(No Model.)

## W. HAECKEL.

WIRE BAND FOR BOXES, &c.

No. 246,672.

Patented Sept. 6, 1881.

Fig. 1.

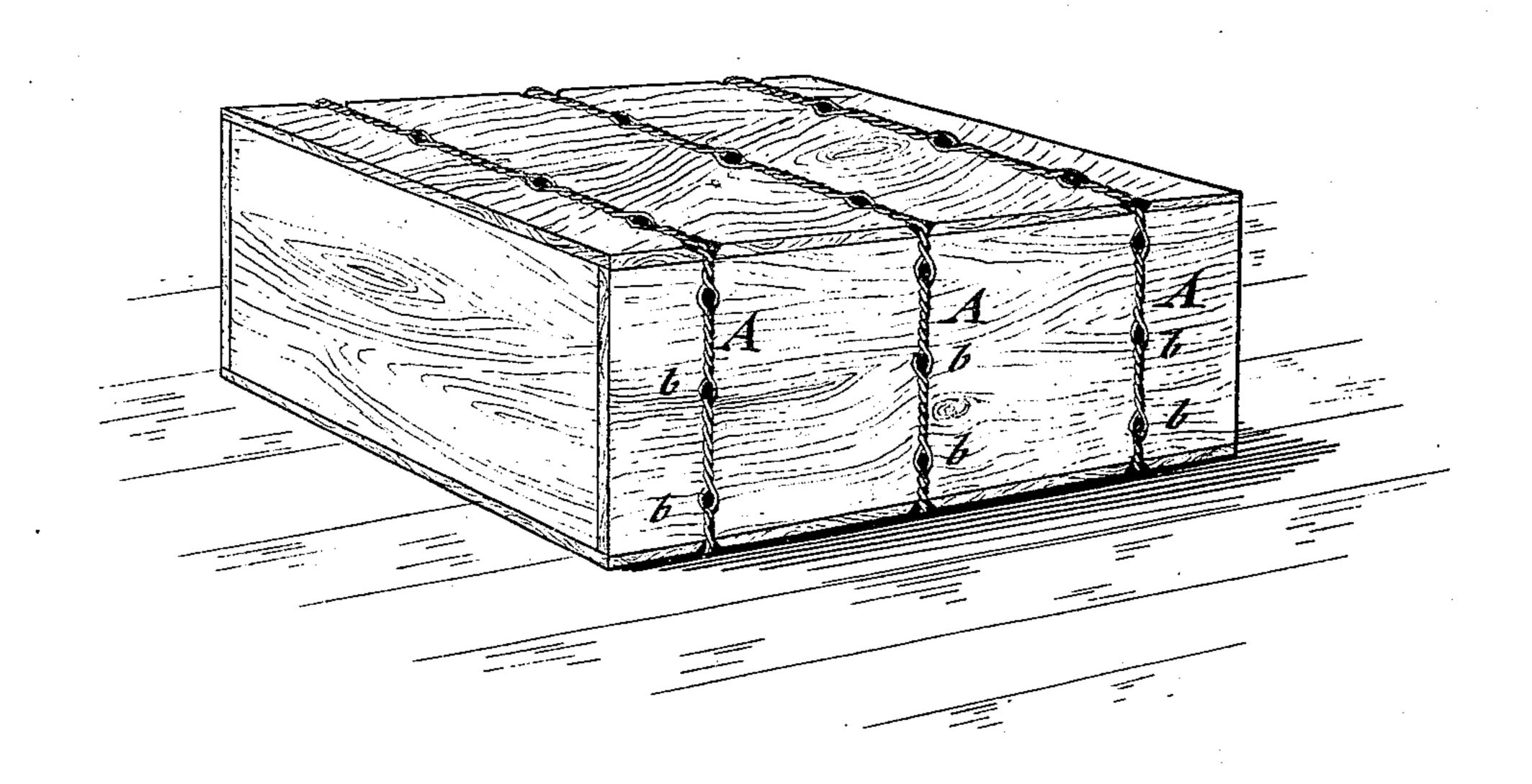


Fig. 2.

a
b

A

A

WITNESSES

Atto Risch

INVENTOR Milliam RecKel

BY Fuel Goeffe

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## United States Patent Office.

WILLIAM HAECKEL, OF NEW YORK, N. Y.

## WIRE BAND FOR BOXES, &c.

SPECIFICATION forming part of Letters Patent No. 246,672, dated September 6, 1881.

Application filed May 27, 1881. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM HAECKEL, of the city, county, and State of New York, have invented certain new and useful Improvements in Wire Bands for Boxes, &c., of which the

following is a specification.

The object of this invention is to furnish in place of the expensive wooden bands or hoops employed around packing-boxes of all kinds, and also in place of the iron bands used for the same purpose, an improved wire band, which is of greater cheapness and strength, can be attached with greater facility, and, if desired, be used again after being detached from the box.

The invention consists of a fastening wire band for boxes of all kinds, which is formed of two or more twisted wires, and which is provided at regular intervals with loops or eyes integral with the band, adapted for the insertion of the nails by which the band is fastened to the box.

In the accompanying drawings, Figure 1 represents a perspective view of a box with my improved wire bands attached thereto, and Fig. 2 is a detail view of a portion of the wire band.

Similar letters of reference indicate corre-

sponding parts.

wire band for fastening boxes, which wire band is to be used in place of the wooden or metallic hoops or bands heretofore employed for this purpose. The wire band A is formed of two or more wires, a a, of any suitable thickness, which are twisted together by means of a twisting-machine of any approved construction.

In the band A are formed during the process of twisting, at greater or less distances from each other, eyes or openings b, which serve for the purpose of inserting the nails in attaching the band to the box. The eyes or openings b are obtained by placing conical steel pins or pegs between the wires when they are in the process of twisting, the steel pins or pegs being supported in position equidistantly from each other by a gage of suitable length.

The gage is a rule having holes at intervals to receive and hold the pins, the distance between them being indicated by figures. As the twist 50 progresses the pins are inserted between the wires and into the holes of the gage at the desired distance apart, and when the pins receive the gripe incident to the twist they are held in position while other pins are inserted until the 55 band is completed. The gage may take the form of a narrow bench extended under the band, or be used in sections of short length above the band, preferably the former. Any rope-maker will understand this method. The 60 pins are taken up by the twists of the wires and tightly retained by the same. The gage is charged with pins or pegs as the twisting of the wires proceeds until the entire length of wires is twisted. The moment the wire band 65 is released from the twisting-machine a certain back spring takes place throughout the band, which has the effect of relaxing the strain upon the steel pins, so that they are dropped from the eyes or can be easily removed there- 70 from.

Wire bands of any desired thickness and strength, to be applied around the smallest or largest boxes, may be thus obtained, in which the eyes may be arranged at more or less vary- 75 ing distances, the bands being then wound upon reels and sold in any required lengths in hardware stores.

Having thus described my invention, I claim as new and desire to secure by Letters Patent— 80

As an article of manufacture, a wire band for binding boxes, composed of twisted wire strands, and having eyes at intervals along its length formed integral with the strands by outward bends thereof, said eyes being adapted 85 to receive the bodies and exclude the heads of the fastening-nails, substantially as described.

In testimony that I claim the foregoing as my invention I have signed my name, in presence of two witnesses, this 5th day of May, 1881. 90 WILLIAM HAECKEL.

Witnesses:

PAUL GOEPEL, CARL KARP.