationship, and suitably strung in such manner as to support the catwalk of the invention.

A plurality of transverse wooden beams **3** are arranged at spaced intervals preferably beneath the cables **2**, and are each provided with a pair of apertures **4** adjacent each of the cables. A relatively heavy link fabric or wire mesh **5** is disposed along the upper surfaces of the transverse wooden beams **3**, and may be composed of a plurality of relatively narrow strips which are under tension. If sections of fabric are used, they may be connected together in any suitable manner as, for instance, by wire ties or clips, as shown at **8**.

A substantially lighter link fabric, or wire mesh **6**, is disposed on the upper surface of the link fabric **5**, and provided on its side with relatively short upward extensions **7**. These upward extensions **7** are used in lieu of toe-boards, and preferably extend diagonally. The link fabric **6** may also be sectionally assembled, if desired, and has as its principal function, the restraining of tools and small objects which might fall through the interstices of the heavier link fabric **5**.

A bolt **9** is disposed in each of the apertures **4** in the transverse wooden beams **3**, in such manner as to have their threaded extremities extend upwardly. A cleat **10** is provided for each pair of bolts **9**, and is composed of wood, or other relatively soft material, which will not have an abrasive action upon the galvanized coating on the cables.

Each cleat **10** has a pair of apertures **12** which are in alinement with the apertures **4** in the transverse wooden beams. The cleats **10** are contoured, as at **13**, to conform substantially to the circumference of the cables **2**, and are each arranged with a pair of bolts **9** extending through their apertures. Each of the cleats is provided with a clamping plate **14** which is suitably apertured to fit over the bolts **9**. A nut **15** is threaded on the upper end of each of the bolts **9** in such manner as to permit the cables **2** to rather loosely occupy the space between the cleats **10** and the upper surface of the link fabric **6**, while the catwalk is being erected. The nuts **15** are, of course, tightened in such manner as to permit the cleats to firmly grip the cables **2** before the catwalk is used.

A substantially vertical support **16** is pivotally connected to each of the ends of the transverse wooden beams **3**, as shown at **17**. Each of the substantially vertical supports **16** is maintained in position by means of a diagonally extending link **18**, preferably of strap iron, which is bolted to the beam and to the substantially vertical support as at **19** and **20**, respectively. An aperture **21** is made to extend through the upper portion of each of the links **18** to permit of the stringing therebetween of a relatively small diameter cable **22**, to which is fastened the upper edges of the relatively short upward extension **7** of the link fabric, as by means of tie wires, at suitable intervals.

An aperture **24** is arranged adjacent the upper and inner end of each of the substantially vertical supports **16** for receiving a hand-rail cable or rope

25, which is held therein by means of suitable tie wires 26.

Various apertures 28 are made in the heavy link fabric 5 and the lighter link fabric 6 for accommodating tension members 29, or other auxiliaries of the elevated structure adjacent which the catwalk of the invention is erected.

The fabrics 5 and 6 are preferably secured to the cables, or ropes, 2, at intervals by means of tie wires 30.

In order to facilitate traction on the lighter link fabric 6, an embodiment of the invention contemplates the provision of numerous cleats 32 which are secured to it, and to the heavy link fabric 5, as at 33.

It will be found in practice that the various elements of the invention may be quickly and easily installed and dismantled, and readily stored in a minimum of space, due to the folding of the substantially vertical supports 16 and the links 18.

It is to be understood that the flooring composed of the link fabrics 5 and 6 may be suitably connected to the cables 2 and/or transverse wooden beams 3 in a manner other than that indicated; that the transverse wooden beams 3 may be placed above the cables or ropes 2, with equal facility; and that while I have shown and described several specific embodiments of my invention, various modifications may be made without departing from its scope, as defined in the following claims.

I claim:

1. A catwalk comprising a plurality of cables in spaced parallel relationship, a plurality of beams disposed transversely beneath said cables, a wire mesh flooring between said beams and said cables, means for supporting said beams from said cables, a hand-rail cable support connected adjacent each of the ends of said beams, and at least one hand-rail cable carried by said last named support.

2. A catwalk comprising a plurality of cables in spaced parallel relationship, a plurality of beams disposed transversely beneath said cables, a wire mesh flooring between said beams and said cables, means for supporting said beams from said cables, a vertical support connected adjacent each of the ends of said beams, each of said vertical supports having an aperture, a hand-rail cable disposed in said apertures, and fastening elements for maintaining said cable in said apertures.

3. A catwalk comprising a plurality of cables in spaced parallel relationship, a plurality of beams disposed transversely beneath said cables, a wire mesh flooring between said beams and said cables, means for supporting said beams from said cables, a vertical support connected adjacent each of the ends of said beams, a brace extending diagonally from each of said beams to each of said vertical supports, each of said braces having an aperture, and a cable extending through said apertures, said wire mesh flooring having its sides extending upwardly in such manner as to be supported by said braces and said cables.

4. A catwalk comprising a plurality of cables in spaced parallel relationship, a plurality of beams supported by said cables, a wire mesh flooring on said beams, said flooring being composed of a bottom layer of relatively large mesh and a top layer of substantially smaller mesh, and means for supporting said beams from said cables.

5. A catwalk comprising a plurality of cables in spaced parallel relationship, a plurality of beams disposed beneath said cables, a wire mesh flooring between said beams and said cables, said flooring being composed of a bottom layer of relatively large mesh and a top layer of substantially smaller mesh, a grooved block mounted on each of said cables, and means extending through said wire mesh flooring for connecting said blocks to said transverse beams.

6. A catwalk comprising a plurality of cables in spaced parallel relationship, a plurality of beams supported by said cables, a wire mesh flooring between said beams and said cables, said flooring being composed of a bottom layer of relatively large mesh and a top layer of substantially smaller mesh, said flooring having side edges extending upwardly, at least one hand-rail support carried by at least one of said beams, a hand-rail carried by said hand-rail support, and means for fastening the extended side edges of said wire mesh flooring to said hand-rail support.

ERNEST G. AMESBURY.