

surface and a great deal of hemorrhage in the surrounding tissues. The dilation of the blood vessels indicated to me that the injury had been made in the vagina some little time before death. Perhaps ten to fifteen minutes. It had occurred before death by reason of the fact that these blood vessels were dilated. Inflammation had set in and it takes an appreciable length of time for the process of inflammatory change to begin. There was evidence of violence in the neighborhood of the hymen. Rigor mortis varies so much that it is not accurate to state how long after death it sets in. It may begin in a few minutes and may be delayed for hours. I could not state from the examination how long Mary Phagan was dying. It is my opinion that she lived from a half to three-quarters of an hour after she ate her meal. The evidence of violence in the vagina had evidently been done just before death. The fact that the child was strangled to death was indicated by the lividity, the blueness of the parts, the congestion of the tongue and mouth and the blueness of the hands and fingernails. The lungs had the peculiar appearance which is always produced after embalming when formaldehyde is used. I am of the opinion that the wound on the back of the head could not have been produced by this stick (Exhibit 48 of Defendant). I made a microscopic examination of the vagina and uterus. Natural menses would cause an enlargement of the uterus, but not of the vagina. In my opinion the menses could not have caused any dilation of the blood vessels and discoloration of the walls. From my own experiments I find that the behavior of the stomach after taking a small meal of cabbage and bread is practically the same as taking some biscuit and water alone. I examined Mary Phagan's stomach. It was normal in size, normal in position, and normal in every particular. I made a microscopic examination of the contents in Mary Phagan's case. It showed plainly that it had not begun to dissolve, or only to a very slight degree, and indicated that the process of digestion had not gone on to any extent at the time that this girl was rendered unconscious. I found that the starch she had eaten had undergone practically no alteration. The contents taken from the little girl's stomach was examined chemically and the result showed that there were only slight traces of the first action of the digestive juices on the starch. It was plainly evident that none of the material had gone into the small intestines. As soon as food is put in the stomach the beginning of the secretion of the hydrochloric acid is found. It is from the quantity of this acid that the stomach secretes that doctors judge the state and degree of digestion. In this case the acid had not been secreted in such an excess that any of it had become what we call free. In this case the amount of acid in this girl's stomach was combined and was 32 degrees. Ordinarily in a normal stomach at the end of an hour it runs from 50 to 70 or 80. I found none of the pancreatic juices in the stomach which are usually found, about an hour after digestion starts.

#### CROSS EXAMINATION.

I don't remember when Mr. Dorsey first talked to me about making this autopsy. As long as the heart was beating you could have put a piece of rope