

the heart almost ceased beating before Dr. Fell arrived.

"It was impossible to give emetics per os, so we gave one-fifth of a grain of apomorphine hypodermically, as soon as Dr. Fell arrived. Then with the patient on the table we instituted forced respiration (by face mask).

"The patient's lungs filled easily and well without tracheotomy.

"We breathed for her steadily for about one hour, and then she moved her hands to her face and opened her eyes. Her cyanosis had entirely disappeared, and good oxygenation was manifest. The face-mask was taken off, and the patient breathed for herself in a long, slow, sighing fashion several times, but ceased entirely after a few minutes. The lips turned blue once more, and she would inevitably have died had we not recommenced forced respiration again. Very soon she was again able to breathe alone, and temporarily stopping the forced respiration, we gave her mustard water, and she vomited profusely. We repeated the mustard water, but she did not vomit; her head fell back, respiration ceased, and again she was turning blue when we applied the face-mask and used forced respiration for the third time.

"After a short time we induced her to swallow another large cupful of warm water and mustard with a teaspoonful of salt in it, with the result that she emptied her stomach completely.

"As is common in conditions where the respiratory centre is benumbed, emesis seems to stimulate that centre, and respirations were more willingly taken. Even at this junction, however—being about two and one-half hours from the time that forced respiration was commenced—she would certainly have died had it not been continued, as it was, altogether for four hours. At the expiration of that time she breathed herself seven times in the minute, and in the morning her respirations were 20, her pulse 80, temperature 101°.

"Dr. Herbert U. Williams, who kindly remained all night with the patient, stated that the pulse gradually fell, and the respirations gradually increased from hour to hour; that he gave her a hypodermic of atropine (the one-hundred-fiftieth of a

grain), of strychnine (one-sixtieth of a grain), and of tincture of digitalis (fifteen drops), about 11.30 p.m. At 1.30 a.m. she had a cup of strong coffee, and a glass of warm milk at 2 a.m. At 2.30 a.m. she urinated freely.

"This patient said she took eleven grains of morphine dissolved in a glass of water at 1 o'clock on the 8th. I saw her at 4. Dr. Fell arrived about 4.30; we performed forced respiration until 9 o'clock, with the result that the woman's life was saved.

"I am convinced that ordinary artificial respiration would not have saved her life, and I cannot speak in too high praise of Dr. Fell's effectual and simple apparatus for forcing such a patient to breathe, if necessary, for many hours in succession. I think more physicians ought to possess and have in readiness Dr. Fell's apparatus, and many lives would be easily saved, where now they are lost because no such facility is at hand.

"It is interesting to note in this case that diplopia existed from the return of consciousness on Thursday evening until some time Saturday morning; and for four days the patient thought a cup of food, or whatever it might be in her hand, was held at the lips, when in reality it was four inches from them, and at first she poured out milk and tea upon her dress."

#### CASE XXIII.—DR. FELL.

December 1, 1891. Called to Erie County Penitentiary by Keeper Albert H. Neal. Geo. C. W., a prisoner, had taken tincture of opium, 3 oz., and a quantity of sweet spirits of nitre, with suicidal intent, at 1 p.m.

Grains 1-10 apomorphia hypodermically administered by Drs. Fohl and Hays, resident physicians, produced vomiting. I reached the case at 3.10 p.m. The conditions usually produced by the poison were present. After about one half-hour's forced respiration work per the face-mask, the cyanosis prevailing passed away, heart action became stronger, and patient became conscious at short intervals of time. This condition prevailed under forced respiration for some four hours, then auto-respiration ensued. The stupor was unusual, and I ascribed it to the intense congestion of the encephalonic vessels. Death, I believe, has been caused in several of my cases by this condition. At my request Drs. Fohl and