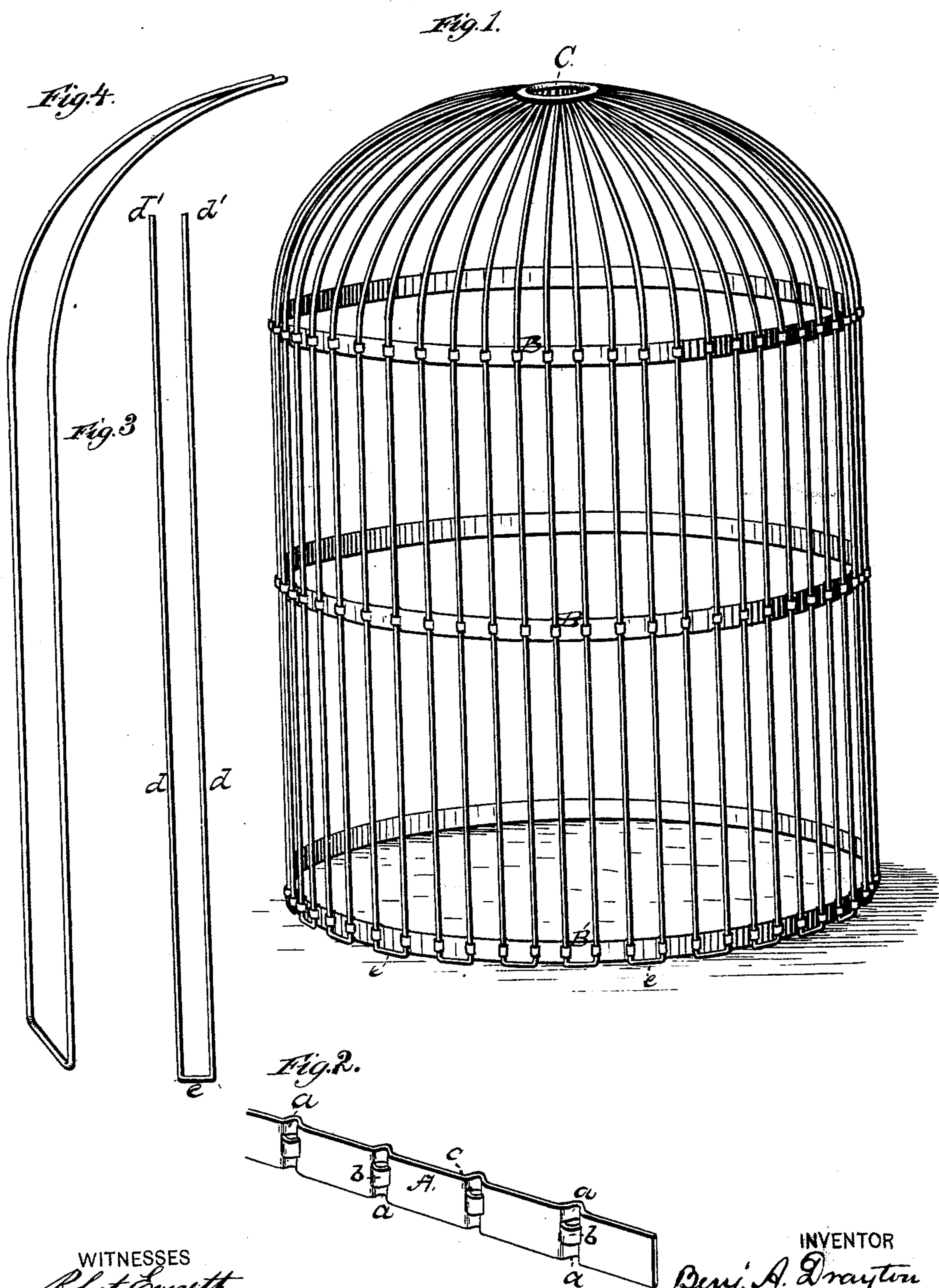


B. A. DRAYTON.  
Bird and Similar Cages.

No. 218,505.

Patented Aug. 12, 1879.



WITNESSES  
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# UNITED STATES PATENT OFFICE.

BENJAMIN A. DRAYTON, OF NEW YORK, N. Y.

## IMPROVEMENT IN BIRD AND SIMILAR CAGES.

Specification forming part of Letters Patent No. **218,505**, dated August 12, 1879; application filed June 5, 1879.

*To all whom it may concern:*

Be it known that I, BENJAMIN A. DRAYTON, of New York, in the county of New York and State of New York, have invented new and valuable Improvements in the Manufacture of Bird and Similar Cages; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters and figures of reference marked thereon.

This invention relates to the manufacture of metallic cages, especially of that class known as "bird-cages." Heretofore bird-cages have been made of single upright wires soldered, riveted, or locked to the horizontal bands or wires of the cage. This construction of a cage is objectionable for several reasons. It requires considerable labor and time to make the cage with the soldering, riveting, or locked connections, involves expensive construction, and renders the cage weak as well as heavy.

The main object of this invention is to simplify the construction and cheapen the cost of the cage, and to produce a bird-cage that shall be light, strong, and neat.

My improvement consists, substantially, in the combination of the punched bands and the double wires, whereby the bent portions of the upright wires, coming in contact with the lower band, form a support, as will be hereinafter more fully set forth, and pointed out in the claims.

To enable those skilled in the art to which my invention pertains to make and use the same, I shall proceed to describe its construction and operation, reference being had to the annexed drawings, showing the improvements applied to one class of cages.

In the accompanying drawings, Figure 1 is a perspective view of the dome of a bird-cage. Fig. 2 is a perspective view of the punched metallic strip. Fig. 3 is a front view of the double wire. Fig. 4 is a perspective view of the double wire, showing the upper ends curved and brought together.

I take strips of metal (bright metal) A to form the horizontal bands of the cage, of a uniform width and thickness, and pass them

through a self-feeding vertical press, which produces, by means of dies, at intervals, two depressions, *a a*, at the upper and lower edges, and a central rise, *b*, in the band, as shown in Fig. 2, and this operation of punching (forming eyes) continues until the metal strip is passed through the press. These transverse depressions *a a* and raised portions *b*, corresponding to the shape and size of the wires to be used, are at equal distance from each other, and form eyes or openings *c*, through which the upright double wires are passed. The strip is now cut off at the proper length when a round cage is to be formed, and the ends soldered together or otherwise secured, forming a ring-band. In this way two or more horizontal bands for the cage are made.

The wires for forming the vertical or upright wires are cut off at a given length ascertained in advance for the known size cage, and are bent or turned by suitable machinery or tools at or near the middle, and extend at right angles the distance of one space between the formed eyes on the band, and then are bent upwardly, and its portions are run parallel with each other, as shown in Fig. 3 of the drawings. The wire thus doubled consists of the two vertical wires *d d* and the connecting cross-bar *e*, the latter serving as a support for the lower band.

The double wires of the shape substantially as shown in Fig. 3 are now attached to the horizontal ring-bands B by passing the free ends *d' d'* through two of the eyes *c* of the lower band, and continuing the operation through the bands above, and, finally, bringing the ends of the wire together at the top, substantially as shown in Fig. 4, for permanent attachment to the eyelet C.

The cross-bars *e* of the double wires form a perfect support or rest for the lower band, B', where the greatest strain of the cage comes, thereby making it an impossibility for this part of the cage in any way to become loose or displaced.

Thus it will be seen that the upright wires passing through the eyes of the horizontal bands rest in the outer pressure in the eye of the band, and on the inward pressure on the material of the band above and below the



central raised portion of the eye, and the band is held firmly in place by frictional contact, the object being to dispense with soldering material or locking devices.

It is well known that the strain on a cage is at the point of suspension and at the lower band, and it is principally at the latter where the breakage takes place. The strain on the band is caused by the weight of the movable bottom of the cage and the attachments.

By the arrangement of the double wires in my improvement, the cage rests on the cross-bars or bent portions of the wires, and the bottom being fastened by suitable means, the strain is thrown on lower band, braced by the bent portions of the double wires, and all liability to breakage or displacement by ordinary means is obviated, and the wires are not liable to pull out at the base.

It is obvious that these improvements are applicable to cages for squirrels and mice.

What I claim is—

1. In a bird or similar cage, the combination of a series of double wires and a bottom horizontal band provided with a corresponding series of eyes for the double wires, substantially as described, and for the purpose set forth.

2. A bird or similar cage the body of which is formed of two or more horizontal bands having a series of eyes to sustain an outer and an inner pressure, and a plurality of double wires passed through the eyes of the bands, and held in place by frictional contact, substantially as set forth.

In testimony whereof I have hereunto subscribed my name.

BENJ. A. DRAYTON.

Witnesses:

HARRY W. LAWRENCE,

ALVAN DRAYTON.