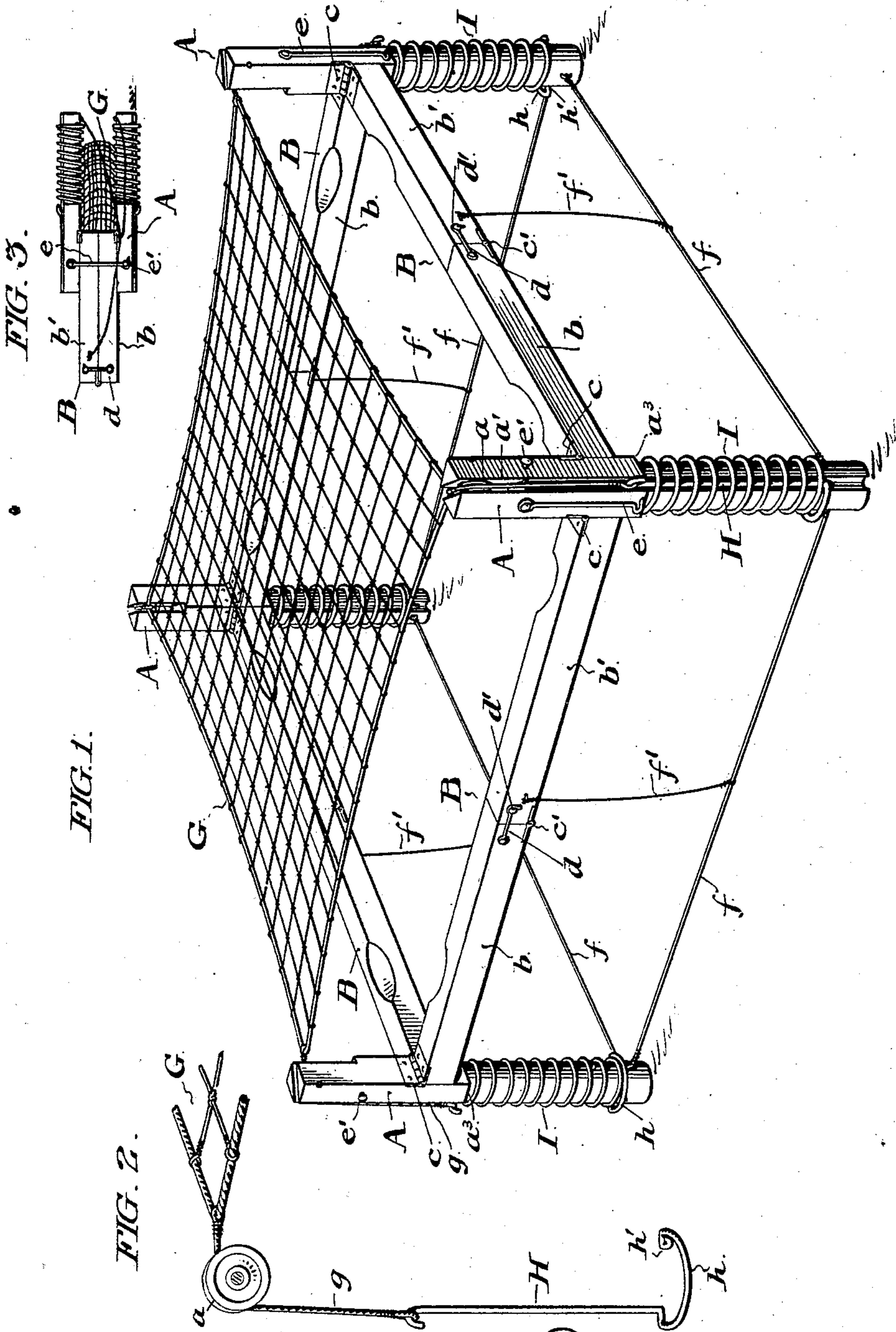


(No Model.)

J. P. DROMGOOLE.
SAFETY NET.

No. 527,594.

Patented Oct. 16, 1894.



WITNESSES:

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UNITED STATES PATENT OFFICE.

JOSEPH P. DROMGOOLE, OF PHILADELPHIA, PENNSYLVANIA.

SAFETY-NET.

SPECIFICATION forming part of Letters Patent No. 527,594, dated October 16, 1894.

Application filed May 17, 1894. Serial No. 511,535. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH P. DROMGOOLE, a citizen of the United States, residing in the city and county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Safety-Nets, of which the following is a specification.

My invention relates to a class of apparatus designed to rest upon the ground, and to receive the weight and cushion the fall of persons dropping from considerable altitudes to the ground. Apparatus of this character is especially designed for use in cushioning the fall of persons jumping from the upper stories of burning buildings when other avenues of escape are cut off. Safety nets of this character are designed to be in the possession of the officers in charge of municipal fire stations, and to be carried, together with the ordinary extinguishing apparatus, to the fires which such officers are summoned to extinguish.

It is the object of my invention to provide, in connection with a safety net or sheet of any ordinary and preferred character, a supporting frame-work, which shall, by reason of its capacity for being folded into small compass, be exceptionally portable and occupy the minimum of space within the fire station or engine house and the vehicles employed in connection therewith, and shall also embody or be provided with auxiliary springs which shall enhance the yielding capacity of the net and therefore increase the efficiency of the device as a whole.

In the accompanying drawings I show, and herein I describe a good form of a convenient embodiment of my invention, the particular subject-matter claimed as novel being hereinafter definitely specified.

In the accompanying drawings, Figure 1 is a view in perspective of my improved device erected in position for use. Fig. 2 is a view in detail of a corner of the net and associated appliances. Fig. 3 is a view in front elevation of two of the uprights and the intermediate slat represented, however, as in their folded condition.

Similar letters of reference indicate corresponding parts.

The supporting frame-work of the safety net consists, as shown, of a quadrangular

skeleton structure composed of four standards or uprights A connected by horizontal slats B. Each of the horizontal slats B is formed in two sections *b b'*, the extremities of each of which sections are accurately squared, so that when the two members are placed end to end the meeting faces will make close contact. The two members which form each horizontal slat are hingedly connected together at their inner or meeting extremities, and hingedly connected also at their respective outer extremities to the respective uprights A between which they are disposed and which they serve to connect. The hinges *c* by which the respective members of the slat are connected to the respective uprights are leaf hinges of the ordinary variety each having one plate secured to the inner face of the upright and the other plate attached to the upper face of the adjoining slat member. The hinge *c'* by which the meeting extremities of the slat members are connected is attached as to its respective plates to the under faces of the respective slats. As a result of this arrangement each slat may be doubled upon itself, and the two uprights between which it is disposed may in the folding of the frame-work be brought together into close proximity with each other, so that the space between them will be equal merely to the combined thickness of the two slat members and, as will be obvious, when all the slats are thus folded and the uprights brought into proximity with each other the structure will occupy a very small compass. Each of the slats is conveniently provided with a hook *d* mounted upon one of its members and a staple or hook engaging projection *d'* mounted upon the other of its members, so that when the slat is in its horizontal position the engagement of the hook with the staple will reinforce the rigidity of the structure and prevent its undue folding. Each of the uprights A, moreover, is preferably provided with a hook *e* and a hook engaging projection *e'*, to the end that when the structure is in its folded position, it may, by the engagement of said hooks with said hook engaging projections, be secured in such position.

In practice, I prefer to connect each of the uprights to its neighbor by a cord or light cable *f* to increase the rigidity of the structure.

ure, and to brace the slats by connecting each of them to the rope or cable *f* by a cord *f'*, as shown.

The net *G* employed may be of any ordinary construction, and in practice I increase its resiliency by connecting it to the uprights in connection with the following devices.

g are ropes leading from the respective corners of the net, and passing over grooved pulleys *a* supported in vertical openings formed in the upper extremities of the uprights *A*,—to the free or depending extremities of which ropes are attached what I term anchors *H*.

Each of the uprights embodies a pair of vertical grooves *a'* formed in its diametrically opposite sides.

The anchors *H* each consists of a vertical shank, adapted to lie and move vertically within one member of the pair of the grooves *a'*,—and of a horizontally-disposed semi-circular arm, *h*, the free end of which arm is provided with an inwardly extending projection *h'* which exists within the other member of the pair of grooves.

I are spiral springs coiled about the lower portions of the respective uprights *A*, the upper ends of which springs abut against suitable shoulders *a''* formed in said uprights, and the lower extremities of which bear against the semi-circular arms *h* of the anchors, and said springs, by forcing said anchors downward, occasion the drawing taut of the ropes *g* and of the net *G*.

As will be understood, the weight or shock of a falling person upon the net will be received and borne by the springs *I*, to which

the shock will be transmitted through the ropes *g* and anchors *H*, and said springs, by yielding under the pressure, will cushion the shock.

Having thus described my invention, I claim—

1. A supporting frame work for a safety net consisting of uprights, slats formed of sections hingedly connected together and to the uprights, ropes uniting adjacent uprights to each other, and guy ropes extending from said ropes to the folding slats,—substantially as set forth.

2. A frame work for a safety net embodying uprights, springs encircling said uprights, anchors mounted upon said uprights and provided with arms adapted to bear against the lower extremities of said springs, a safety net, and ropes leading from said safety net to said anchors,—substantially as set forth.

3. In combination with an upright for a supporting frame for a safety net, grooves formed in the opposite faces of said upright, an anchor the body of which is mounted in one of said grooves, and which is provided with an arm having a projection engaged in the other of said grooves, a spiral spring surrounding said upright, and means for connecting said anchor to a safety net,—substantially as set forth.

In testimony that I claim the foregoing as my invention I have hereunto signed my name this 10th day of May, A. D. 1894.

JOSEPH P. DROMGOOLE.

In presence of—

F. NORMAN DIXON,

THOMAS K. LANCASTER.