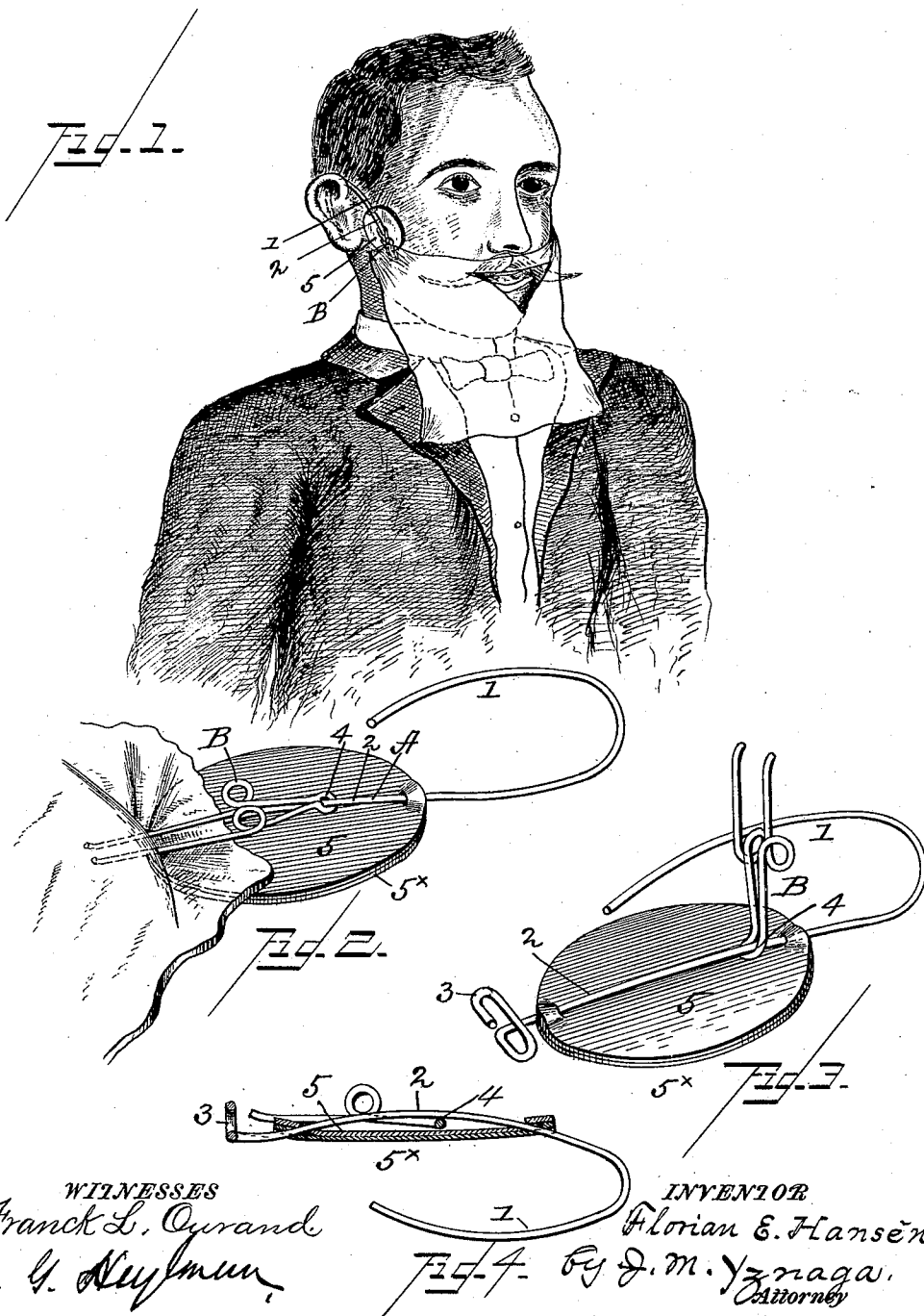


(No Model.)

F. E. HANSEN.
RUBBER DAM CLAMP.

No. 465,265.

Patented Dec. 15, 1891.



WITNESSES
Frank L. Curand
A. G. Neysman

INVENTOR
Florian E. Hansen
By J. M. Yznaga,
Attorney

UNITED STATES PATENT OFFICE.

FLORIAN E. HANSEN, OF MINNEAPOLIS, MINNESOTA.

RUBBER-DAM CLAMP.

SPECIFICATION forming part of Letters Patent No. 465,265, dated December 15, 1891.

Application filed October 2, 1891. Serial No. 407,503. (No model.)

To all whom it may concern:

Be it known that I, FLORIAN E. HANSEN, a citizen of the United States of America, residing at Minneapolis, in the county of Hennepin and State of Minnesota, have invented certain new and useful Improvements in Rubber-Dam Holders; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

My invention has relation to improvements in rubber-dam holders or retainers, and the object is to provide a conveniently-adjustable and reliable means for holding or retaining the rubber dams, mouth-guards, mouth-expander, mouth-prop, or dental bib in position while the patient is being operated upon, and I accomplish this object by the means hereinafter described, and which I have fully and clearly illustrated in the drawings, wherein—

Figure 1 is a view showing a rubber dam held in place by my improved ear-hook. Fig. 2 is a detail view of the device on a larger scale, attached to a rubber dam. Fig. 3 is a view in detail, showing the device with the latch lifted. Fig. 4 is a detail of the cheek-plate with the pad.

A designates a wire of any suitable metal, bent at one portion, as 1, into proper shape to fit over and partly around the ear of the patient. The lower portion or stem of this wire is formed to fit or lie against the cheek, as at 2, and terminates in a suitable keeper or loop 3, to take in the end of a sliding and hinged latch B. This latch B consists of a piece of wire bent into parallel prongs or arms and at the bend formed into a loop or eye 4, adapted to retain and slide on the stem of the ear-piece and pivot or hinge on the stem at any position thereon, so that it may be raised and turned down and the end pushed through the keeper on the end of the stem to hold the grasped material when connected therewith. On the stem is loosely arranged a cheek piece or plate 5, the wire being let through holes at each end of the plate, as shown, and against

the cheek-plate may be secured a cushion or pad 5^x, composed of any suitable material, to relieve the pressure of the plate on the cheek of the patient.

The holders or retainers are made in pairs of duplicate construction, except that they are made right and left, respectively, for superior and inferior maxillary.

I believe I am the first in the art to provide means adapted to be lodged on or connected to the ear of the patient for holding a rubber dam or any similar device used in dentistry or oral surgery in position, and I do not desire to be limited to the precise construction of the latch for gripping and holding the rubber dam or other material.

My invention consists, broadly, of a wire adapted to be lodged on the ear of the patient and provided at one end with a means for holding a protective shield or material over the face of the patient.

The device is used or applied in practice as follows: The rubber dam or other protective device being put in place on the patient, the bent or curved portion of the holders is lodged on and about the ears of the patient with the stem portion carrying the cheek-plate extending front against the cheeks, with the cheek-plate down to its limit on the stem. The latch being then opened, the projecting parts of the protective material are brought up over the loop or eye in the end of the stem and drawn to such tension as may be required, and then the latch or clasp is closed down on the rubber or other material and the ends pushed down into the loop carrying the material in a crimp or fold with it through the loop, when the connection is complete and strong and has been accomplished and will be maintained without injury to the material.

It will be perceived that I have effected the purpose by a means which not only holds the material in position without injury, but that the means are readily applied and as readily removed, and are comfortable to the patient. It will also be perceived that the device can be attached and removed or adjusted without lifting or otherwise disturbing the patient.

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

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1. The holder herein described, consisting of a wire formed to grasp the ear of the patient and provided with means on its stem to grasp and retain the rubber dam, dental bib, or similar device.
2. The holder herein described, consisting of a wire formed to grasp the ear of the patient and formed with a loop at the end of its stem, and a latch to lock within the loop, substantially as described.
3. The holder herein described, consisting of a wire to grasp the ear of the patient and formed with a loop at the end of the stem, a cheek-piece on the stem of the wire, and a

latch arranged to engage the loop, substantially as described.

4. The holder herein described, consisting of a wire to grasp the ear of the patient and a catch at the end of the wire, an adjustable cheek-piece on the stem of the wire, and a hinged and sliding latch on the wire to engage the catch.

In testimony whereof I affix my signature in presence of two witnesses.

FLORIAN E. HANSEN.

Witnesses:

J. L. DOBBIN,

JOHN A. WALGREN.