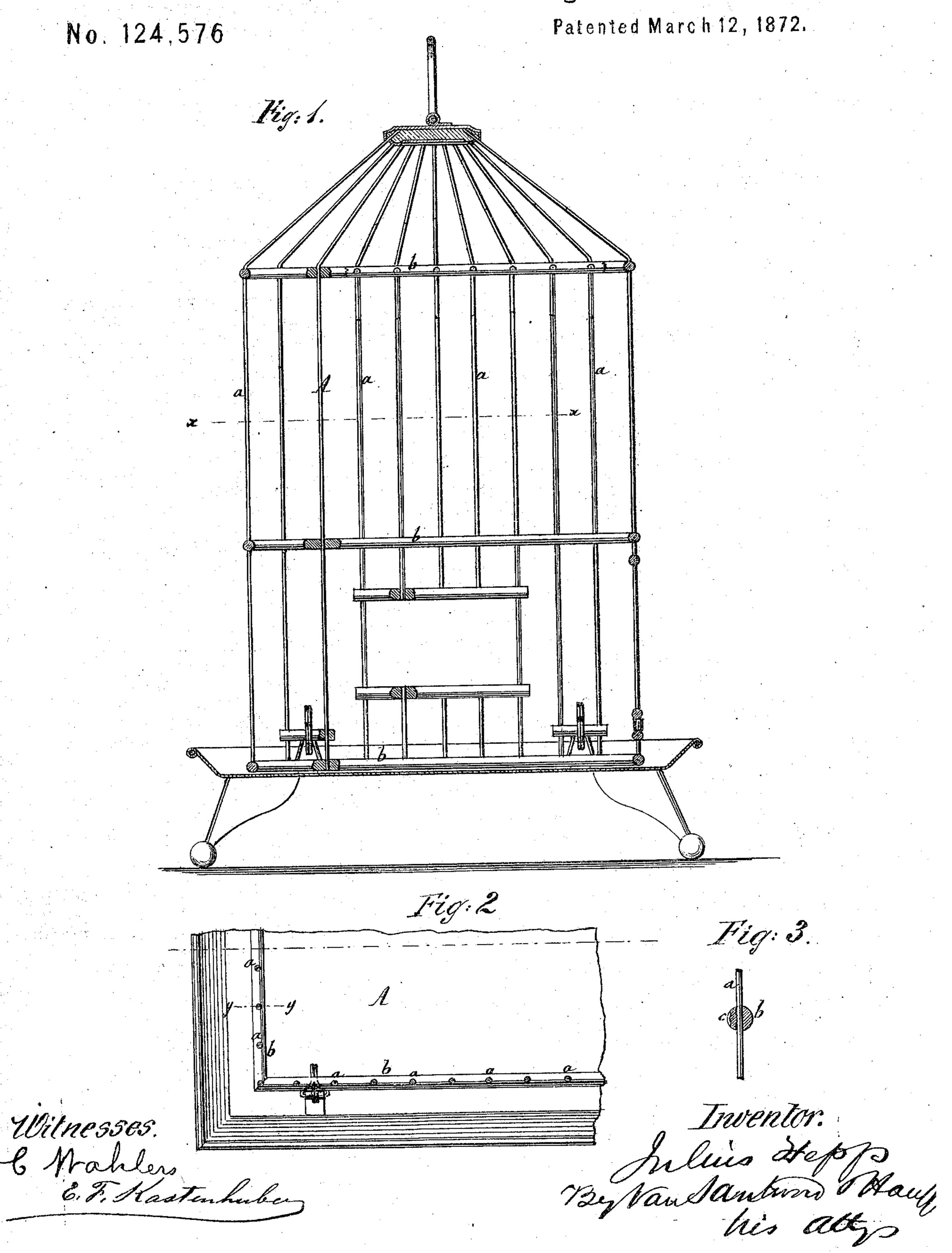
## JULIUS HEPP. Manufacture of Bird Cages.



Bejeuce Och 29th 1872

124,576

## UNITED STATES PATENT OFFICE.

JULIUS HEPP, OF NEW YORK, N. Y., ASSIGNOR TO O. LINDEMANN & COMPANY, OF SAME PLACE.

## IMPROVEMENT IN THE MANUFACTURE OF BIRD-CAGES.

Specification forming part of Letters Patent No. 124,576, dated March 12, 1872.

To all whom it may concern:

Be it known that I, Julius Hepp, of the city, county, and State of New York, have invented a new and useful Improvement in Bird-Cages; and I do hereby declare the following to be a full, clear, and exact description thereof, which will enable those skilled in the art to make and use the same, reference being had to the accompanying drawing forming part of this specification, in which drawing—

Figure 1 represents a vertical section of this invention. Fig. 2 is a horizontal section of the same, the line x x, Fig. 1, indicating the plane of section. Fig. 3 is a detached section of the cross-band, showing the manner in which the wire is secured thereon, the plane of section being indicated by the line y y, Fig. 2.

Similar letters indicate corresponding parts. This invention relates to a bird-cage, the upright wires of which are secured in the sockets of the cross-bands by simple pressure or friction, produced by exposing said cross-bands to the action of a punch in such a manner that the operation of soldering the wires to the cross-bands can be dispensed with, and thereby much labor is saved, and, furthermore, the appearance of the cage is materially improved.

In the drawing, the letter A designates a bird-cage, which is constructed of wires a, secured in cross-bands b. These cross-bands are made, by preference, of round bars provided with holes, through which the wires a pass. For the purpose of securing the wires in their sockets I expose the cross-bands to the action of a punch, which produces an impression, c, (see Fig. 3,) so that the wire a is firmly clamped in its socket. The punch used in this operation may be operated by a press, or it may be struck by a hammer, or a roller-punch may be used, and the marks produced by said punch

not only serve to fasten the wires, but they also give to my cage a distinguishing appearance; and, if desired, the punch may be made ornamental, so as to increase the beauty of the cage.

The principal advantage of this mode of fastening the wires, however, consists in the fact that it enables me to secure said wires in the cross-bands and other bars running parallel therewith without solder, whereby much time is saved and the appearance of the cage is improved. Particularly in cages made of brass wires, the presence of solder is very obnoxious, since such cages are usually exposed to the action of acid in order to render them bright, and all those spots which are covered by solder turn black by the acid. It is necessary, therefore, in such cages, to remove all traces of solder before dipping the cage in the acid, and this operation requires much time and care, and, besides this, the operation of soldering the wires in their sockets itself requires much more time than the operation of securing the same by means of a punch, as above described.

It is obvious that my improvement is applicable to round cages as well as to such of any other form or shape.

What I claim as new, and desire to secure by Letters Patent, is—

A bird-cage, in which the vertical wires a passing through the horizontal wires b are secured in place by means of the struck-up impressions c in the wires b, as herein shown and described, for the purpose specified.

JULIUS HEPP.

Witnesses:
W. HAUFF,
CHAS. WAHLERS.