

Facial restoration.

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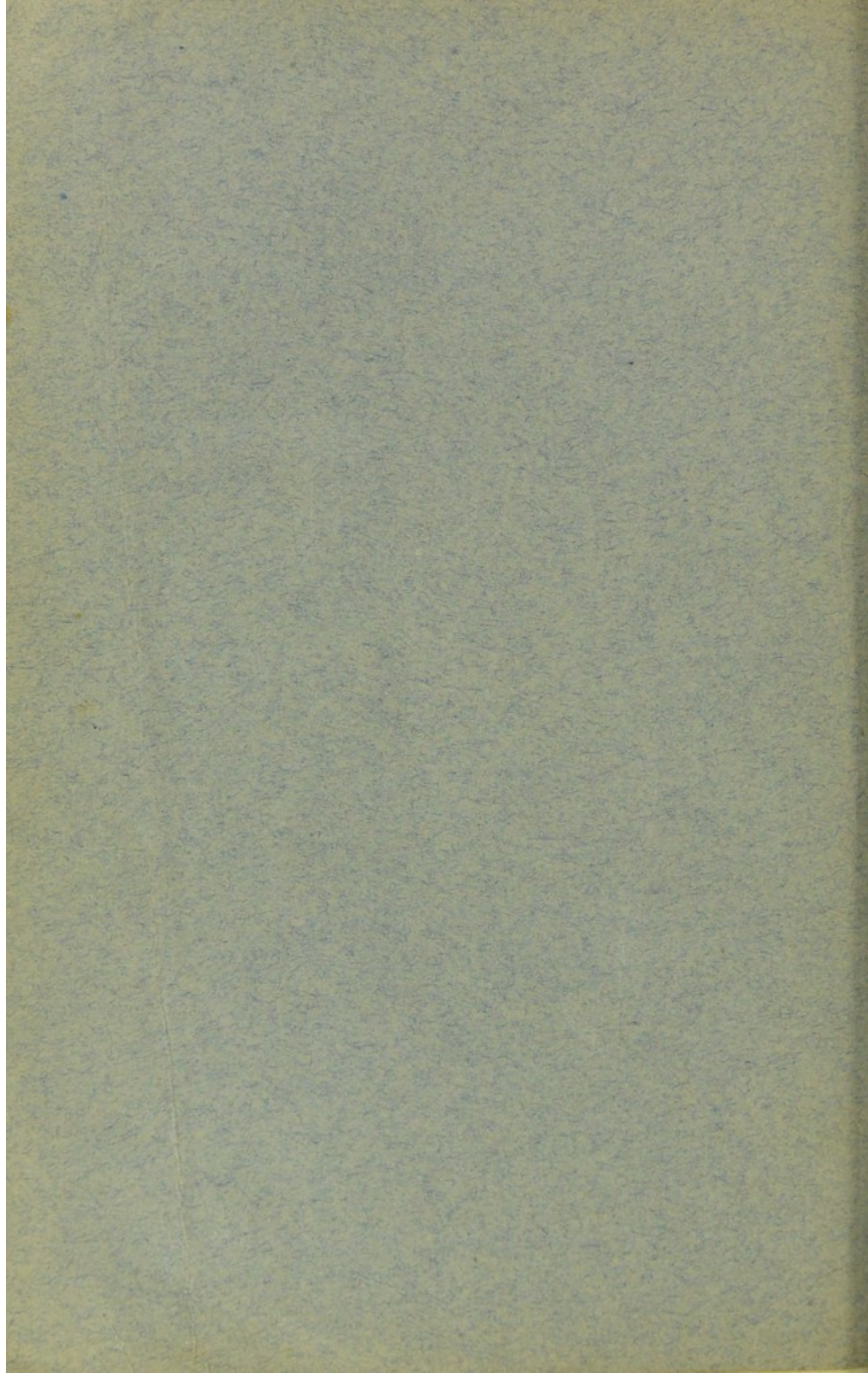
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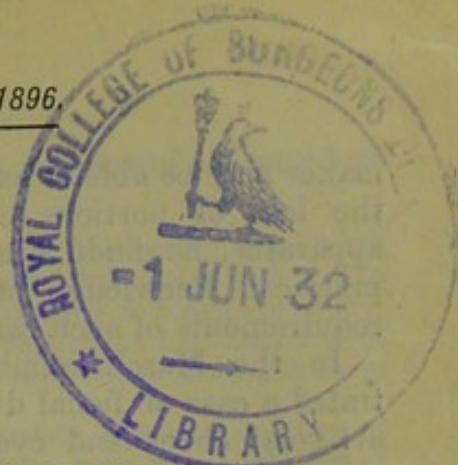


FACIAL RESTORATION.

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FACIAL RESTORATION.



The invention and construction of artificial substitutes for parts of the human organism which have been lost or injured by accident, or otherwise, have of late years engrossed the attention of many. In the race for honours of this kind the dentist has not been left behind. From time to time cases of deformity and disfigurement are brought under his notice, and his special knowledge of mechanical processes enables him to exhibit his skill, and affords a wider range to his ingenuity than is required for the mere replacement or reparation of the teeth.

It may be interesting to linger for a few moments upon some previous attempts to remedy facial defects, and to restore to the ruined features a semblance of their original form. In 1804 Dubois de Chemant* (the inventor of mineral teeth) relates that with his mineral paste he replaced "the under lip, the chin, and several teeth" for "the daughter of an English physician, which had been lost by the violence of the small pox"; and, in 1828, James Snell,† a surgeon-dentist of London, published a book on "Artificial Palates, and Deficiency of the Lower Jaw, Lips and Nose," wherein he records several successful cases. It would appear that, prior to this, little attention had been paid to the matter beyond the invention of obturators, since Snell claims for his book the distinction of being the first work written exclusively on the subject. De Chemant's idea is original in its conception and practice; but as neither of these writers left anything but bare records of their cases behind them, the art of photography being then but a recent discovery, and scarcely in the initial stage of its development, we are unable to form any judgment as to the extent of their success. During the last fifty years the gradual progress of knowledge on all subjects intimately connected with our existence or welfare, bringing increased methods of manipulation, has led to a keen competition in inventive skill, and it is said that the artificial nose maker has established for himself a separate department in trade. So long as defects are confined to external parts of the face, the artificial nose

* De Chemant.—"A Dissertation on Artificial Teeth" (London, 1804), page 37.

† Snell.—"On Obturateurs or Artificial Palates, and Deficiency of the Lower Jaw, Lips, and Nose" (London, 1828).

maker may be able to supply the deficiency, but when the injury involves the loss of portions of the palate, jaw, or other parts of the dental apparatus, he finds himself outside his province unless he has a sound practical knowledge of dental mechanics, by which means only the requirements of such cases can be met.

In the March number of the *QUARTERLY CIRCULAR*, 1889, we illustrated a case of facial disfigurement restored by means of an obturator and artificial cheek and eye, by Mr. Hayman, of Bristol; and in the June number of the same year Mr. André, of London, supplied us with the

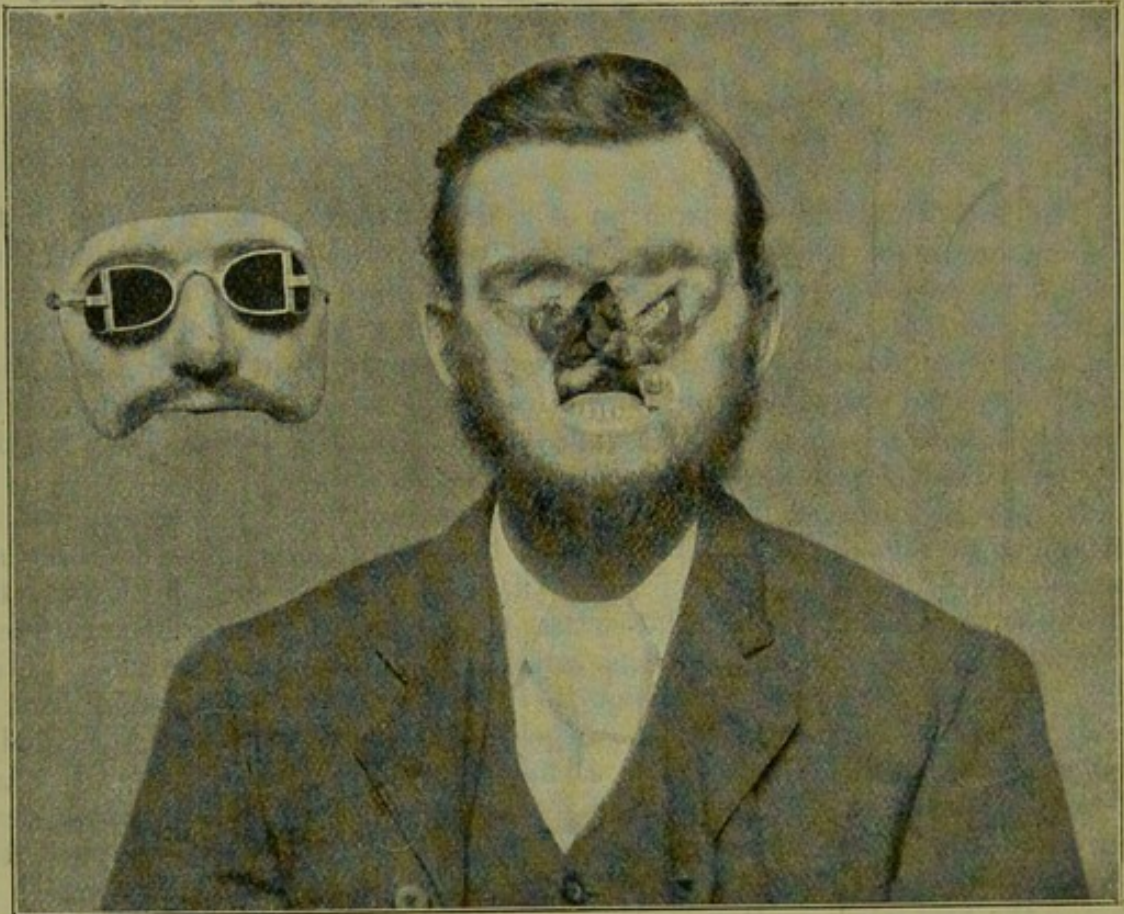


Fig. 1 shows condition of the face before treatment, and the mask away from the face.

description of a case which he had restored by means of an artificial nose and partial denture. Both these cases were successful.

But what is probably one of the most unique cases of facial restoration has just been effected by Mr. S. Brock, of London, in conjunction with Mr. Hudson, an artist friend of his. The history of the case is as follows:—

In April, 1893, two young miners, William and John Veale, natives of St. Ives in Cornwall, owing to the gradual decline of the mining industry in that county, left England for Bolivia in South America. They at once found work in the mine of the Komer Kocha Silver Company. In November, 1894, the younger brother, John, died; and, shortly after, the Komer Kocha Company failed, whereupon the surviving brother entered

the service of the Royal Silver Mine, Potosi. His account of the accident which there occurred to him is as follows:—

"About midnight on March 31st, 1895, being in charge of the boring machine, I bored five holes and charged them with dynamite. I directed the native with me to fire two of the fuses whilst I lit the other three. We then retired to a place of safety. The report followed in due course, and after waiting the regulation half-hour I went back alone to see the result. Just as I got within twelve feet of one of the holes there was a terrific explosion, and I remember nothing more.

When picked up some time after, I was found to be terribly injured. A piece of rock had swept across my face, carrying away both my eyes, nose, upper lip, part of both cheeks, and upper jaw. I lay apparently lifeless for two days, and the local doctors, thinking recovery impossible, ordered my coffin. However, as signs of life became more evident, some attempt was made to dress my wounds, and after twenty-one days' unconsciousness I gradually awoke to find myself in so pitiable a plight that I could not then be thankful for life, but could only regret that I had not been allowed to die." (See Fig. 1.)

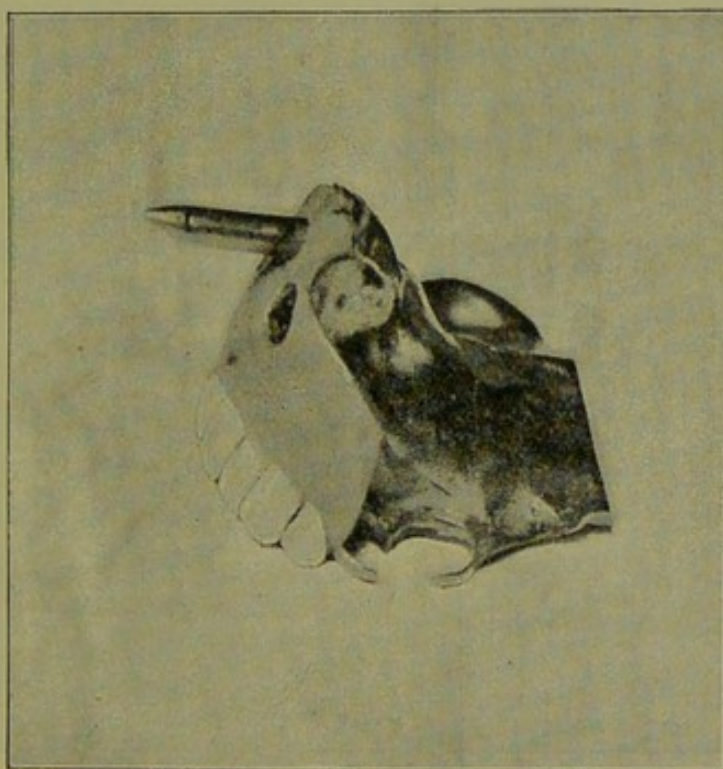


Fig. 2 shows the artificial upper denture.

To intensify the disaster, the Potosi Bank, in which Veale's savings were deposited (some £75), failed two months later. The unfortunate man left Potosi in August, 1895, arriving in England in October. Shortly after this he came under the notice of Mr. S. Brock, to whom we are indebted for the following details:—

"I first saw Veale in November last. A medical man in Penzance recommended him to visit London, to see Dr. Critchett, of St. Mary's Hospital, in order to ascertain if anything could be done for his sight, as Veale thought he could distinguish strong light from darkness; it is probable that some small portion of the retina may have been left behind which caused the sensation. He was detained at the hospital some four or

five days, and then sent away hopeless. When he came under my notice, I considered the possibility of replacing the palate and teeth, and, with the aid of Mr. Hudson, the cheeks, nose and lip. I must confess, however, that on surveying the void in his face, I was conscious of the extent of the undertaking, and of the difficulties which might arise. Both eyes, the floor of the orbits, and the nose had disappeared; the anterior part of the superior maxillary from the second bicuspid on the left side to where the first molar should have been on the right was also missing, and likewise all the teeth with the exception of the second bicuspid and first and second molars on the left side. The second molar, was, however, so extensively decayed that I decided to extract it. There was thought to

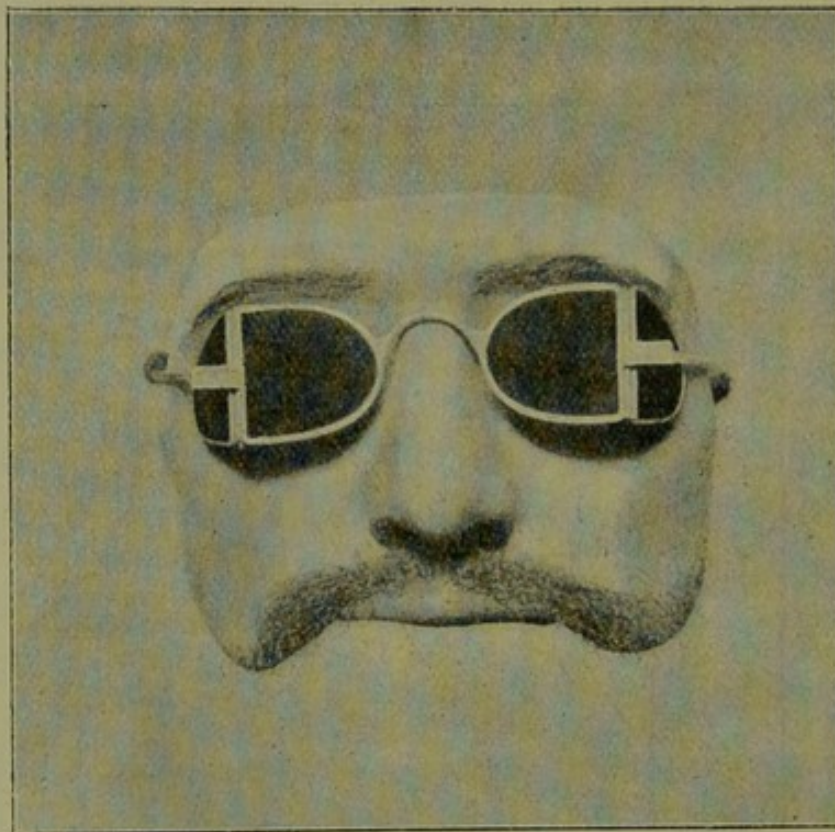


Fig. 3 shows the mask.

be some danger in doing this owing to the shattered condition of the jaw, but, with the assistance of Mr. Braine, gas was administered, and the tooth successfully extracted; since then, by the way, the third molar has partially erupted.

Dr. Bland Sutton, who saw the patient at this juncture, strongly advised a further delay of six months to allow the parts to more thoroughly heal. Veale accordingly went back to St. Ives and returned in the beginning of May.

I then took an impression of the remaining parts of the mouth in beeswax, and cast a model in plaster, from which a special tray was made. With this a fresh impression and model were taken and cast, moulded in sand in the ordinary way, and a gold plate was 'struck-up' to the shape.

On the posterior margin of the plate I soldered a crescent-shaped piece of plate about half an inch wide, the anterior and free edge being raised to come in line with the lingual surface of the palate. This, besides securing strength, allowed of the surface of the vulcanite being brought flush to the edge of the gold, instead of having a chamfered edge, which invariably curls up away from the plate.

Before mounting the teeth I also soldered a gold-pointed tube on the anterior part of the plate to project as near as I could judge towards the centre of the nose, the object of this being to connect the denture to the

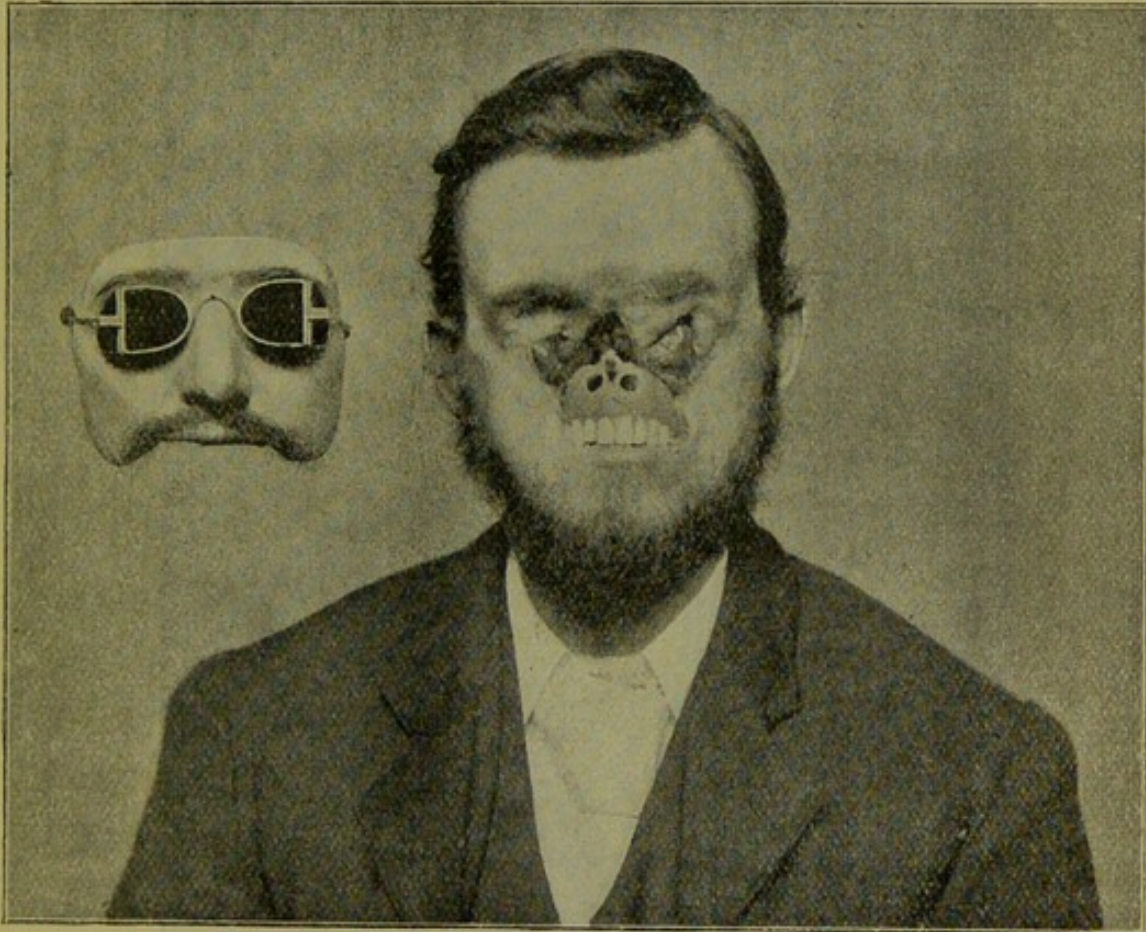


Fig. 4 shows the face with artificial upper denture in position, and the mask away from the face.

mask. The teeth were then mounted and the plate tried in for the bite, at which stage I had the satisfaction of hearing the patient speak distinctly.

After flasking and clearing away the wax, a thin layer of rubber was packed over the surface of the gold; the outer portion with the teeth was also packed with just sufficient rubber to hold them together and to gain enough strength. The remaining part was then filled with plaster, and a tin plate, previously struck up to the shape of the palate, was placed in and the flask closed. When the plaster had set, the flask was opened, the tin plate and superfluous portions of plaster were removed, a fresh layer of rubber was placed in position, and the flask was again closed and put in the vulcanizer. After vulcanization the plaster was cleared away through

two holes in the front, one on each side of the gold pin. By this arrangement the utmost lightness was obtained. (See Fig. 2.)

Mr. Hudson and myself then attempted to take a plaster cast of the disfigured face with the denture in position. We first tried oiled silk to prevent the plaster adhering to the face, &c., but this proved too unyielding, and, the mould being very imperfect, we next tried a layer of moistened



Fig. 5 shows the patient's present appearance.

tissue paper, which answered admirably. From the mould thus obtained a plaster model was cast, upon which Mr. Hudson skilfully modelled up the missing portions of the face in wax. From this a plaster mould and model were taken and cast, and a zinc die made with a lead reverse. The mask is made of silver, and the three main portions (namely, the two side pieces and the centre strip) are soldered together.

This completed the rough portion of the work. Mr. Hudson then, with much labour and artistic taste, carved the zinc model wherever undercuts were desirable, notably the inner and outer parts of the nostrils, the mask

being chased into them. Two small silver tubes were then shaped and soldered into the nostrils, and all the joins carefully finished. A silver tube was made to slide over the gold pin fixed to the denture, and this was then soldered to the inner surface of the mask in the centre of the nose, and strengthened in position by a piece of silver plate with a hole in the centre, soldered on transversely at the back of the nose.

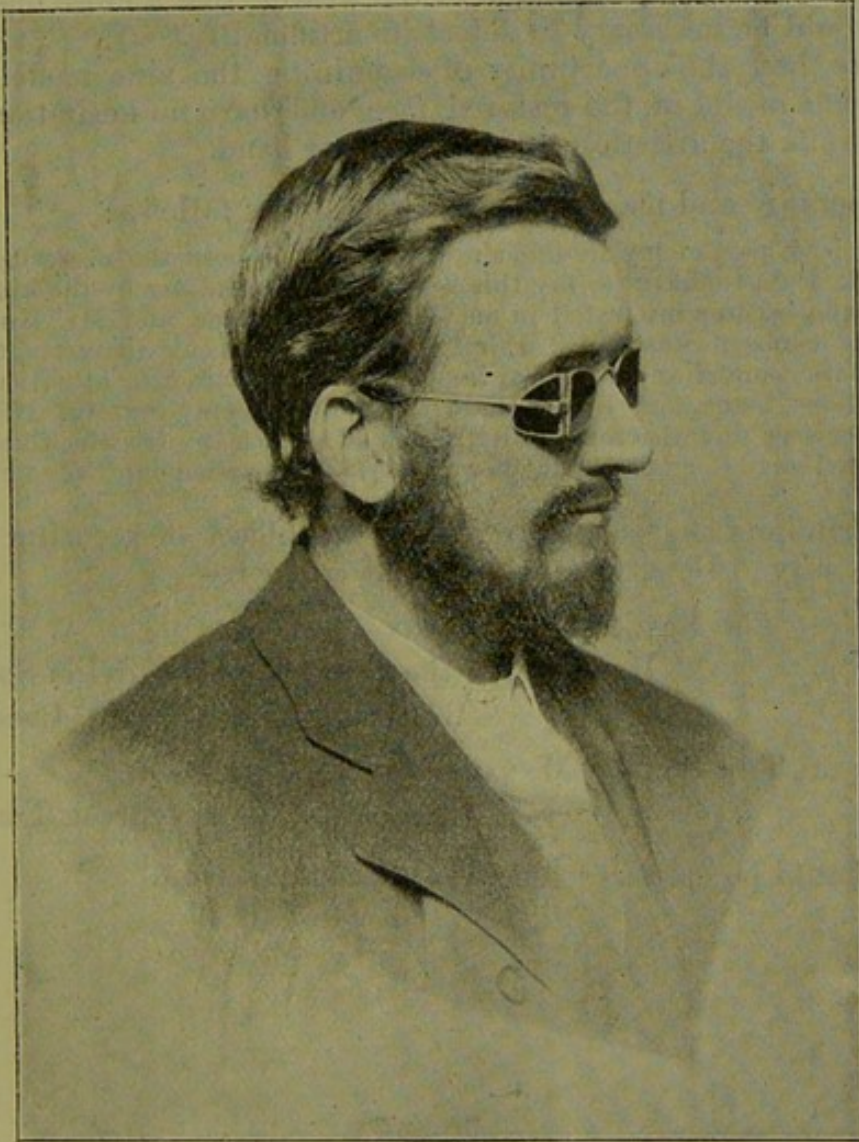


Fig. 6 shows the patient's present appearance in profile.

The upper lip is merely a piece of red rubber tubing tied at each end, and held in position by three catches soldered inside the silver lip; the rubber coming just below the edge of the silver lip allows the patient's lower lip to rest comfortably against a flexible surface. This is easily removed for cleansing purposes—in fact, several were made for the patient as a store. A strong pair of blue silver-framed goggles with the ordinary retractor fastenings behind the head were constructed, and a small pin was soldered to the back of the centre of the bridge of the goggles; this pin fits into a hole made in the mask, thereby preventing the goggles from slipping.

After this Mr. Hudson painted the mask whilst it was on the patient's face. A slight moustache and eyebrows were affixed, the patient's own whiskers being laid under contribution for the hair required for them." (See Figs. 3 and 4.)

"Too much stress," continues Mr. Brock, "cannot be laid upon the work of the artist in this case. The exterior of the mask is so skilfully modelled, and the combination of colour, with its many tones of shade, imitates so admirably the natural complexion of the wearer, that a close observation of the face would be necessary to detect its artificiality."

We have had the opportunity of examining the zinc model cast from Mr. Hudson's model of the restored face, and have no hesitation in saying that it exhibits the artistic power of a master hand.

Of the denture and mask the patient speaks as follows:—

"Not the least part of my trouble since recovery has been the necessity for wearing a heavy veil. I am thankful to say this is no longer needed, for by the kindness of two gentlemen who became interested in me (Mr. Brock, dentist, and Mr. Hudson, artist), an apparatus has been constructed which enables me to speak distinctly, to eat, drink, and smoke with comfort, and to appear in public without attracting attention. This is all very marvellous to me, and I need hardly say how deeply grateful I feel for their gratuitous services, and also for the kindly help of their many friends, whose generosity enabled me to live in London whilst the work was being carried out." (See Figs. 5 and 6.)

A subscription has been started with the object of securing Mr. Veale a small annuity. Donations may be sent either to—

The Rev. JAMES PULLEIN THOMPSON,

Hon. Sec. of the National Blind Relief Society,

27, Tite Street, Chelsea, London, S.W.

OR, THE BRANCH MANAGER OF THE CITY BANK,

6, Sloane Street, London, S.W

Cheques should be crossed "The Veale Fund Account."

