

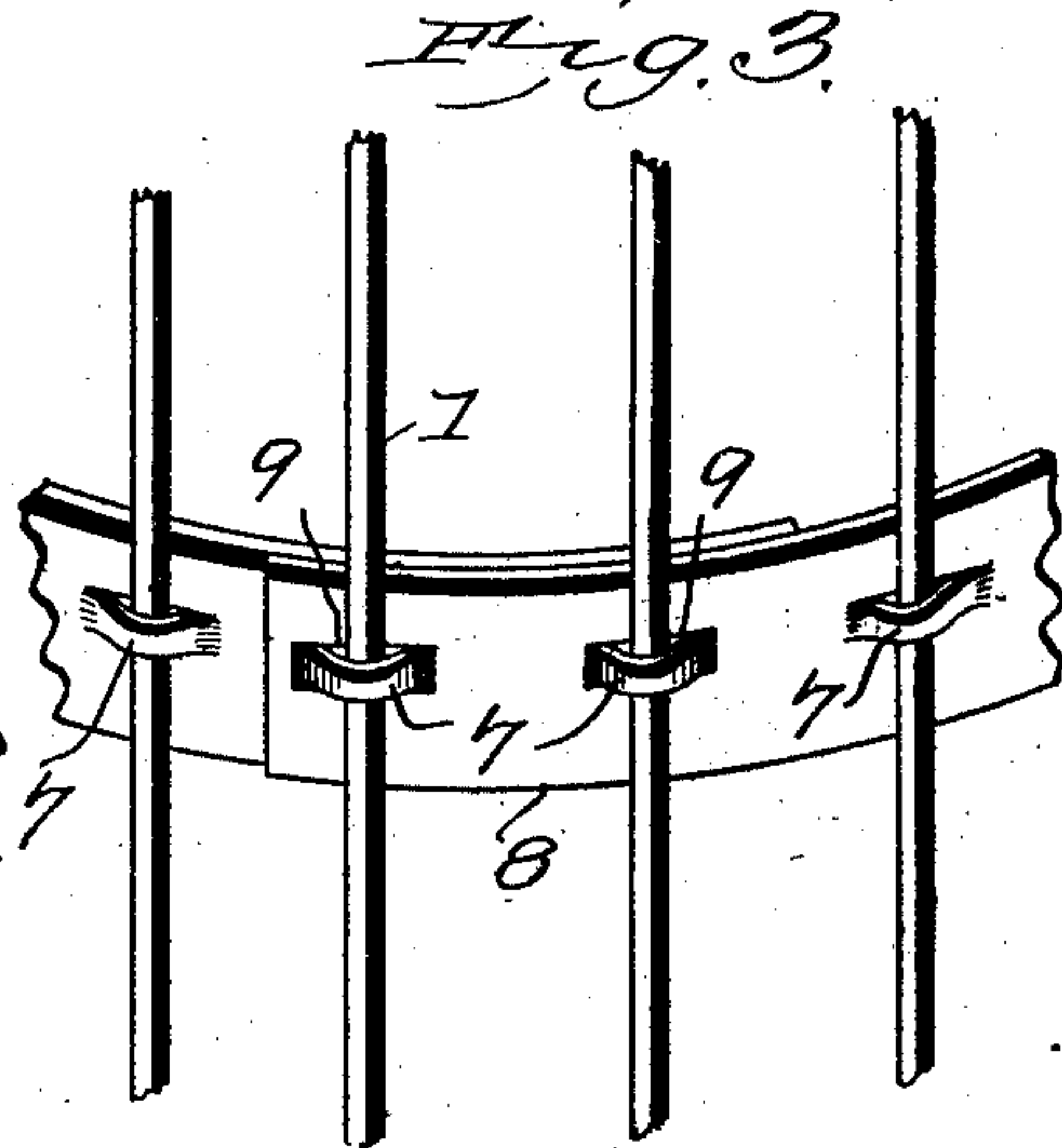
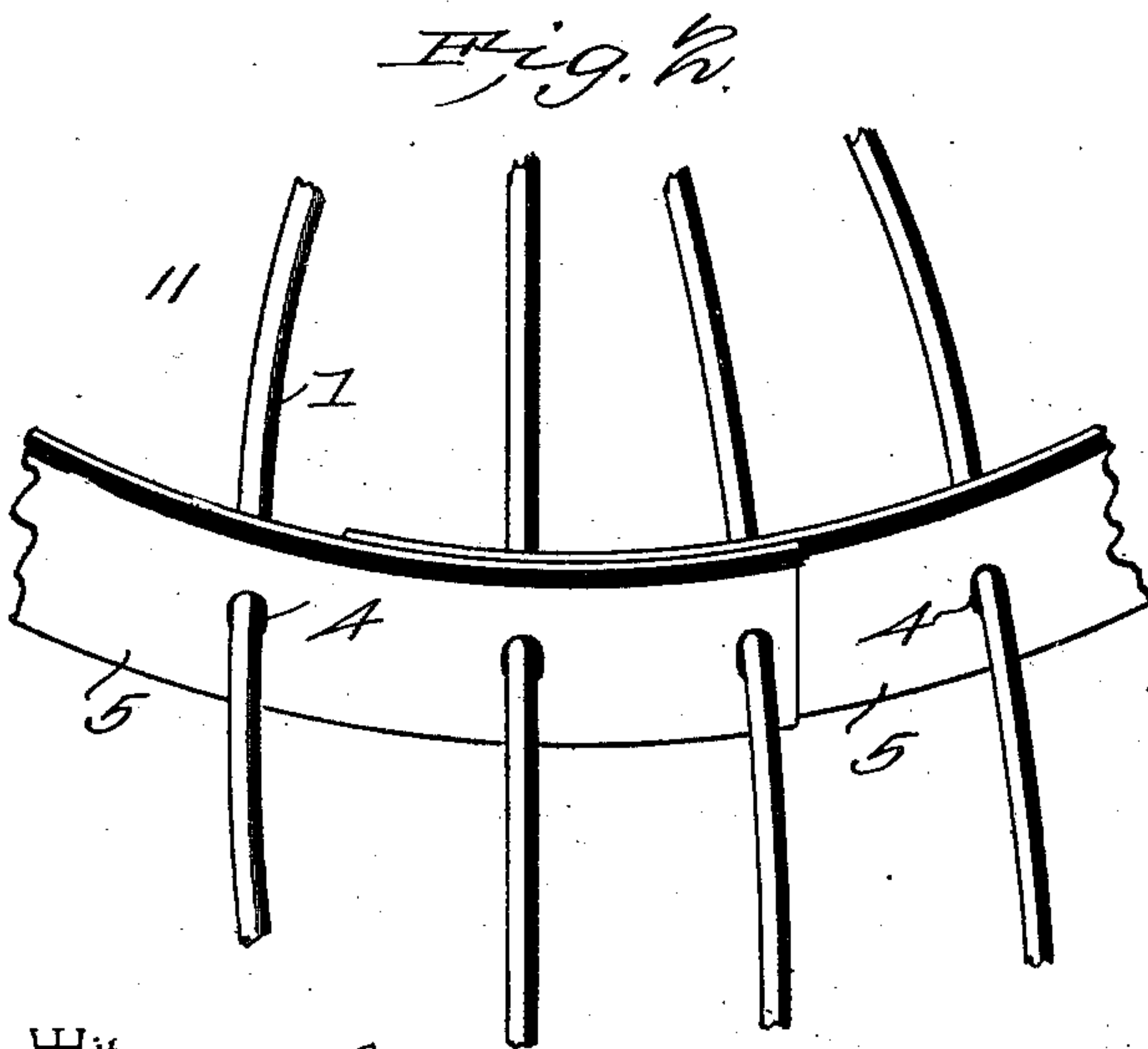
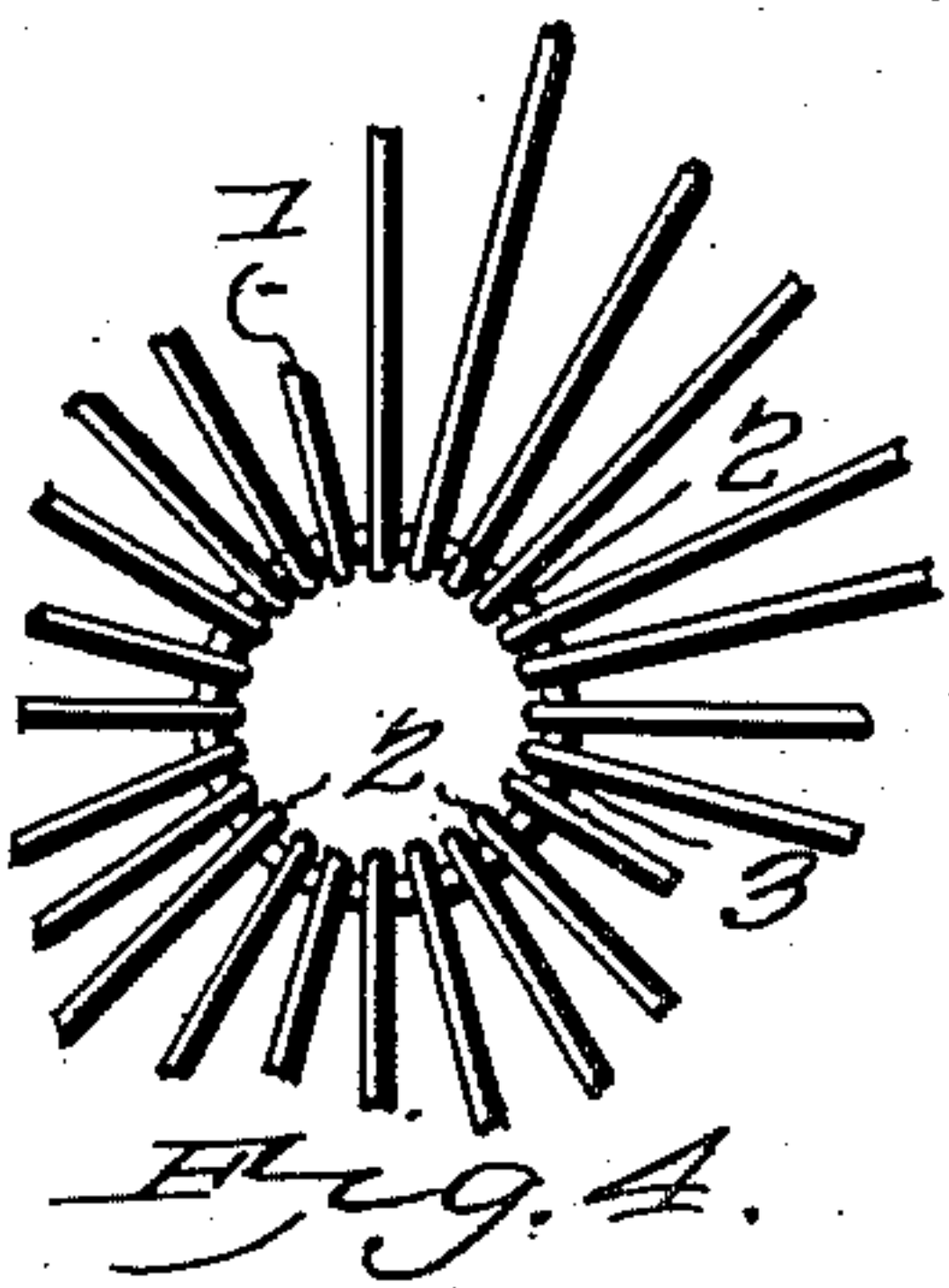
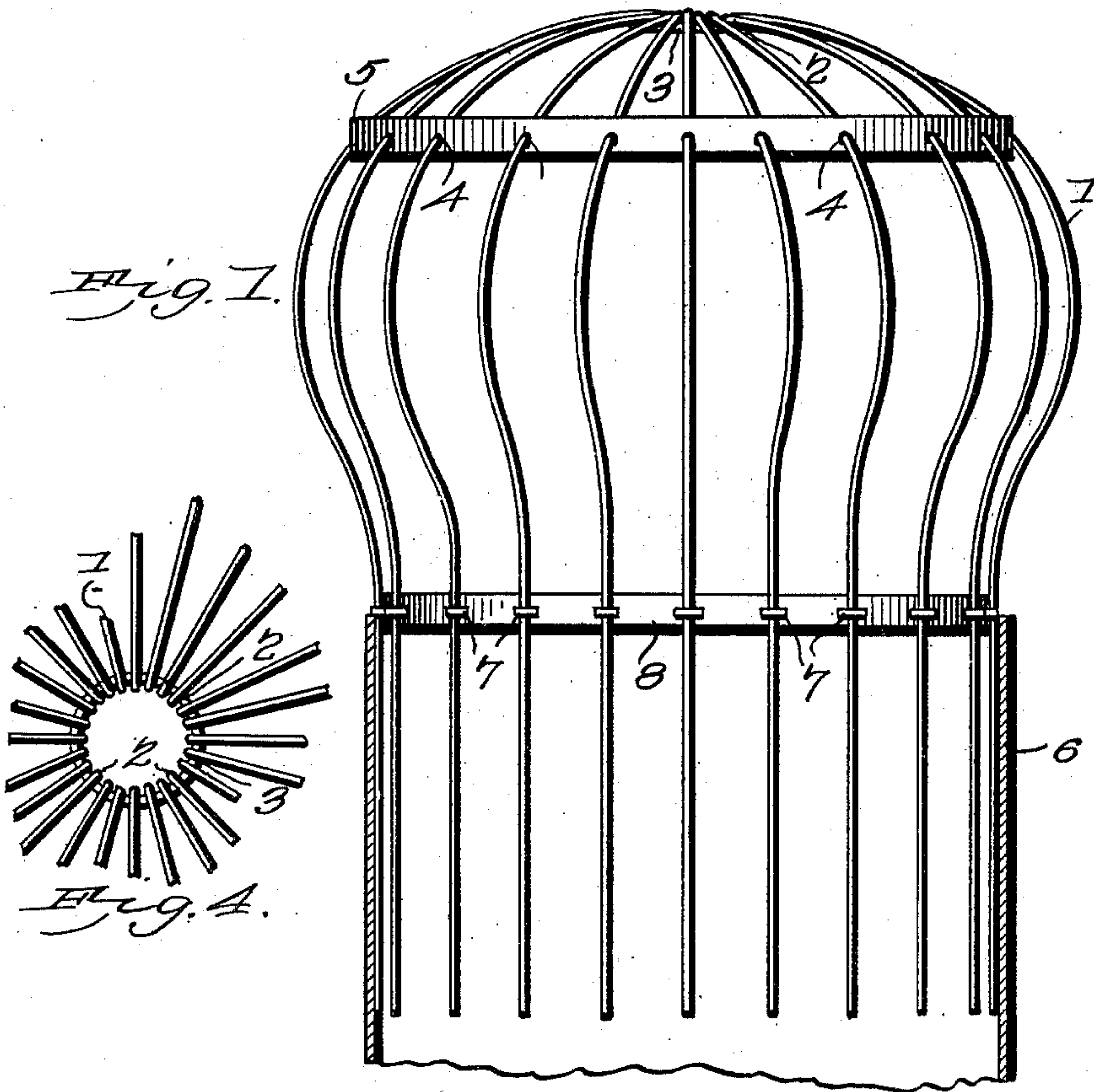
No. 713,733.

Patented Nov. 18, 1902.

R. O. BENNETT.  
STRAINER.

(Application filed Feb. 13, 1902.)

(No Model.)



Witnesses  
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# UNITED STATES PATENT OFFICE.

RICHARD OLMSTEAD BENNETT, OF BRANCHVILLE, CONNECTICUT.

## STRAINER.

SPECIFICATION forming part of Letters Patent No. 713,733, dated November 18, 1902.

Application filed February 13, 1902. Serial No. 93,936. (No model.)

*To all whom it may concern:*

Be it known that I, RICHARD OLMSTEAD BENNETT, a citizen of the United States, residing at Branchville, in the county of Fairfield and State of Connecticut, have invented a new and useful Strainer, of which the following is a specification.

The invention relates to strainers or guards for roof conductors or leads or for drains in general; and the object in view is to provide an improved construction, particularly with relation to the binders, whereby the guard elements or wires are connected and held in the desired relative positions, the binders being such as to retain the guard in shape and prevent distortion or inward bending of the elements.

Further objects and advantages of the invention will appear in the following description, and the novel features thereof will be particularly pointed out in the appended claims, it being understood that various changes in the form, proportion, and the minor details of construction may be resorted to without departing from the spirit or sacrificing any of the advantages of this invention.

In the drawings, Figure 1 is a side view of a guard or strainer constructed in accordance with the invention. Figs. 2 and 3 are detail perspective views of portions, respectively, of the upper and lower binders, showing adjacent portions of the straining elements or wires. Fig. 4 is a detail plan view of the upper ring and the connected portions of the wires.

Similar reference characters indicate corresponding parts in all the figures of the drawings.

In the illustrated embodiment of the invention the straining elements or wires 1 are connected at their upper extremities, as shown at 2, with a top ring 3, and thence diverge, as in the ordinary construction, pass through openings 4 in the upper binder 5, are bulged below the upper binder to provide a gradually-increasing diameter of guard toward an intermediate point in the height of the device, are thence contracted to a smaller diameter and are extended in straight and approximately parallel lines to their lower ends to fit within a conductor or lead 6, the approximately parallel portions of the wires extend-

ing through clamps 7 on a lower adjustable binder 8.

In the construction illustrated the upper binder is provided with openings 4, which are elongated transversely of the strip, the binder consisting of a flat band of sheet metal. The elongation of the openings permits the wires to pass therethrough at an angle and at the same time serves to respectively brace the wires at the points of intersection to prevent bending. The extremities of the openings serve to bite and frictionally engage the wires to prevent slipping. Preferably the binder consists of a strip or band of which the extremities are unconnected, as indicated in Fig. 2, and are overlapped, the openings in the overlapped portions being in registration. By varying the extent of overlap the diameter of the binder may be varied in the original construction of the device to correspondingly spread or contract the guard. The overlapped extremities are held in the desired relative positions obviously by the engagement of the wires therewith. The lower binder also consists of a flat band of sheet metal with the wire-engaging clamps 7, consisting of upstruck loops, through which the straight approximately parallel portions of the wires extend in directions parallel with the width of the band, thus causing each wire to bear flatly against the surface of the band. The extremities of this lower band are also overlapped, and the upstruck loops on one extremity extend through corresponding slots 9 in the other extremity to receive the wires, whereby the wires form the means of holding the overlapped extremities in the desired relative positions.

Having described the invention, what is claimed is—

1. A guard or strainer for a conductor or lead having wires connected at one end, and a binder consisting of a band extending transversely of the wires, and provided with spaced wire-engaging means respectively threaded on the wires, the extremities of the band being overlapped and engaged by the adjacent wires and thereby held from relative displacement.

2. A guard or strainer for a conductor or lead having wires connected at one end, and a binder consisting of a band provided with



spaced openings through which the wires respectively extend, the extremities of the band being overlapped to cause registration of the openings adjacent to said ends, and the adjacent wires being extended through the registering openings to secure the overlapped ends of the bands in their opposite positions.

3. A guard or strainer for a conductor or lead having wires connected at their upper extremities, and a binder consisting of a flat band provided with openings through which the wires respectively extend at an angle to the width of the band whereby the edges of the openings bite and frictionally engage the wires.

4. A guard or strainer for a conductor or lead having a plurality of wires connected at their upper ends, and a binder for holding the wires in the desired relative positions, said binder consisting of a flat band having upstruck wire-engaging clamping-loops, each of which is continuous with the band at its extremities, and is intermediately separated

from the band by parallel cuts, the intermediate portion of the loop being bowed or deflected from the plane of the band to engage that portion of the wire which spans the opening from which the loop is struck.

5. A guard or strainer for a conductor or lead having wires connected at their upper ends, and a binder for holding their lower ends in spaced relation, said binder consisting of a flat band having overlapped extremities and provided with upstruck clamping-loops, the loops of one of the overlapping ends extending through slots in the other for engagement with the wires, whereby the wires secure the ends of the band in their overlapped relation.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

RICHARD OLMSTEAD BENNETT.

Witnesses:

LAURA B. BENNETT,  
ELSIE D. BENNETT.