INVISIBLE PHOTOGRAPHY AND WRITING, SYMPATHETIC INK, ETC.

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Invisible Photographs of writings and printing—Make a silver print on the face of the stamp. To make visible, dip in hypo.
1. Sympathetic ink—Chloride of Cobalt—bring out with heat.
2. Cobalt acetate and saltpeter—(beet).
3. Cobalt Chloride and nickel chloride mixed—(beet).
4. Nitric Acid—(beet).
5. Solfuric Acid—(beet).
7. Saltpeter—(beet).
8. Copper Sulphate and ammonium chloride—(beet).
9. Silver Nitrate—(expose to sunlight).
11. Ferric sulphate—(bring out with infusion of gall-nuts or mercuric cyanide of potassium).
12. Copper sulphate—(bring out with mercuric cyanide of potassium).
13. Lead vinegar—(bring out with hydrochloric acid).
14. Mercurochrome—(bring out with potassium iodide).
15. Starch water—(bring out with tincture of iodine or re-sublimation of iodine wafers), (fumes).
16. Cobalt nitrate—(bring out with salicylic acid).
17. Soda ash or sodium carbonate—(bring out with phenol phthaloe).
18. Starch or gelatin, after it becomes dry, is made visible by fumes of iodine or by solution of potassium iodide. The writing becomes blue and disappears again by washing paper with a very weak solution of hypo sulphate of soda.
19. Letters written with a weak solution of the soluble chloride of platinum or iridium develop black when fumed with mercuric vapor. This ink is used for marking lined and is called iridium. This ink is sold in large bottles to laundries, etc. It is often used for smuggling information across the frontier, when the writing is on handkerchiefs, shirts, underwear, or on other surfaces.
20. Sulphate of copper, much diluted, used in writing with a soft brush into the printed lines. This is developed by fumes of strong ammonium, which makes the invisible writing appear bluish.
21. Soluble compounds of antimony will develop red writing by the use of hydrogen sulfide vapor.

22. Soluble compounds of arsenic or perchloride of tin will develop yellow writing by use of hydrogen sulfide vapors.

23. Diluted acid solution of iron chloride. Invisable writing will appear red by sulpho cyanide vapors and will disappear again upon fuming with vapors of ammonia.

24. Write characters on steel plate, wood, or any polished surface or on a smooth papered wall, with a thin solution of paraffine dissolved in benzene. Use fine stiff brush or cotton tipped goatee quill or fountain pen. Upon evaporation, writing becomes invisible, paraffine being transparent. To develop it, use finely powdered graphite on light background and finely powdered dragons-blood or linseed oil. Such ink remains on background, either as steel nails, carving knives or covers of tin boxes, etc. In every instance use two long cotton hair brushes—One should be round, about ½ inch thick, with long hairs, for powdery, and the other brush should be about an inch broad—a regular photographic camel's hair brush, for cleaning up surplus powder.

25. Dip a toothpick in common milk and write between lines of an ordinary letter. The writing will appear by being ironed out with a hot flatiron.

26. Write with a quill, with the following solution: Dissolve one part of lead nitrate, one part of uranous acetate and the same quantity of bluish chloride in 100 parts of distilled water; then add, drop by drop, a solution of sal ammoniac until the solution becomes transparent. Afterwards, mix with few drops of gum arabic. To bring out the writing, expose paper to fumes of sulphuric acid. The writing appears dark brown and after fifteen minutes or more the writing disappears, but may be made legible again by bringing the letter with a 2 per cent to 5 per cent nitric acid solution.

27. Writing on white paper with a common ordinary writing ink containing tannin gallic ferric base, using a quill, toothpicks, match or rounded fountain pen, can be made to disappear with the common ink eraser in a few seconds, such as Stanford's, Cutler's, etc. Such decolourized writings can be again made readable by the application of hydro sulphate of ammonia; Mr. Keyth has restored erased figures after a lapse of twenty years. This method is used by forgers such as Kork Becker, and to alter names and dates in passports.

28. Pencil marks and the surrounding disturbed paper surface can be made visible by the fumes of reehaluminate of iodine.

29. Writing with a very weak solution of chloride of cobalt can be made visible by the heat of the human body, or ordinary heat from a stove or flatiron. Upon cooling the writing again disappears.

30. Suspect printed black ruled lines as sometimes border a page or divide columns. These lines are used by writing messages on them in the Morse code (dots and dashes) with a transparent solution of gum, or the white of an egg beaten up with six ounces of water. For developing, heat paper slightly, and powder with finely powdered dragons-blood. The code will appear in red dots and dashes on the black lines.

31. Counterfeit stamp impressions are made by the photo-photographic process. They can be made very close facsimiles, so as to deceive the examiner.

32. On all documents and passports, examine ink, holding the document against the direct sunlight and then any variation in the color of the ink is noted in the magnifying glass.

33. Steel die impressions are easily imitated by photographing the seal impression, on a large scale, say about six inches in diameter. A plain silver print is made from this negative. The etched lines up this photograph with Hlugus waterproof ink. Subsequently the photograph is dipped in a solution of cyanide potassium, which makes the photograph disappear and leaves a perfect drawing of the seal on an enameled scale. The silhouetographer reduces this photograph to the exact size of the genuine seal on the metal, which, in turn, is etched. Trees in the same scale and female metal plate of the die is mounted on a stand for making impressions. This method was shown me by Sir Harry Cooper, the noted English forger, from Australia.

34. A solution of common table salt or urine is often used by convicts in prison, to write between the lines of a letter, with a match. The confederate heats the paper to make it legible.

35. Photography is used as follows: A film negative is made of letters, plans, etc., on a reduced scale, but the film is not developed. It is then placed in a transparent celluloid envelope and this envelope is placed between wooden boards, or bound in book covers. On reaching its destination, the confederate develops the film and makes suitable enlargements therefrom. To the uninitiated, who would open the box in the daylight, the transparent gelatine envelope would destroy all chance of disclosure.

36. German Secret Ink. Take one ounce of linseed oil, 20 ounces of liquid ammonia, 100 ounces of distilled water. This mixture must be well shaken up before using with a quill pen. Write in free space between the words written in pencil. To make this writing appear, dip the whole letter in cold water, and read secret writing while wet. Upon drying the writing disappears, but upon moistening with water, it will reappear again.

37. Vanishing Ink. Rodisable only for twenty-four hours after writing. To make: boil five parts of sulphuric acid, add one part of water, and two parts of nitric acid. To this add one part of sal ammoniac. When cold dissolve a little gum in it. Use quill or blunt pointed fountain pen, but if too many pen point furrows.

38. Writing made with vegetables or fruit juices, such as onion, leek, artichoke, cabbage, lemon, etc., becomes visible by being ironed with a hot flatiron.

39. Take an unexposed sheet of bromide paper, fill a fountain pen with Nernst solution (used for developing bromide papers) write your communication with the fountain pen; of course, this must be done in a darkroom, under a red lamp, allow the writing to become dry on the paper, fix the print in hypo, wash and allow to dry, dip the print in strong solution of mercuric chloride, which will completely eliminate the writing and leave a white sheet of paper. Upon dipping the sheet in a weak solution of hypo, the writing will appear again in a permanent state.