day after; also nausea and vertigo for two days after. He had been overcome once before under the same conditions but soon regained consciousness in the open air. There was no history or sign of epilepsy or other condition simulating this. Others in the building had the dizzy feeling and headache but reached the open air without help.

CASE 2.—A chop-mill operator disconnected the exhaust-pipe of gasoline engine and turned it into a tank of water within the building, to heat the water. After the engine had been running for half an hour the operator became extremely dizzy and was barely able to escape to the open air.

CASE 3.—A farmer placed his gasoline engine in a large barn, part of which was occupied by cattle. After running the engine for some time he noticed the stock dropping in their stalls, and was unable to get them up. He soon felt dizzy and had difficulty in reaching the open air in time to avoid unconsciousness. He had marked headache and vertigo for some time after.

In all cases the buildings were not tightly closed. In Case 1, especially, all doors were wide open, giving very free circulation of air.

OPEN-TUBE LARYNGEAL SPECULUM

E. FLETCHER INGALS, M.D.

CHICAGO

This instrument was designed to facilitate the introduction of the bronchoscope or to be used in direct laryngoscopy either for diagnosis or operations. The handle has been placed at an acute angle to the tube, a feature which is important in enabling the operator to

Open-tube laryngeal speculum.

hold the instrument firmly with the patient either in the sitting or the recumbent position. The tube is open on one side, which permits the easy withdrawal of the instrument after the introduction of the bronchoscope, yet the opening in no way sacrifices the advantages obtained by the tubular instruments heretofore employed for similar purposes, and its use is not attended by the difficulties that have sometimes been experienced in withdrawing the slide that closes the opening in some tube specula. The light is introduced along a protecting groove so that it is out of the way in operative procedures, yet it is not liable to be dimmed by secretions that might find their way into an auxiliary tube. The instrument is made in two sizes, one 14 cm. long for children, the other 17 cm. long for adults. I have found this much more satisfactory than other instruments I

have used for direct laryngoscopy or for introducing the bronchoscope. It may be employed easily when the parts have been properly anesthetized by cocaine and suprarenalin. It is best to make the examination or operation when there is no food in the stomach, as the throat is then more tolerant of manipulation and vomiting is much less likely to occur.

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Therapeutics

TOBACCO

In this age of the ever-increasing frequency of high blood tension, arteriosclerosis and cardiac weakness, the action of tobacco is becoming more and more a topic of importance. While it is true that the number of non-smokers among men is increasing, it is also true that the number of men, young men, and even boys, who smoke excessively is increasing.

In investigating the exact pharmacologic action of tobacco, while we must seriously and carefully consider the scientific findings of laboratory investigators, it becomes evident that these findings do not express the whole truth of the action of tobacco on the individual addicted to its over-use.

The only active constituent of tobacco seems to be the alkaloid nicotine, and this alkaloid acts principally on the nervous and circulatory system. In concentrated form it is one of the most quickly acting poisons, and may produce death in less than a minute by causing immediate respiratory failure, the heart beating for some time after respiration ceases. In less concentrated doses the symptoms are severe nausea, vomiting and purging, with profuse salivation, sweating and a gradually failing heart and respiration.

When nicotine is injected intravenously or subcutaneously there is first a rise in the blood pressure, which is probably due to an irritant action on the blood vessel walls. This, however, is soon followed by a lowering of blood pressure, due to the disturbing influence on the heart. The action on the heart varies with different doses, and often from minute to minute. At first there seems to be decided inhibitory action, by a stimulation of the pneumogastric nerves. If the dose is sufficient to paralyze the ganglia of the pneumogastric nerves the heart becomes rapid, and soon the heart muscle itself is depressed and later paralyzed. Most of the secretions of the body are increased, especially that of the salivary and sweat glands.

Nicotine is a stimulant to peristalsis, both of the intestines and stomach. Nausea and vomiting, though partially due to excessive stomach contractions, are also doubtless due to the irritant or depressant action on the vomiting center in the medulla.

Cushny says that nicotine first stimulates and later paralyzes all of the sympathetic ganglia. If this is true of large doses, small doses taken in constantly (as by smoking) by young boys must profoundly affect growth and nutrition.

The nervous twitchings and fibrillary contractions of muscles seems to be due to an action on the central nervous system. Nicotine does not seem to be a stimulant to the higher centers of the brain, except possibly during the actual act of smoking or puffing at a cigar or pipe. The almost immediate action is a depressant and quieting one on the central nervous system; in