

(No Model.)

T. F. BROWDER.

FIRE ESCAPE.

No. 367,362.

Patented Aug. 2, 1887.

Fig. 1.

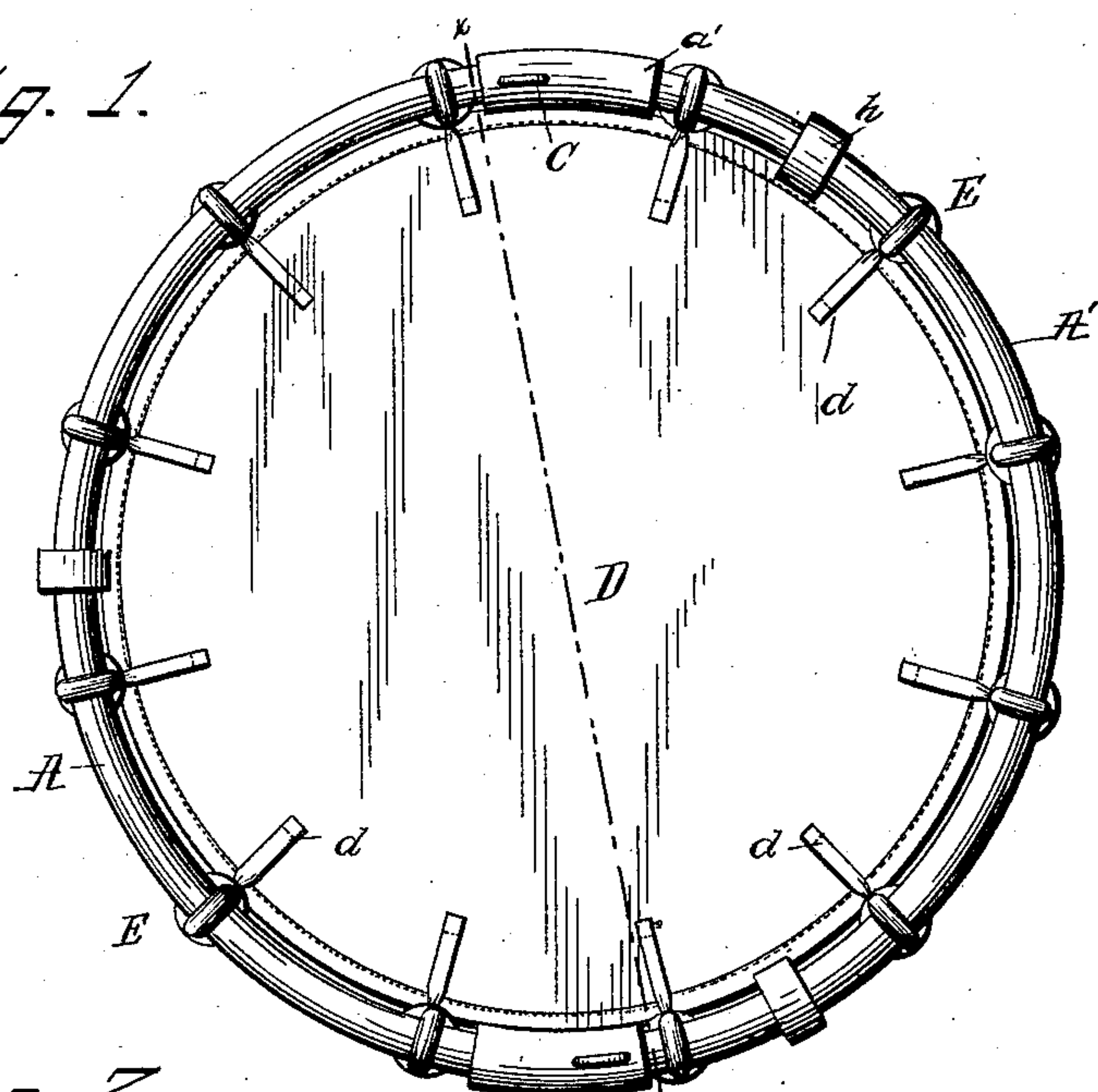


Fig. 2.

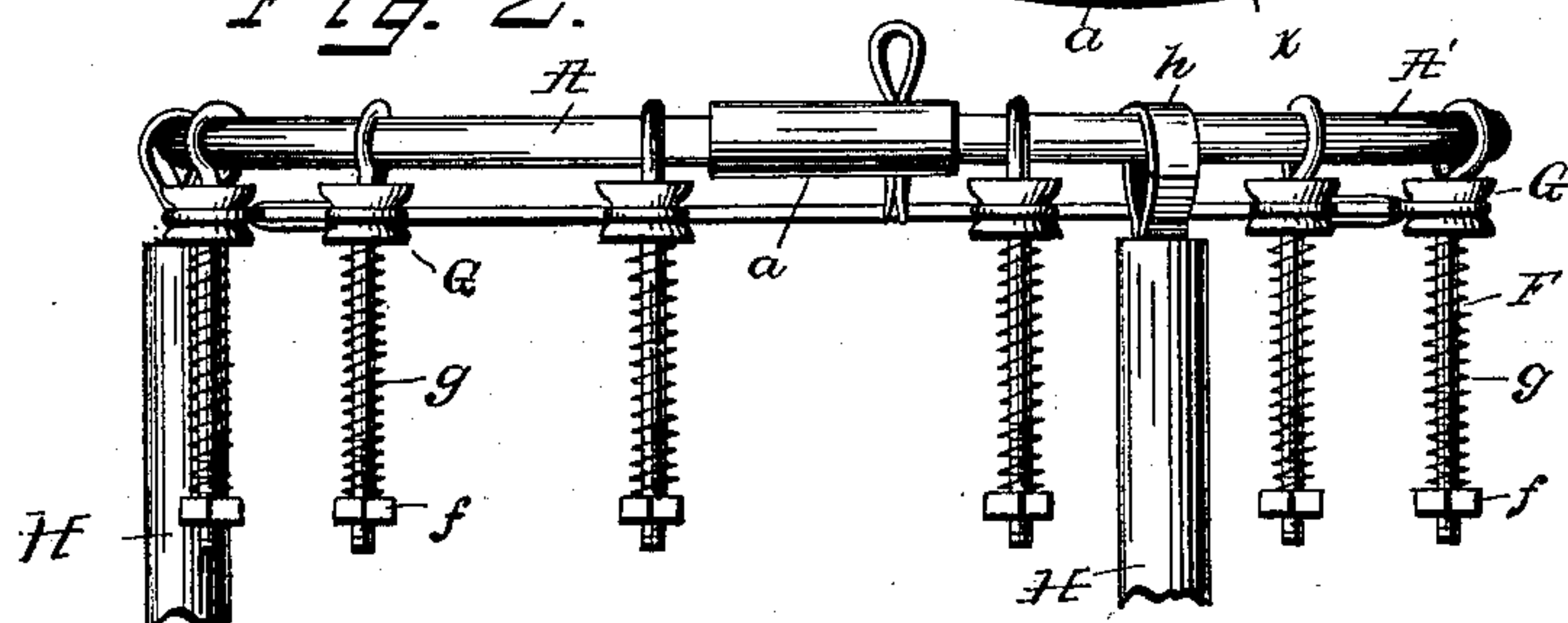


Fig. 4.

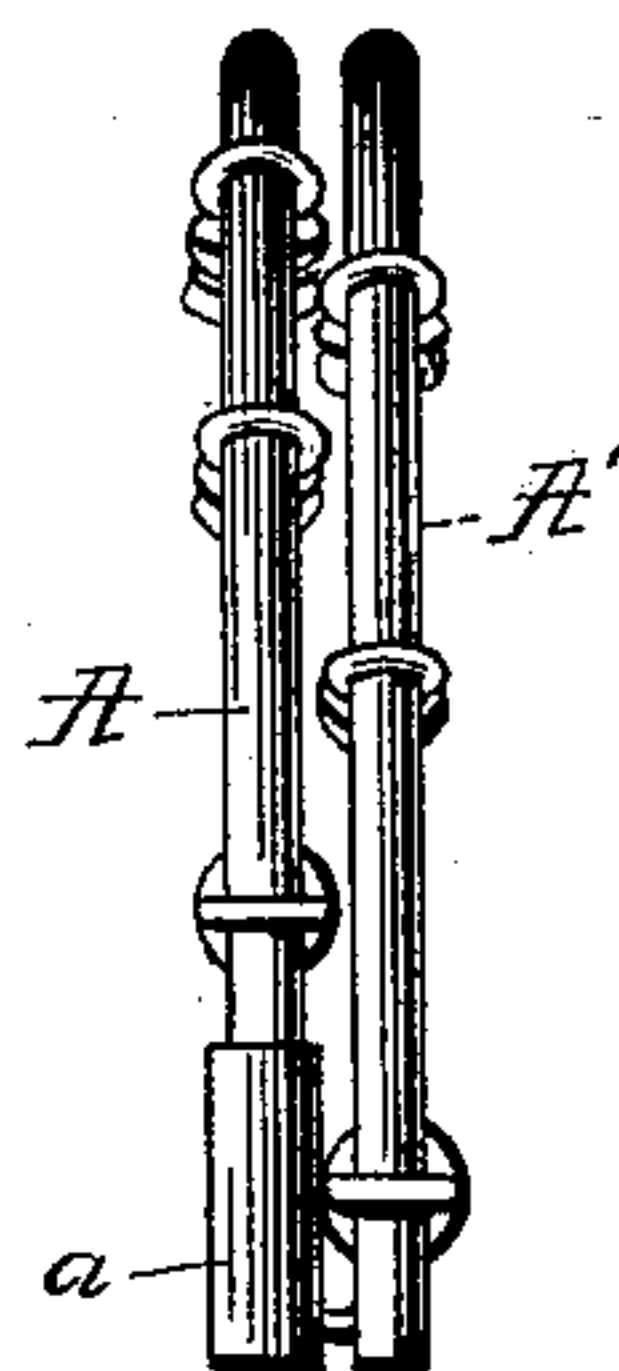
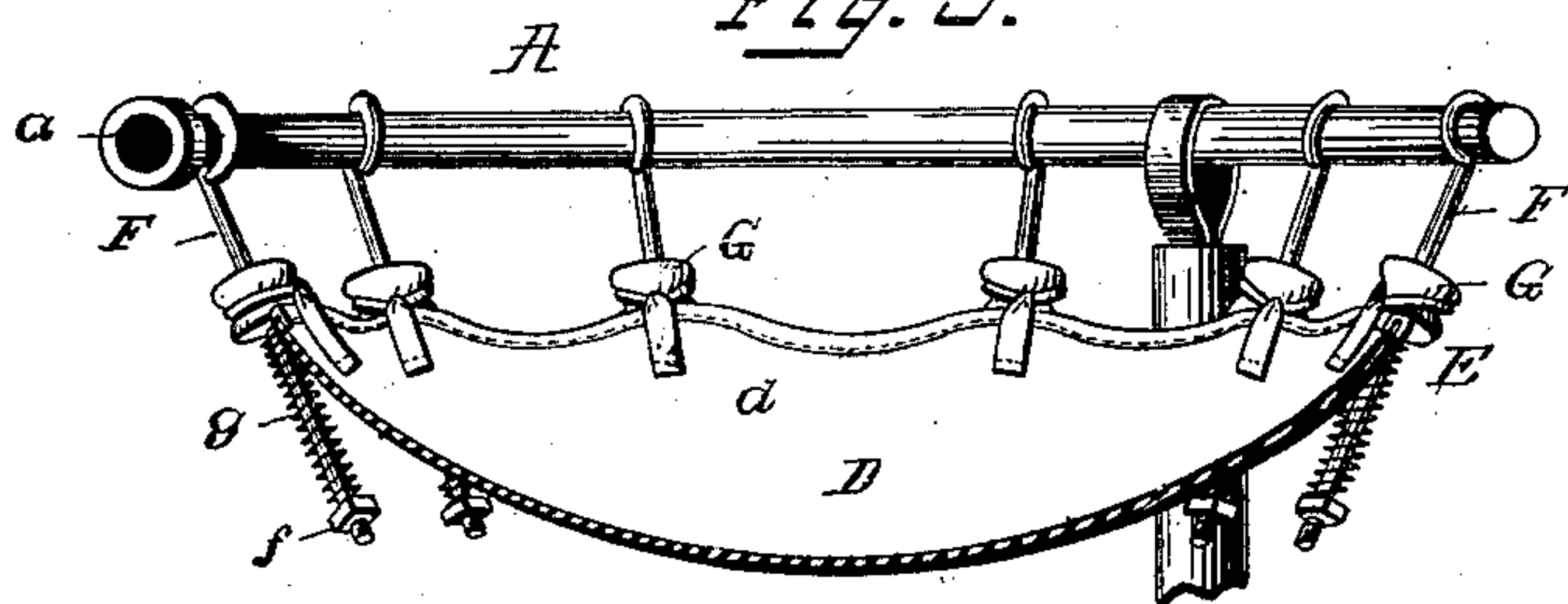


Fig. 3.



Witnesses.

M. A. Barnes.
G. P. Kramer.

Inventor.
Thomas F. Browder

R. S. & A. P. Lacey
His Attys.

UNITED STATES PATENT OFFICE.

THOMAS F. BROWDER, OF GREENFIELD, OHIO.

FIRE-ESCAPE.

SPECIFICATION forming part of Letters Patent No. 367,362, dated August 2, 1887.

Application filed May 13, 1887. Serial No. 238,105. (No model.)

To all whom it may concern:

Be it known that I, THOMAS F. BROWDER, a citizen of the United States, residing at Greenfield, in the county of Highland and State of Ohio, have invented certain new and useful Improvements in Fire-Escapes; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

This invention relates to fire-escapes, and is principally designed as an improvement of that class which are placed to receive persons jumping from burning structures in the event of all other means of escape being cut off.

The object of the invention is the construction of a fire-escape of the type above noted, which will be light and of sufficient area to subserve the purpose intended, and which will combine simplicity, strength, and efficiency, together with capabilities of being packed in a small compass, so as to occupy a minimum amount of storage room, and which can be readily and quickly set up for use.

The improvement consists in the novel features of construction, hereinafter more fully set forth, claimed, and shown in the annexed drawings, in which—

Figure 1 is a perspective view of a fire-escape of my construction embodying my invention; Fig. 2, a side view, the lower portion of the supports being broken away; Fig. 3, a section on the line *xx* of Fig. 1, showing the device reduced to practice; and Fig. 4, a view showing the device folded.

The device is composed of the frame, which may be of any desired outline and pattern, the blanket, and provisions or swinging yielding connections interposed between and uniting the blanket and frame. The frame is preferably circular in form and is composed of a number of sections, two being shown, A and A', which are held together by the couplings *a* and *a'*, secured at one end of the sections and adapted to receive the approximate ends of the other sections, which are slipped in the free ends of the couplings and are held therein by

the keys C. It is tubular, and by reason of its circular form the strain is evenly distributed and the frame is not liable to collapse or bend. Moreover, the strain comes nearly equal on all the connections and on every part of the blanket. This equal distribution of the shock to each and every part of the device is of vital importance, as it diminishes the chances of injury to the person in that, all parts of the structure being subjected to an equal strain, one part is not more liable to give than another.

The blanket D may be of any suitable fabric, single, double, or any number thick, which may be quilted together, and is of a form corresponding to the outline of the frame. It is provided at intervals with the tapes or loops by which and provisions, presently to be described, it is connected with the frame. The yielding connections E, interposed between and uniting the blanket with the frame, are fixedly secured at their upper ends to the frame and are yieldingly connected with the blanket in such manner that the blanket will normally be distended to its full area, and in practice will give or sag between its edges when receiving a heavy object. They are composed of swinging hangers or eyebolts F, having their upper ends mounted upon the frame and their lower ends threaded and provided with nuts *f*, the cross-heads G, placed upon the hangers and adapted to slide longitudinally thereon, and the coil-springs *g*, surrounding the hangers or bolts and located between the cross-heads G and the nuts *f*. The cross-heads are simply apertured blocks having grooved edges which receive the loops or tapes.

In practice the springs *g* support the blanket and hold it close up to the frame, and the tension of the springs can be regulated by the nuts *f*. The hangers depend from the frame in vertical lines, and, being weighty, hold the blanket distended; but when a weight is placed upon the blanket the springs not only yield, but the hangers move inward too and accommodate themselves to the direction of strain. The frame is supported by the hands of the persons rendering assistance, and is further supported by the legs H, which are provided with snap-catches *h*, by which they may be readily removed from and adjusted to the frame.

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

1. The combination, with the frame and the
5 blanket, of the hangers loosely connected with
said frame at their upper ends and having
their lower ends free and adapted to swing to-
ward the center of the frame and means for
yieldingly connecting the blanket with said
10 hangers, whereby when a weight is superim-
posed upon the blanket its connections with
the hangers will yield and the lower ends of
the hangers will approach or swing inward,
substantially as and for the purpose specified.
- 15 2. The combination, with the frame and the
blanket, of the hangers loosely connected at
their upper ends with the frame and having
their lower ends free to swing inward, the
cross-heads connected with the blanket and
20 mounted on the hangers, and the springs held
to the hangers and supporting the cross-heads,
substantially as specified, for the purpose de-
scribed.
3. The combination, with the frame and the
25 blanket, of the hangers, the cross-heads, the
springs, and the nuts for adjusting the tension
of the springs, substantially as specified.
4. The combination, with the frame made
in sections and the couplings for securing the
30 sections together, having one end secured to
the end of one of the sections and the free ends
slipped over the ends of the other sections, of
the blanket and the yielding connections unit-
ing the blanket and frame, substantially as set
35 forth.

5. The combination, with the frame made in
sections, the couplings secured at one end to one
of the sections and having its other end slipped
over the approximate end of the other section,
and the keys passed through the couplings 40
and the ends of the sections loosely fitted in
the couplings, of the blanket and the yielding
connections uniting the blanket and frame,
substantially as set forth.

6. The combination of the circular frame 45
and the circular blanket, and the yielding con-
nections interposed between and uniting the
frame and the blanket, whereby the strain is
equally distributed on all parts of the blanket
and frame and the yielding connections are 50
subjected to an equal tension and are free to
adapt themselves to the direction of strain,
substantially as described.

7. The combination, with the circular frame
made in sections and having the approximate 55
ends of the sections connected by separable
couplings, and the circular blanket, of the
hangers loosely connected at their upper ends
with the frame, and having their lower ends
free to swing inward, the cross-heads connected 60
with the blanket and mounted on said hang-
ers, and the springs for supporting the cross-
heads, substantially as described, for the pur-
pose specified.

In testimony whereof I affix my signature in 65
presence of two witnesses.

THOMAS F. BROWDER.

Witnesses:

W. H. IRWIN,
J. F. WILSON.