

J. S. HARBISON.

GRATED ENTRANCES TO BEE-HIVES.

No. 172,019.

Patented Jan. 11, 1876.

Fig. 1

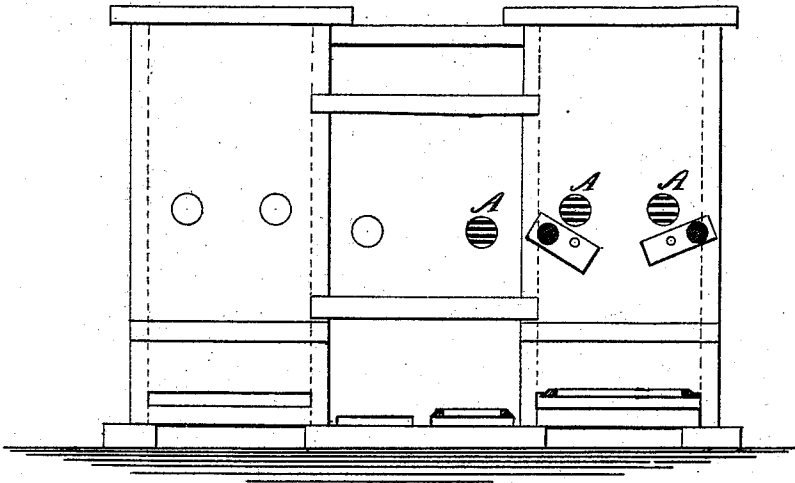


Fig. 2

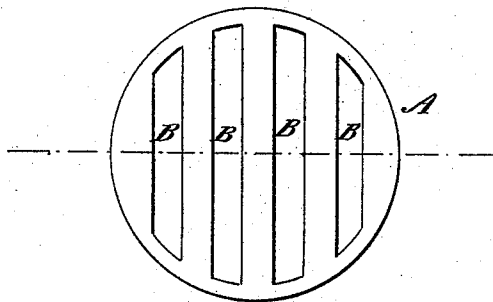
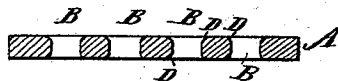


Fig. 3



WITNESSES:

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UNITED STATES PATENT OFFICE.

JOHN S. HARBISON, OF SAN DIEGO, CALIFORNIA, ASSIGNOR TO HIMSELF
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IMPROVEMENT IN GRATED ENTRANCES TO BEE-HIVES.

Specification forming part of Letters Patent No. **172,019**, dated January 11, 1876; application filed
October 16, 1875.

To all whom it may concern:

Be it known that I, JOHN S. HARBISON, of San Diego, in the county of San Diego and State of California, have invented a new and Improved Bee-Passage, of which the following is a specification:

My invention consists of positive gaged passages, made in either cast or wrought metal, or any other suitable material, of sufficient thickness to permit the rounding of the corners, thereby enabling the bees to pass safely with their loads of pollen, while at the same time gaging the passages to the size of the worker-bees, for the purpose of restraining either the queen or drones from leaving their respective apartments, either in the act of swarming or otherwise. The plates will be of any form most easily inserted or attached for being used wherever required.

Figure 1 is a side elevation of a hive, showing the application of my improved passage. Fig. 2 is a side elevation of one of the passage-plates; and Fig. 3 is a transverse section on the line *x x* of Fig. 2, showing the thickness of the metal and the rounded edges of the passage.

Similar letters of reference indicate corresponding parts.

A is the plate, and B the passages. The plate may be of any approved form suitable for the particular location in the hive and mode of attachment, and in thickness it will be sufficient to allow of rounding off the edges D of the passages, so that the bees will not be exposed to the scraping effect of the sharp corners of their plates when passing through with their loads of pollen, by which they lose considerable, whereas the rounded edges of thick plates enable them to press through without loss.

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

The bee-passage herein set forth, consisting of the plate A, having passages or openings B, with rounded edges D, as and for the purpose specified.

JOHN S. HARBISON.

Witnesses:

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R. G. CLARK.