Explanation of plate XXII, in illustration of the Report on anaesthetics, page 387.

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EXPLANATION OF PLATE XXII.

In illustration of the Report on Anæsthetics, page 387.

Some of the tracings referred to in the text are here reproduced, it being understood that in the original the tracings are white on black instead of black on white. The basement line represents the point at which the needle was when the mercury in the two limbs of the manometer was level. According to the pressure, the mercury is pressed down in the one limb and raised in the other, the tracing giving the latter. As the actual pressure equals the weight of the column of mercury raised, this will be represented by the difference in the levels in the two limbs, and will be double the distance from the basement line to the tracing. The tracings are to be read from left to right.

A. Represents the occurrence mentioned in the text, in which, while a dog was recovering from chloroform, a sudden fall of pressure occurred, with great reduction in the frequency of the heart's contractions. There is a gradual recovery, with striking inequalities of pressure corresponding with respiratory movements.

B. Another sudden fall of pressure and retardation of the heart's contractions occurring seventy seconds after the removal of the chloroform, and when the pressure had returned nearly to the normal.

C. The arterial pressure in a dog under the influence of chloroform. There is a progressive but somewhat irregular reduction of pressure, ending in a stoppage of the heart, while respiration continues. There is an imperfect recovery of the heart, the contractions barely causing the pressure to reach the basement line. Beneath this tracing are copies of the markings made with the chronograph, half seconds being registered. The markings used to indicate the administration or leaving off of an agent are also reproduced.

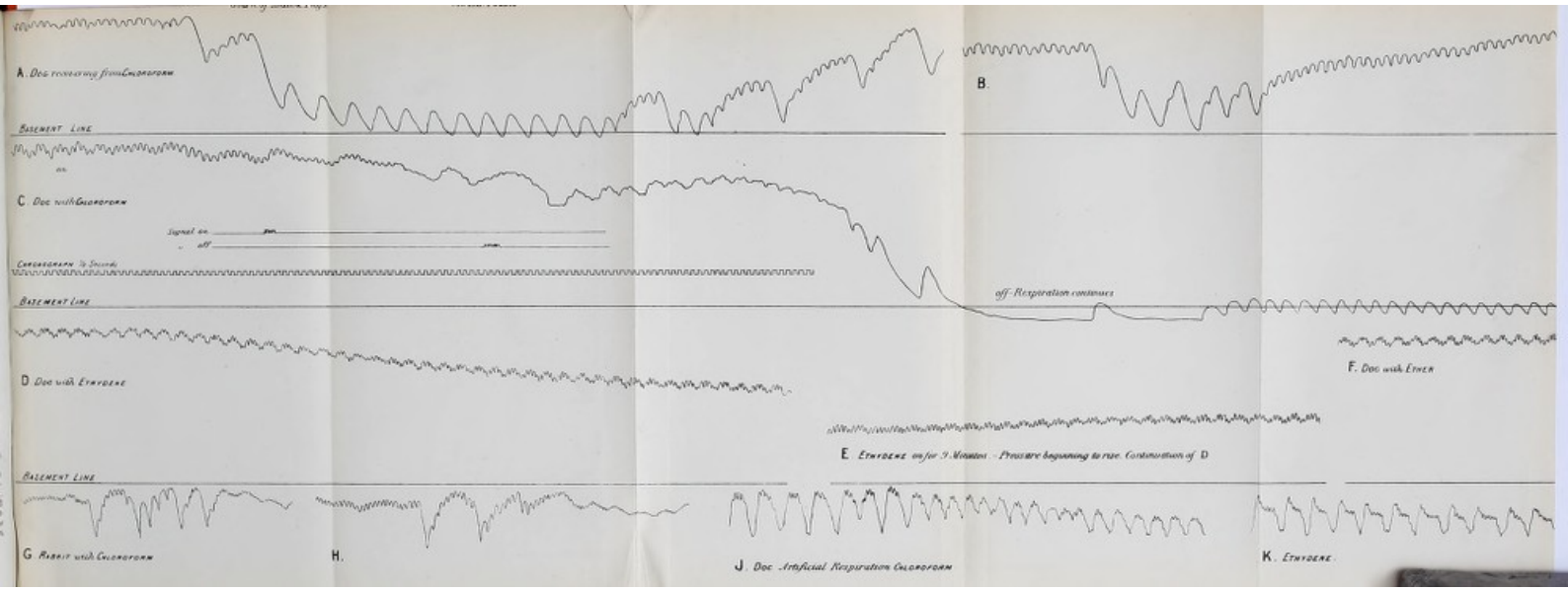
D. The arterial pressure in a dog under the influence of ethidene. There is a perfectly regular and gradual reduction in the pressure, the respiratory variations being preserved.

E. This is a continuation of D, after an interval. Ethidene has been given all the time, and the illustration begins at the point where the pressure is lowest. The pressure is now beginning to rise, the ethidene being still continued.

F. The arterial pressure in a dog under the influence of ether. No effect on the pressure is produced, and the respiratory variations are perfectly preserved.

G and H show the variations in pressure produced in rabbits by the administration of chloroform, the animals being at this time imperfectly under its influence. These variations are presumed to be reflex.

J and H show the exaggerated respiratory variations produced while artificial respiration was being carried out. It is to be understood that the animals made synchronous respiratory efforts. The arrangement for artificial respiration not only blew air into the lungs, but sucked it out.


A. Dog recovering from Chloroform
Basement Line
B.
C. Dog with Chloroform
Signal on
" off
Chronograph & Sounds
Basement Line
off - Respiration continues
F. Dog with Ether
D. Dog with Etherene
E. Etherene on for 9 Minutes - Pressure beginning to rise. Continuation of D
Basement Line
G. Rabbit with Chloroform
H.
J. Dog Artificial Respiration Chloroform
K. Etherene.