



The Holy Face from the first photograph of the Shroud. As Pia succeeded in making only one negative, the Face is an enlargement. The original negative was presented to the Centro Internazionale by Giuseppe Pia and his sister, and can be seen in the Centro Museum.

## A LETTER FROM SECONDO PIA

The photographic revelation of the figure lying unsuspected for nearly nineteen centuries in the shadowy image on the Shroud was received by Leo XIII with "joy and emotion" (Barbet, *A Doctor at Calvary*), sentiments shared by many prelates, scholars and scientists. But there were a few who did not welcome this threat to the settled demesne in which they had felt so comfortable. As long as the Shroud stayed locked away, as long as the enigmatic image was rolled in pious belief, it was a safe, indeed salutary, Relic. The tremendous figure which emerged, however, had to be reckoned with. And the question of its authenticity bristled up in earnest. Among detractors, the most formidable was the Canon Ulisse Chevalier; finally silenced for having published a false statement attributed to the Vatican.

Illogically, the controversy was directed toward the photographer, Secondo Pia; and the opponents were well-served by journalists whose understanding of the photographic process left much to be desired. There was the claim that the photographic plate had been "over-exposed"; there was the claim that the photo had been made by "transparency", but as Pia pointed out, everybody knows that a red silk lining is sewn on the back of the Shroud and that would prevent all transparency. Furthermore, the notarial Act of 1901 specifically mentions that the Shroud was never removed from its frame. It seems strange to us today that Secondo Pia could have been accused of fraud and trickery in the darkroom.

He himself was surprised and distressed. In March 1901, he appealed to Prof. Benedetto Porro, Director of the Laboratory of Analytical Chemistry at the University of Turin, for his opinion. Prof. Porro taught a course in photography; he also experimented, putting different solutions on a cloth, pressing the treated cloth against the face and hair of volunteers, then photographing the resultant stains. In a lengthy reply, Porro assured Pia that he had committed no errors in photographing the Shroud.

Another of Pia's supporters was the French Professor Arthur Loth, who already in 1900 had published *The Portrait of O. L. Jesus-Christ according to the Holy Shroud*, with reproductions of the photograph. This book went into a second edition in 1902. In 1907, the controversy still not abating, Loth requested Pia to write an account of the work he performed on 28 May 1898. Pia's *Memorandum*, outlining the difficulties and contrary circumstances of that evening, and giving the technical details of his procedure, was published in Loth's next book on the subject, *The Photograph of the Holy Shroud of Turin*.

Pia's complete vindication came in 1931, when Giuseppe Enrie made his superb photos. On this occasion, Pia and Paul Vignon were among the dignitaries beside Enrie while the photos were being taken and developed.

In the course of those 33 years, photography had become the tool of science and the toy of millions of ordinary people who understood at

least the basics of the photographic process. And since 1898, the image revealed on Pia's plates had become the point of departure for the research of such men as Yves Delage, René Colson, Paul Vignon, Noguier de Malijay...

What is presented here is Pia's letter to Dr. Porro. In brackets I have inserted a few details from the *Memorandum*. These two documents were published in *Sindon* #5, 1965, as appendices to an article by Giuseppe Pia, Secondo's son.

Pia died in 1941, at the age of 86.

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D.C.

Turin, 28 February 1901

Illustrious Sig[nore] Dott[ore] Cav[aliere] Benedetto Porro,

In the past year of 1900, there were interesting discussions about the Most Holy Shroud of Turin, especially between Arthur Loth and the Canon Ulisse Chevalier; the discussions arose from the photographic reproduction that, by special authorisation of the King, I had the honor to execute during the Exposition of 1898.

The discussions concerned the attempts to present the hypothesis that special methods had been used in the photographic reproduction.

To remove every doubt about the seriousness with which I made the photographs, I consider it my duty, for love of the truth, to make public a detailed statement of the way in which my work was carried out. I would therefore like that you, Professor (who had occasion to follow my work with such kind interest), would acquaint yourself with these explanations and compare them with the writings of Prof. Arthur Loth and the Canon Ulisse Chevalier, and that you would favor me with your opinion.

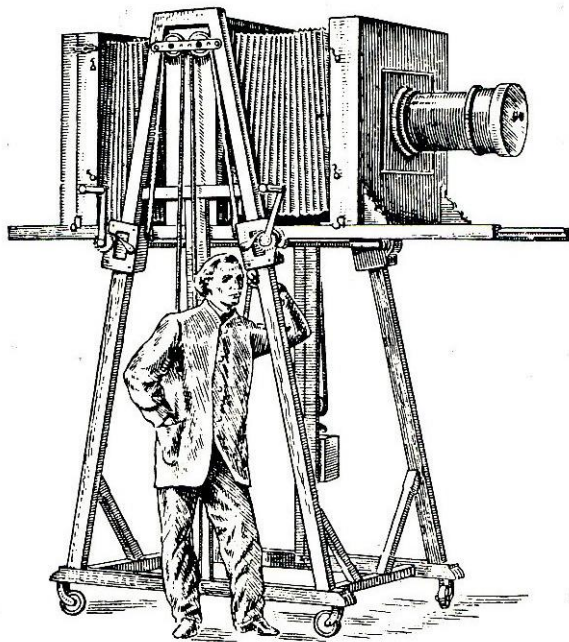
For the execution of the photograph of the M.H.Shroud, a suitable scaffold on which to set the camera was constructed in front of the Cathedral altar, over which the Holy Relic was exposed. The M.H.Shroud was illuminated by two electric lamps,\* one at the right and one at the left, at a distance of about 10 meters. These two electric lights, however, were not of equal luminous power, and this is clearly evident on the photographic plate. [Since the current was supplied by two different electric companies, the lights were not of equal luminous intensity; one was 1000 candles and the other only 950.]

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\* These were arc lights with reflectors. Ed.

I made the first trial the evening of the solemn opening of the Exposition (25 May 1898) but I was forced to renounce the work because of the intermittent electric current and consequently the irregular intensity of illumination on the M.H.Shroud. [The fluctuations of the current presented a serious obstacle. It was necessary to make a long exposure of the photographic plate, and I needed a light that was steady and without interruptions.]

To avoid this inconvenience, I therefore provided ground glass screens to be placed in front of the two lamps and thus obtained a more diffuse and uniform light over all the surface of the M.H.Shroud. [Only 5 minutes into the first exposure, the heat from the lamps broke the glass.] I even succeeded in obtaining a more constant and regular luminous source; the person in charge of such service proved to be of the greatest kindness, praiseworthy zeal and solicitude.



Once this serious inconvenience was corrected, it was possible to make the photograph on the evening of 28 May 1898 at 9:30pm. [In the meantime, I had two other ground glass screens placed in front of the lamps at a distance of 1.50m to prevent their breaking.] I must mention, however, that in the course of those three days, the M.H.Shroud had been covered with a sheet of plate glass [to protect it from the dust], and this made my work even more difficult because the glass reflected the electric lights and the church decorations.

A moveable camera of 1865. From *Die Geschichte der Kleinbildkamera bis zur Leica*.

This fact obliged me to change the original position of the camera by moving the scaffold back to a distance of about 8m.\* Naturally, I had to resort to another lens, choosing one of a longer focal length. The lens used was a Voigtlander, with a diaphragm of 2mm.

The plates, 50cm x 60cm, were orthochromatic made by Edwards Company. I put a very pale yellow filter on the lens.

I made two exposures, the first of 14 minutes and the second of 20 minutes.

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\* Moving the camera back to about 26 ft. and using a longer lens, Pia's negative image was smaller than originally anticipated. Enrie gives the dimensions as 53cm x 14cm. Ed.



27 maggio 1898 ore 9  
 2 pan. Saboya 2 pan. S.  
 . Amiciato a luce elettrica  
 Lupa 1/20 sec 2 1/2  
 1/20 sec 6 1/2 2 1/2  
 per abbass. grido  
 un po' centrale

28 maggio 1898 ore 9 pan  
 Saboya 2 pan. S.  
 Lupa 1/20 sec 2 1/2  
 1/20 sec 3 1/2

33. Giudice  
 lunghezza metri 2.10  
 larghezza 1.60  
 in tutto 80/60 proporzioni  
 in tutto 1/2 dal vero  
 in tutto proporzioni  
 1/2 dal vero anzi  
 lunghezza cont. 98  
 altezza cont. 20

per esatto  
 Lupa 80/60 strada  
 abbever. 1/20 sec  
 1/20 sec in per 14  
 1/20 sec in per 12  
 1/20 sec in per 10  
 1/20 sec in per 8  
 10 x 90 per buona  
 50 x 60 per peggiore

Pages from Pia's notebook: Experiments with artificial light: Measurements of the Shroud in proportion to the dimensions of the photographic plate: Notes on the work of May 25 and May 28.

The plates were developed in a bath of oxalate of iron, without any special chemical preparation which could in any way enhance the normal result customarily obtained in my work. The plates were fixed in a solution of hyposulphate of soda.

[Closed in my darkroom, completely intent on my work, I felt a very profound emotion when, during the development, I saw appearing on the plate, first the Holy Face, with such clarity that I was astonished and at the same time happy, since from that moment I could have the certainty that my work would have a good outcome.]

It is clear, therefore, that I did not invent any special method nor did I use any artifice to obtain the reproduction of the M.H.Shroud, but instead I was able to profit by my long experience and the years of practice that, even as a simple amateur, I had acquired by photographing paintings and colored objects, [often in poor light-conditions, requiring considerable time-exposures].

I used a yellow filter because I had been informed by persons who had examined the M.H. Shroud during the Exposition of 1868, that the fabric had a slightly yellowish tint. [They warned me that the imprints were very faint.]

The photographic plates were not retouched and are at the disposition of whomsoever wants to assure himself of that. I can produce not a few testimonies from persons who, interested in my work, had occasion to see the original negatives the day after they were exposed.

With thanks and with expressions of my esteem.

SECONDO PIA

*Who would believe that so small a space could contain the image of all the universe? O mighty process! What talent can avail to penetrate a nature such as this? What tongue will it be that can explain so great a wonder? Verily, none! This it is that guides the human discourse to the considering of divine things. Here the figures, here the colors, here all the images of every part of the universe, are contracted to a point. O what point is so marvelous?*

LEONARDO DA VINCI