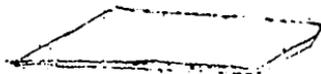
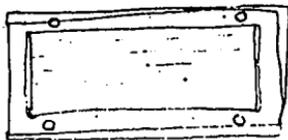
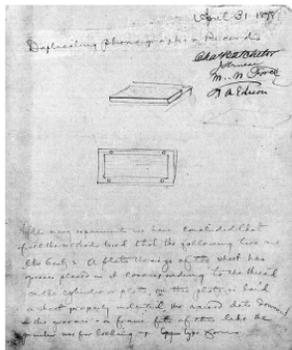


-1313-

[Menlo Park,] April 31 [May 1?] 1878.

Duplicating phonographic Records

Technical Note: Phonograph



After many experiments we have concluded that of all the methods tried that the following two are the best=¹ A plate the size of the sheet has grooves planed in it corresponding to the thread on the cylinder or plate. on this plate is laid a sheet properly indented, the raised dots downward in the grooves— a frame fits of this like the printers use for locking up epy type forms² This frame extends 1/2 and or 1 inch

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above the record the foil is gummed to the grooved platen ~~the best plaster~~ over this frame is a plate with a funnel shaped orifice & into this is poured the best plaster paris= after its set its turned upwards the foil taken from it & its then placed under a press whose piston is proved with a platten equal in size to the sheet this platten is of polished metal. four pins are on the frame holding the Paris, these are the registering pins over which the paper frame having the foil to be indented is placed, a sheet of gutta percha foil or other non fibrous material is laid on the foil & the press platten brought down f & forces the foil on the raised dots of the paris thus taking an accurate copy

The other plan is to substitute an electrotyped peice of Copper for the paris—²

T A Edison
J Kruesi

Chas Batchelor
M. N. Force

X, NjWOE, Lab., Vol. 17:84, 10 (*TAEM* 4:953, 880). Document multiply signed. “Duplicating phonograph records continued” follows at top of second sheet.

1. Other approaches, probably from before this date, are included in Edison Caveat 80 (Doc. 1341 [figs. 60–62]).

2. The day before, Edison had written Painter, “The electrotyping is a perfect success” (Doc. 1309). The first experiments in this process were conducted by William Hollingshead, a New York electrotyper. Hollingshead had seen Edison’s phonograph during the New Year’s exhibitions at Western Union, where he acquired a tinfoil recording. After making a matrix from the foil, he used deposits of copper to make electrotype duplicates of the recording. The deposits, which varied in depth between .004 and .0312 inches, “were exactly like the original tin foil having every scratch or mark faithfully reproduced thereon.” Hollingshead accompanied Joseph Moody to Menlo Park on 23 February and gave a piece of the copper record to Edison, who was “pleased that there was a possibility and certainty of preserving and duplicating any records made on tin foil or otherwise.” Hollingshead never returned to Menlo Park but was “informed that steps were immediately taken to exploit my method of obtaining reproduction from tin foil records.” Hollingshead’s deposition, pp. 11–12, *American Graphophone v. Leeds & Catlin*; Wilson 1878, 655; Cat. 1233:54, Batchelor (*TAEM* 90:80).

In June, Charles Cheever suggested to Gardiner Hubbard that they take “some active steps . . . in regard to perfecting arrangements for Stereotyping the Matrices, there have been several Stereotypes made of it, but they have all been reported to me as not reproducing well when placed upon the machine.” He felt that “Edison is so very busy between the visitors and his experiments that I fear that much valuable time will be lost unless we take outside means for getting at this part of the thing.” He therefore suggested “appointing a few people say a half dozen who would like to experiment with the same furnishing them each with a

Phonograph at cost price and offering a prize of a Thousand Dollars to the one who within the next two months shall produce the best result, no prize to be given unless such best one works in a satisfactory manner." He also indicated that the "Toy people" were interested in sharing the cost of these experiments. Nothing appears to have been done in this matter. Cheever to Hubbard, 10 June 1878, ESP Lbk. 1:394-95, UHP.