

RESTORATION AND PRESERVATION OF ARABIC HISTORIC PAPER DOCUMENTS

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Introduction:

Recently some authors have published articles under the subject restoration of historic paper materials such as manuscripts, books and other art objects made of paper as drawings and others (Ieyshon et al., 1986). These articles may be divided into two types according to subject content: The first type discusses the basis and techniques of restoration (Hussam, 1979; Endo, 1987; Anon, 1988; and Hussam, 1990). The second type explains the applied work of restoration on art objects made of paper as manuscripts, drawings, books and others (Hussam, 1979, (a & b); Alex and Eveline, 1982; Eckardt, 1982; Dahlstrom et al., 1984 (a&b) and Lafitte, 1987).

The present work represents a progressive trial in the field of document restoration. The technique used in the present article is a cheap and semi-manual type. It can be easily applied to save huge amount of historical documents, especially in the developing countries like Egypt.

The paper document restored in the actual work represent both manuscripted and printed types.

Material and Methods:

The paper objects to be restored in the present work

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consist of four documents, three are manuscripted and one is printed. These documents are of special historical value to Egypt. They belong to a famous personality in the modern Egyptian history, Refaha El Tahtawi. These documents were provided for the author by a relative of Refaha to be restored and preserved. It is important to note that, there are two major collections belonging to Refaha in Egypt, one is kept in Dar El wathaik in Cairo, and the other collection is exhibited in The National Tahta Museum in Tahta City in the upper Egypt, where Refaha was born. The date of these documents is around 1316 A.H. They suffered extensively by being kept in a folded state for long time in dry conditions. Some of them were attacked by insects along fold lines, which also suffered of breakdown extends along the text area. Tears, stains and missing parts are present specially at the margins, as marks of previous uncareful usage of such documents.

Some of the documents had been restored badly by unspecialists by glued brown paper strips, to provide us a new problem to be overcome, i.e. to remove the old irresponsible restoration without damaging the original documents. The documents generally need, cleaning, softening. While tears and cracks need mending. Finally the restored documents need encapsulating as a form of permanent preservation.

Treatment techniques:

This step includes processes of the cleaning, softening and flattening of the documents as preparatory state before

restoration. It is important first to test the sensitivity of the inks on these documents to the treatment solutions to prevent the fugitivity of inks during treatment processes. The test proved that red ink is sensitive to alcoholic solutions - but the black ink is stable. Since the black ink is in the majority, we used the alcoholic solutions in the ratio of water/alcohol (1 : 3) as cleaner/humidifier fluid beside usage of organic solvent as local cleaners for some stains. The sensitive red ink was isolated before treatment with dilute gelatine solution (Bredereck et al, 1988). After cleaning and humidification processes the document was flattened and pressed until dry in between acid-free blotting papers.

Restoration techniques:

The restoration techniques can be divided into three types:

1. Strengthening of the weak lines along folds of the documents.
2. Mending cracks along fold lines and also small tears distributed on the documents.
3. Completing the missing parts of the documents. Conserving type (1-2) of the restoration techniques, we used heat sensitive adhesive transparent tissue paper. This type of restoration material is used now in the restoration laboratory of the British Library for quick mending. This foils gives high mending potentiability beside its transparent characteristics i.e. Leaves no visual scars after restoration. The adhesive

included in these foils is modified cellulose acetate, which can be stuck under the effect of fast mild heat ironing (heat degree about 80° C & the time of application just few seconds) .

The 3rd technique is the completion of the missing parts. It was carried out by using the suitable tissue paper in the proper thickness and colour. Mending of the tissue paper to the original document was carried out also by the cellulose acetate/ tissue paper foil by the same technique previously described. Very small holes were mended only by the cellulose acetate/ tissue paper foil in the same manner.

Encapsulation technique:

This is the final process to preserve the restored documents in between two flexible transparent teflon sheets. The encapsulated sheets are connected together only at the external margin by sewing . This state will permit internal air circulation to the trapped documents, through the stitching holes. The encapsulation state will preserve the documents and protect them on handling or even in scrolling, keeps them clean and flat, and in the same time readable.

Discussion:

The present application is a cheap semi-manual technique. It can be applied to save a huge number of documents in shorter time than the traditional manual restoration technique which takes long time and needs high experienced personels beside its

high lost . We recommend the present technique to be used in Dar El Wathaik in Cairo. They have a huge number of the historical documents in need of our technique to be save. Our technique needs normal technical personals trained for a short time on this technique, specially the balance between temperature of iron (80° - 85° C) and the time of pressing (about two seconds) i.e. fast ironing with moderate temperature and preferably humidify the document after mending to regain its humidity content which may be escaped during ironing. Finally see the following documentary photos for documents before and after treatment and restoration for judgment .

Photos (1 & 2)

Document (A) printed paper (general view) before and after treatment and restoration - arrows indicating the defected areas before treatment and restoration in photo No (1) while in photo No (2) the same page after treatment and restoration:

63 x 48 Cm.

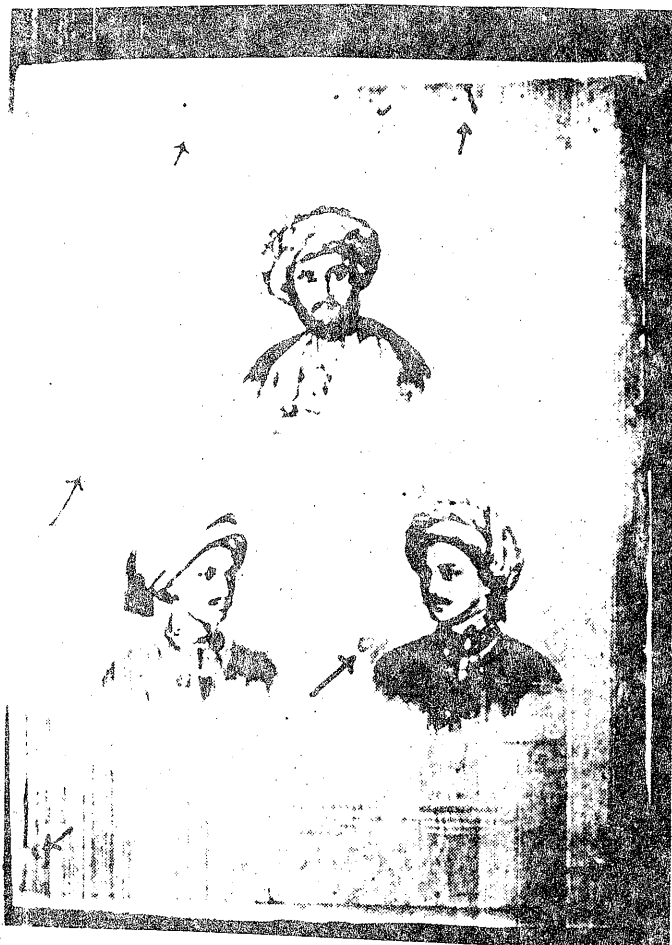


Photo No (1)
before treatment and restoration .

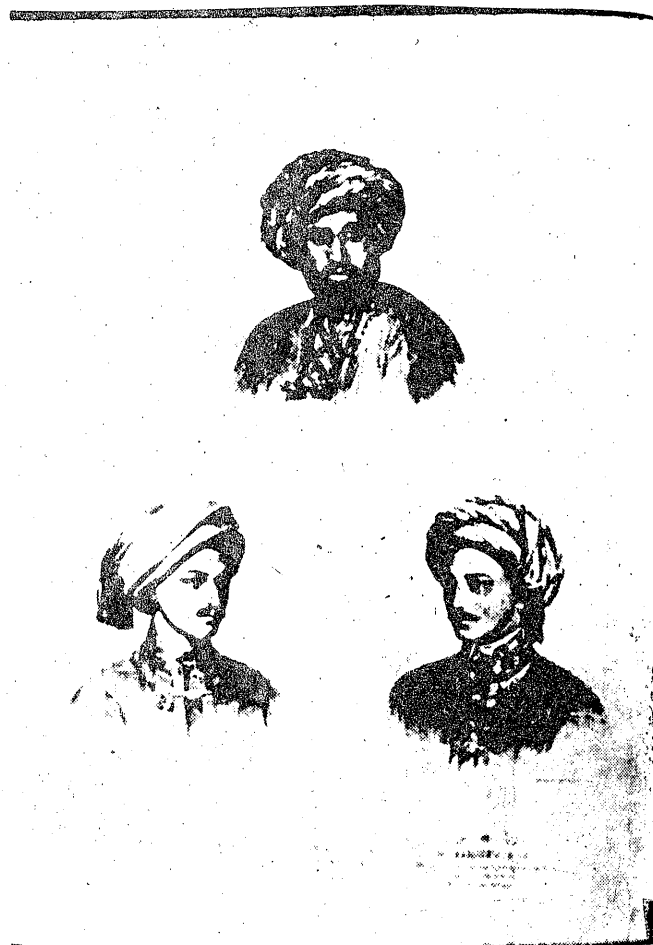


Photo No (2)
after treatment and restoration.

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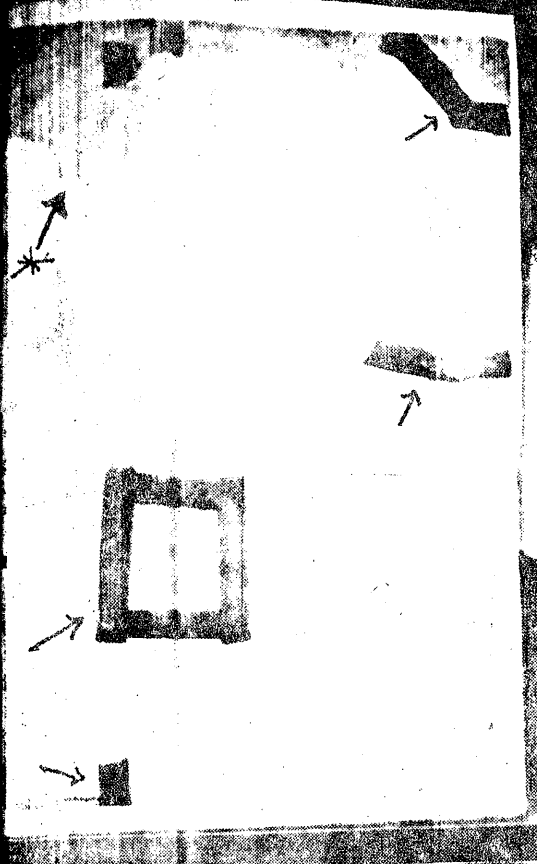


Photo No. (3)
 Back of the document
 includes old restoration

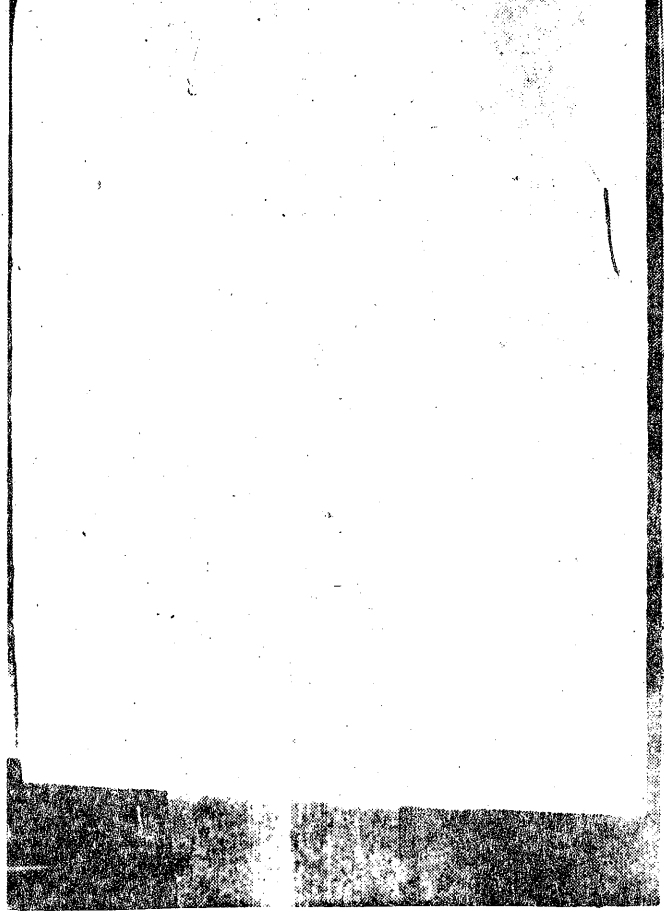


Photo No. (4)
 The same after removing the old
 restoration



Photo No. (5)
 Photo through transmission
 light to expose the old
 restoration, and general defects

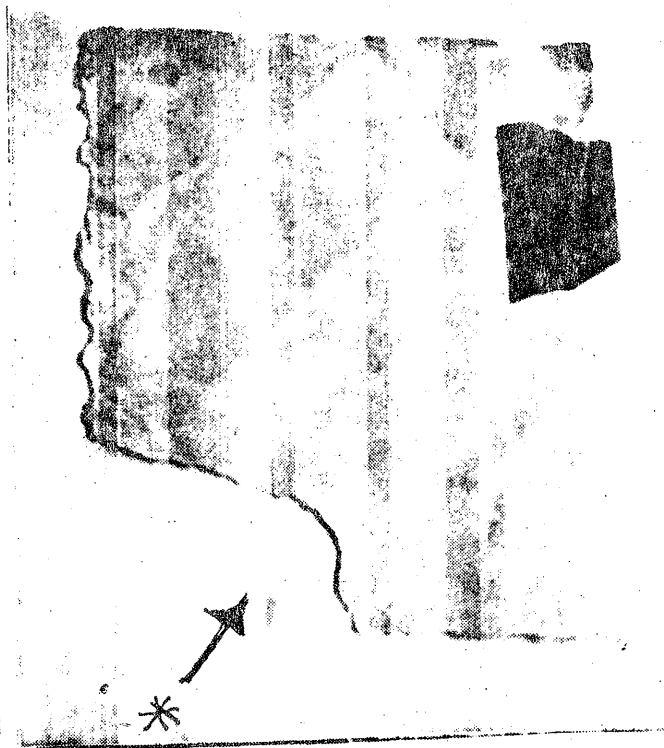


Photo No. (6)
 A piece of paper used in the old
 restoration in photo No. (3)
 after removing it.

Photo No. (7) (a & b)

Focus of the document before restoration
arrows indicate defects.



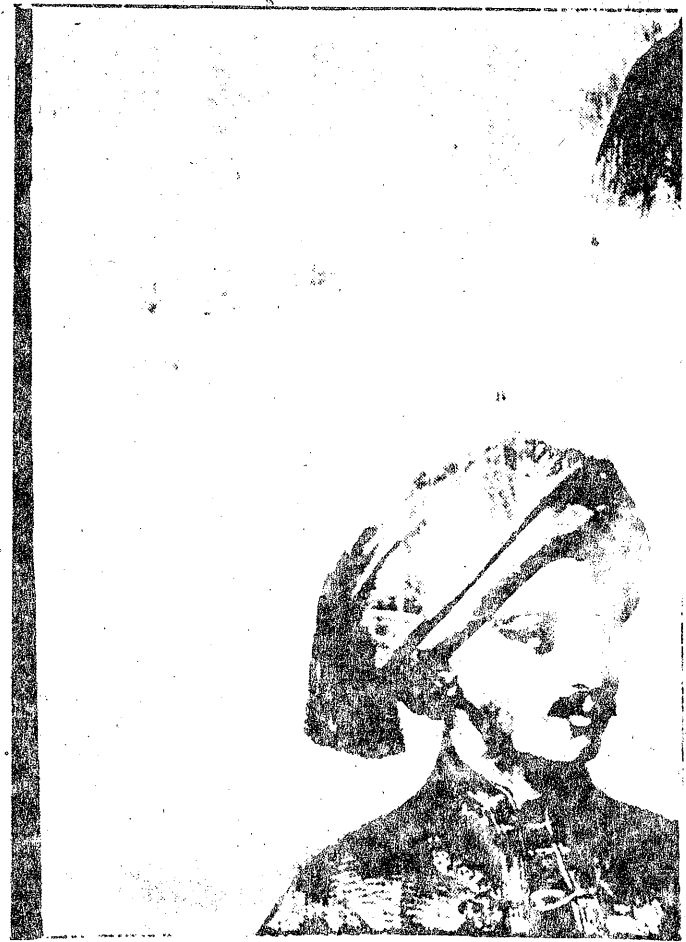
Photo No. (8) (a & b)

The same focus after restoration



PHOTO NO. (9) (A & B) before (T & R) Photo No. (10)

stained old restoration, hole and the same after (T & R)
tears, arrows indicating defects



Document (B) manuscripted document (general view)

57 X 81 Cm.

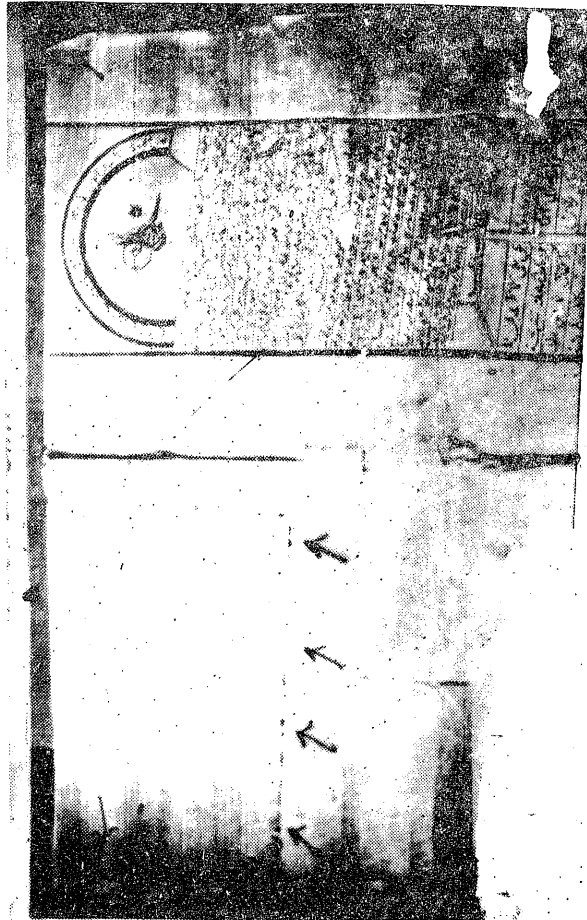


Photo No. (11) before (T & R) arrows indicating in the middle holes after insect attack - other arrows indicating tears on the margins of the document

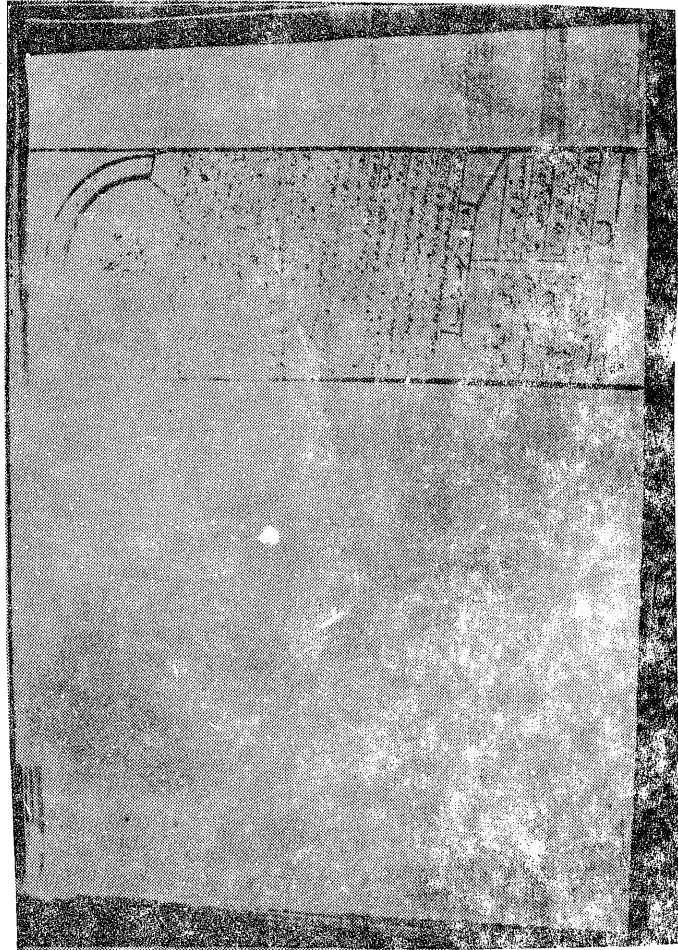


Photo No. (12) The same document after (T & R)

Photo No. (13) (A & B)

document (B) before (T & R)

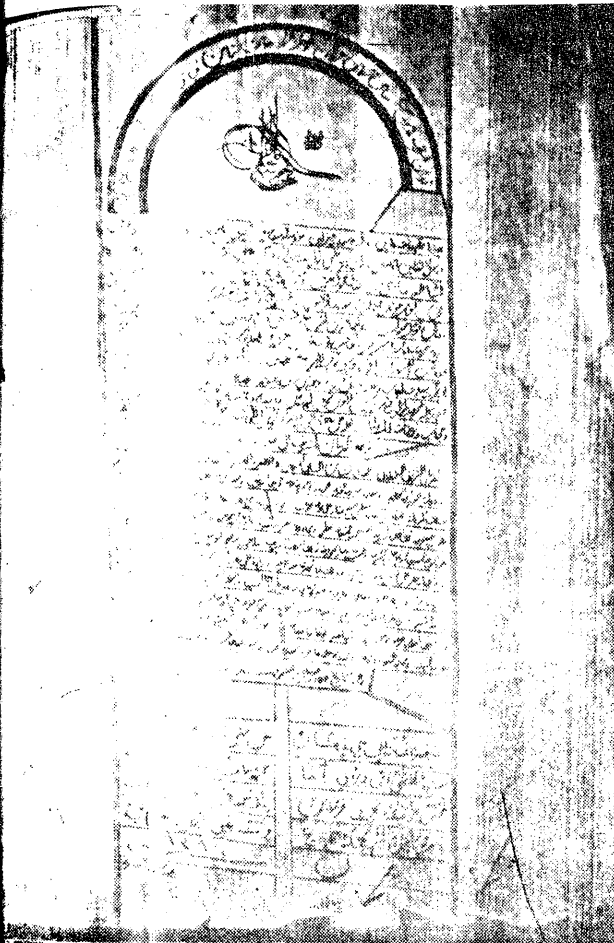


Photo No. (14) (A & B)

the same after (T & R)

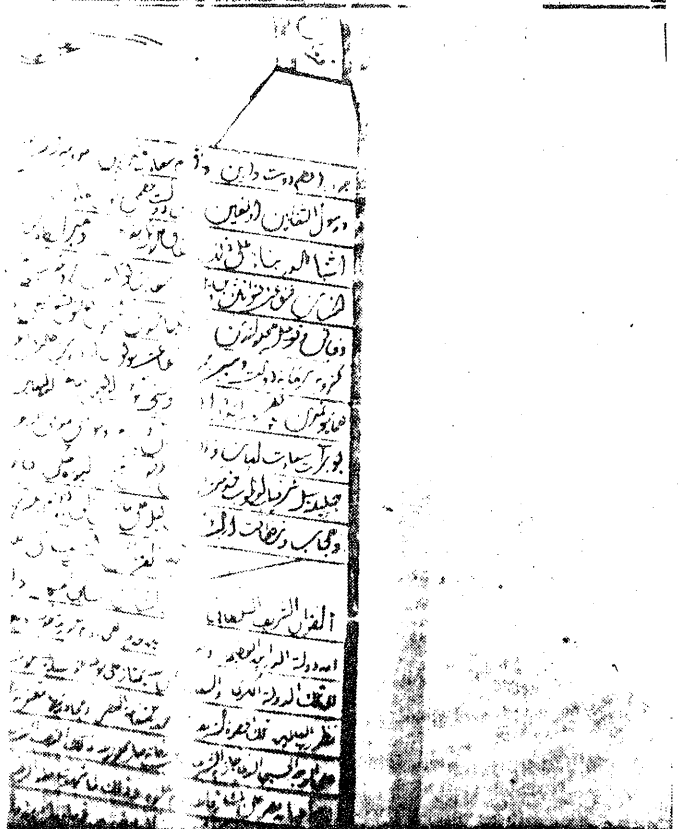
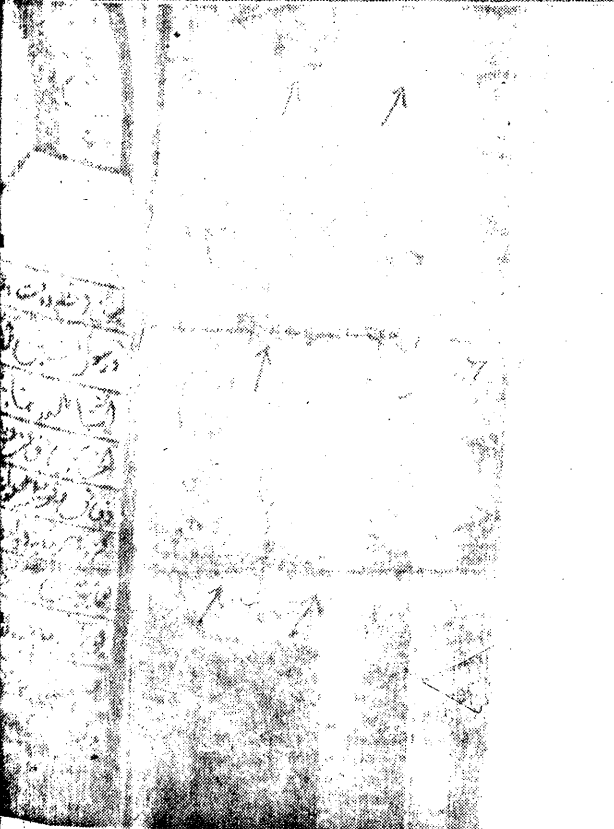
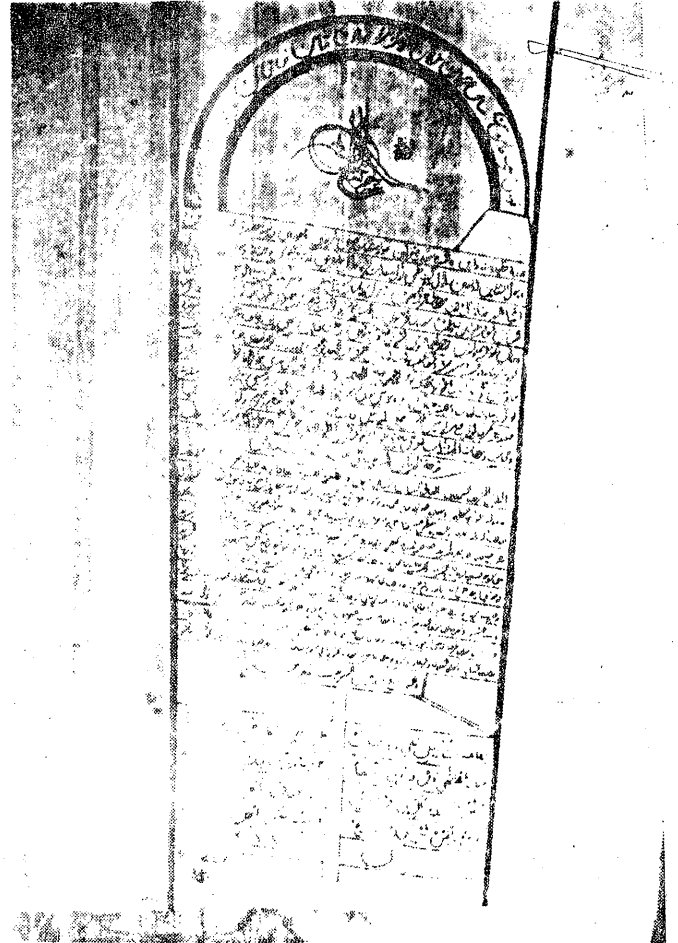
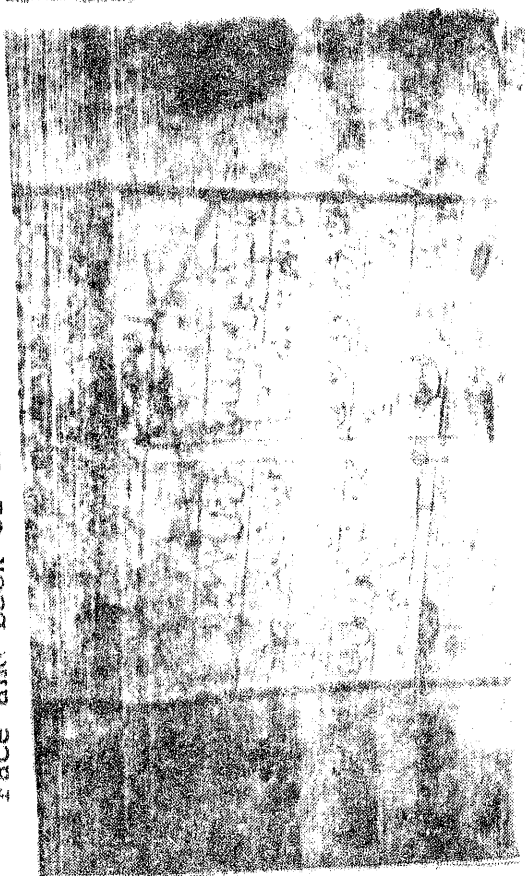


Photo No. (15) (7 & B)

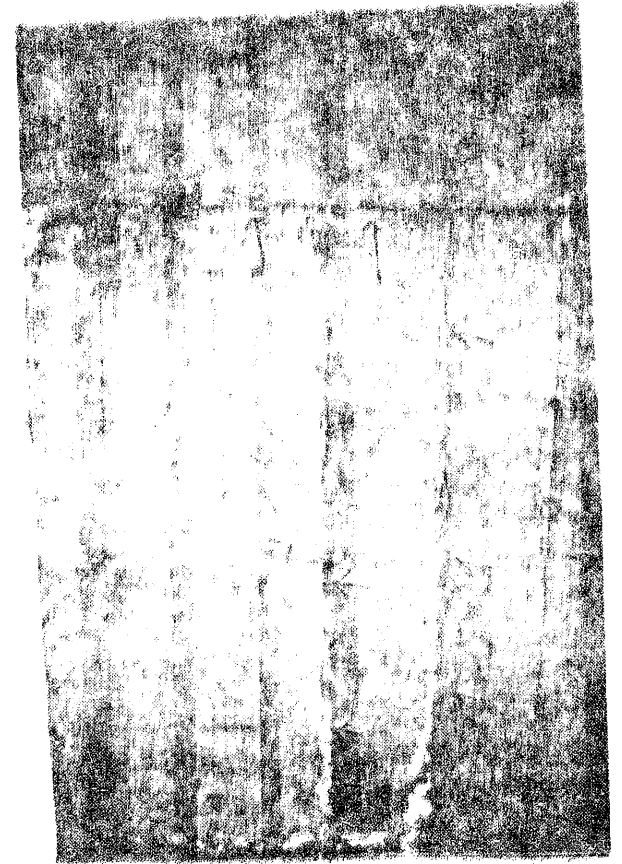
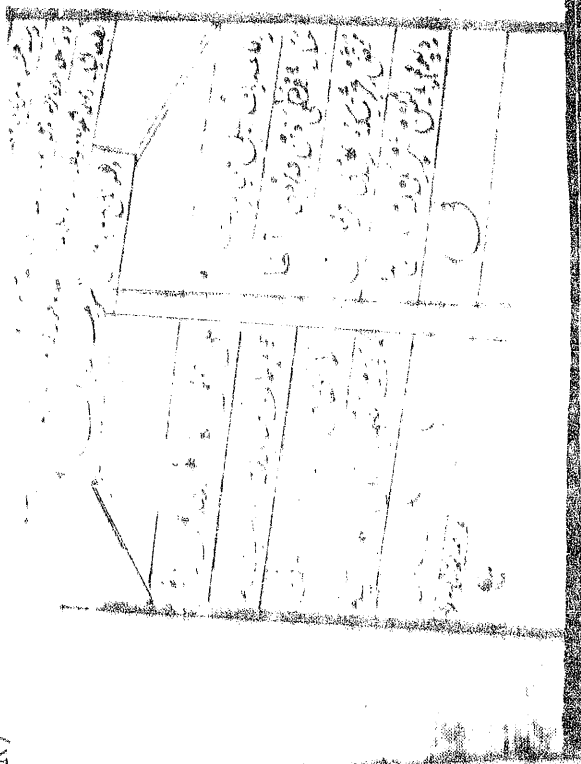
Face and back of the document before (T & R)



(A)

Photo No. (16) (A & B)

The same after (T & R)



(B)

Photo No. (17)

Document (c) before (T & R)

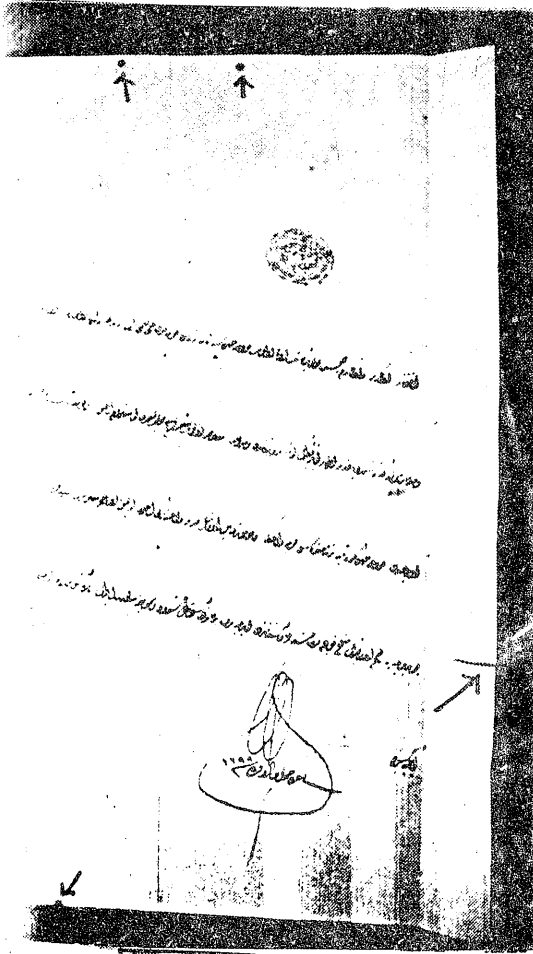
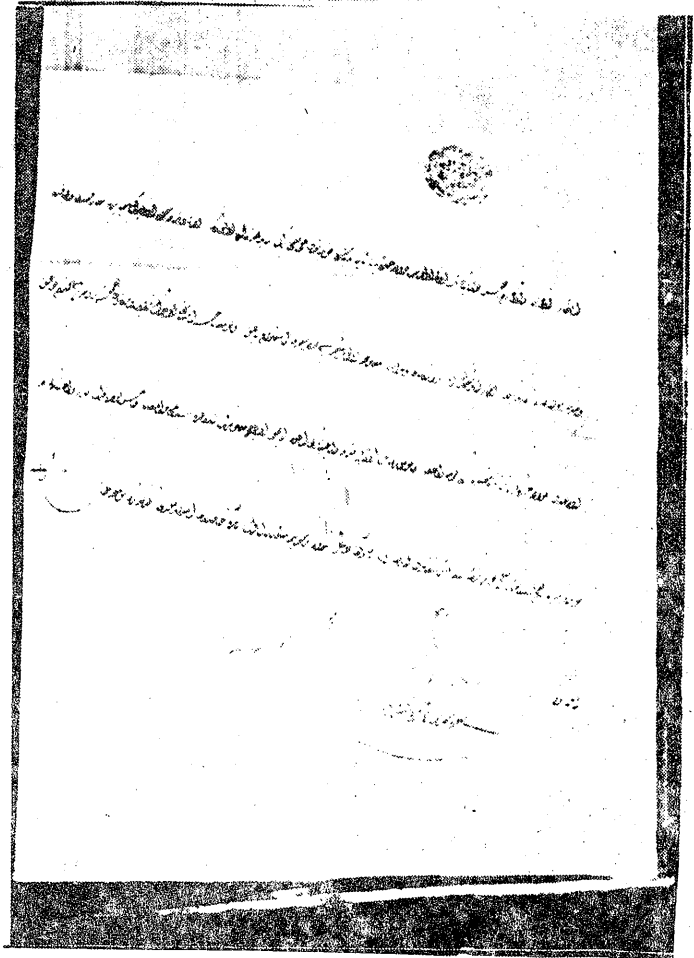


Photo No. (18)

The same after (T & R)



39 X 57 cm.

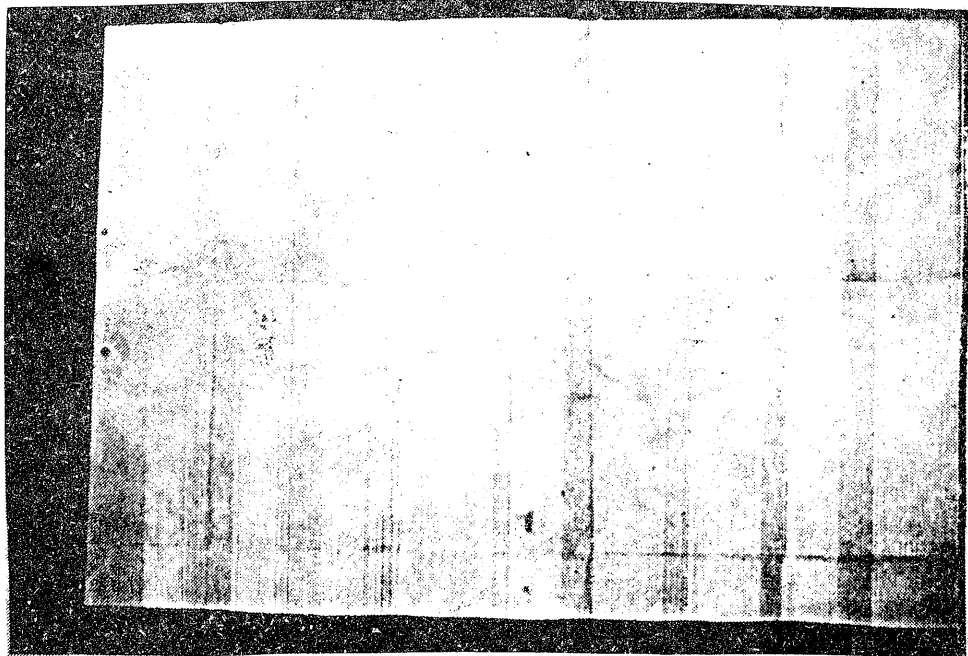
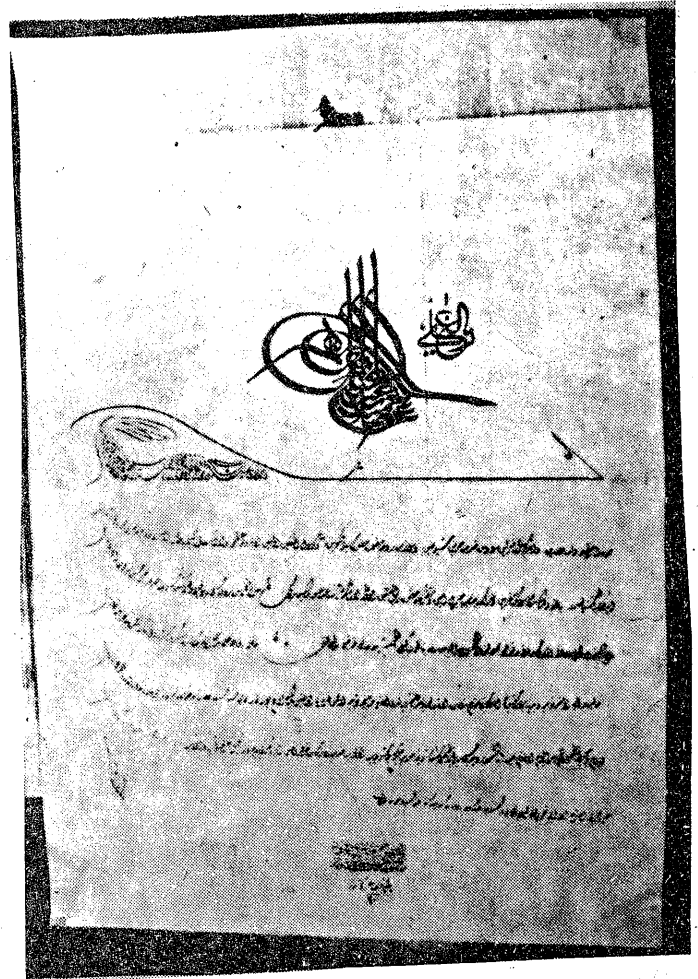
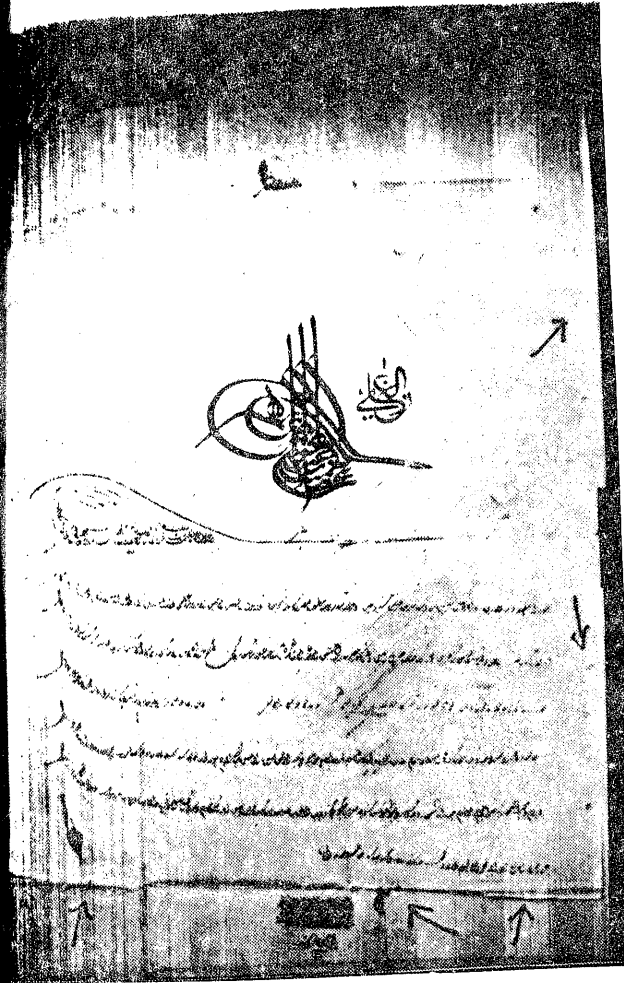


Photo No. (19)

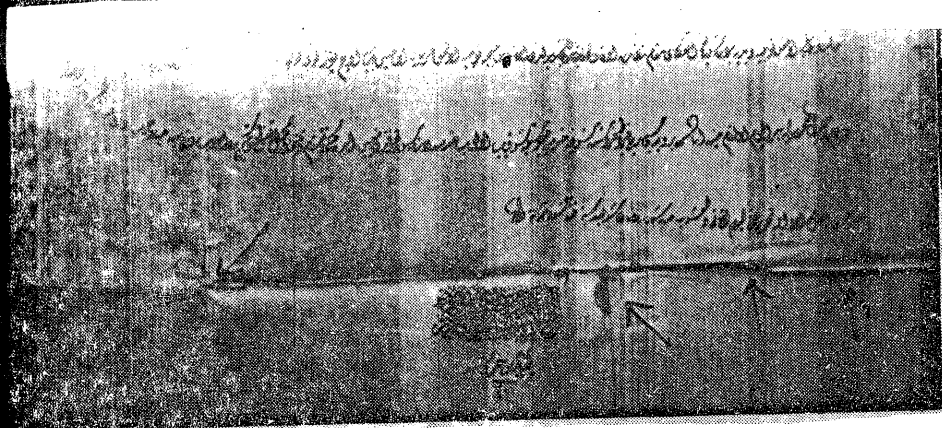
Back of the document after mending

Photo No. (20) (A & B)
Document (D) before (T & R)

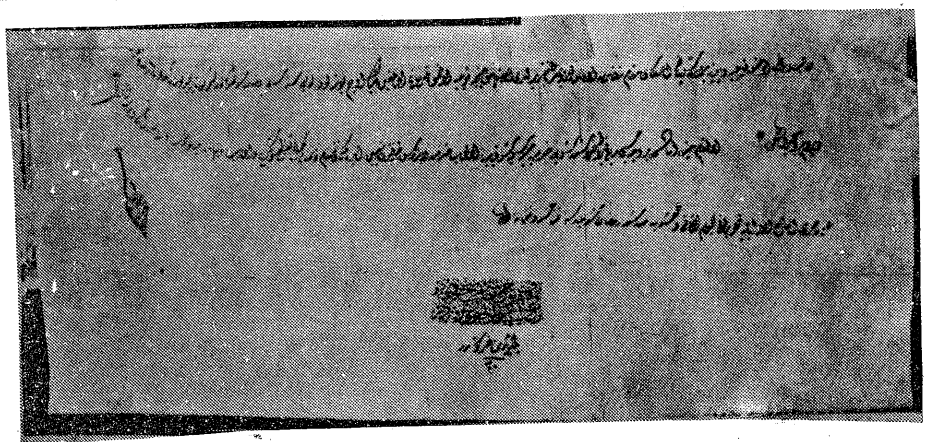
Photo No (21) (A & B)
The same after (T & R)



55.5 X 80.5 Cm.



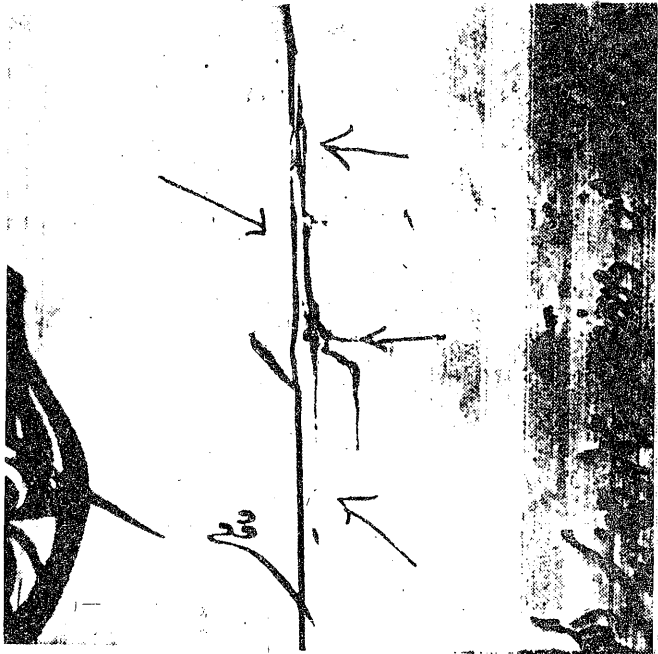
(A) The lower part of the document before (T & R)



(B) The same lower part after (T & R)

Photo No (22) (A & B)

Focus of document (D) before (T & R)

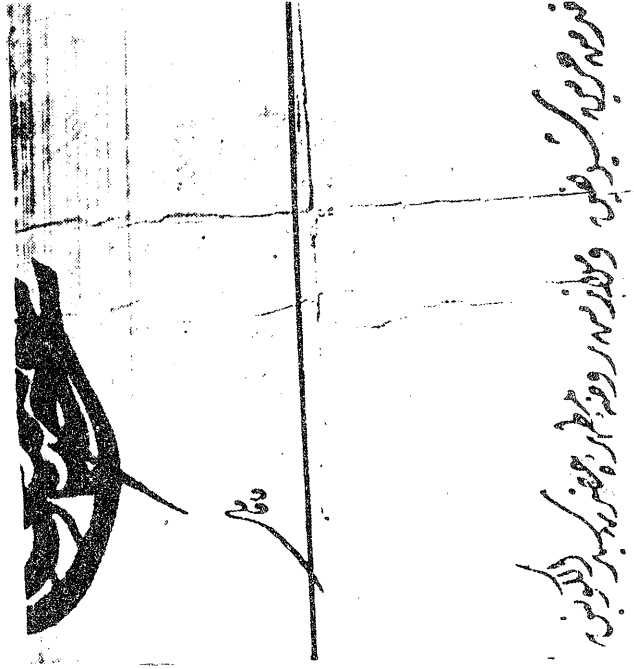


(A)



(B)

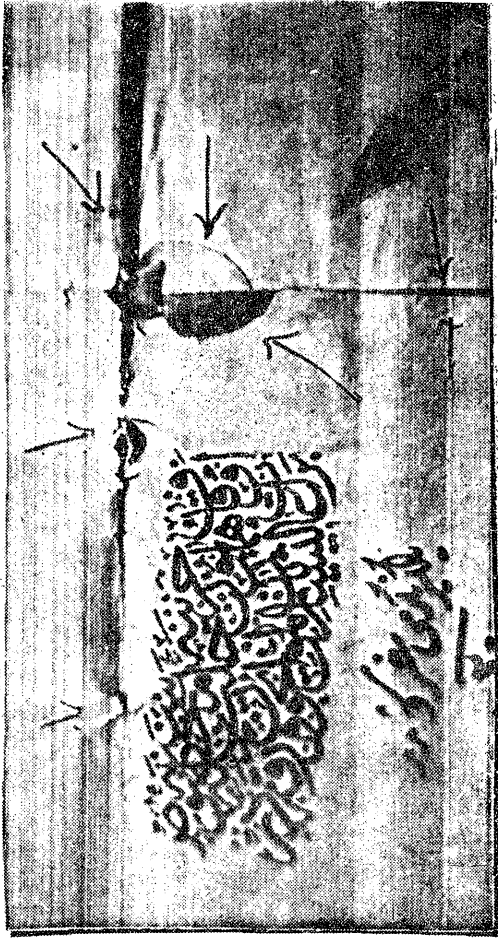
Photo No (23) (A & B)
The same focus after (T & R)



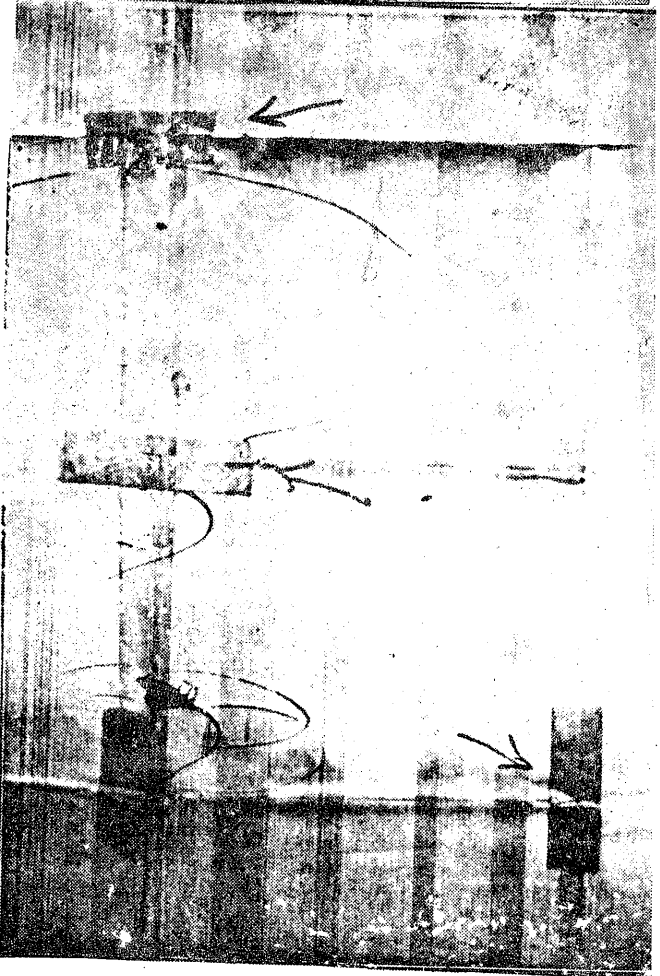
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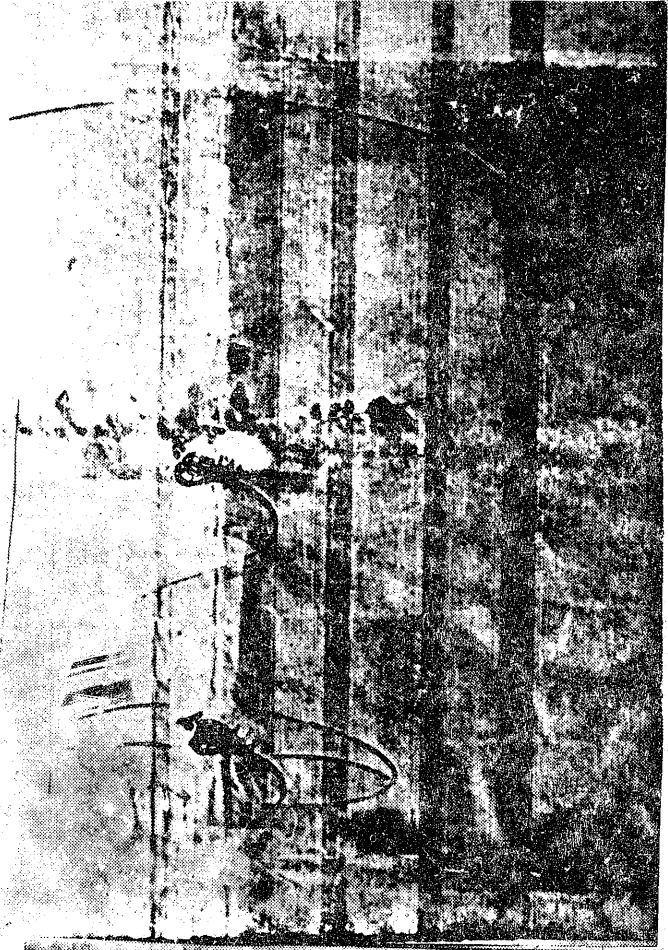
Focus of document (D) face and back before (T & R)



The same after (T & R)



Signes on the Back of the document hide under old restoration by brown tapes.



See the appearance of signes after the removal of the old restoration.

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