

The medical detective : a poison museum for students : aids in tracing crime.

Contributors

Royal College of Surgeons of England

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Wellcome Collection
183 Euston Road
London NW1 2BE UK
T +44 (0)20 7611 8722
E library@wellcomecollection.org
<https://wellcomecollection.org>

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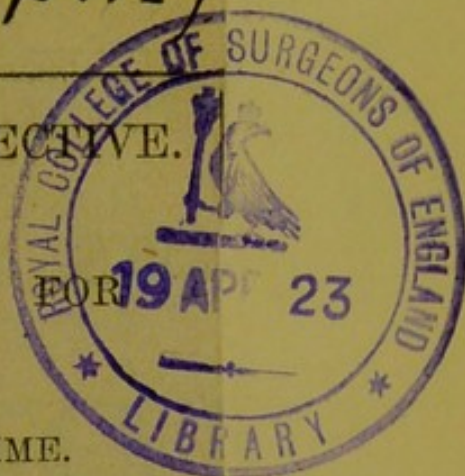
THE MEDICAL DETECTIVE.

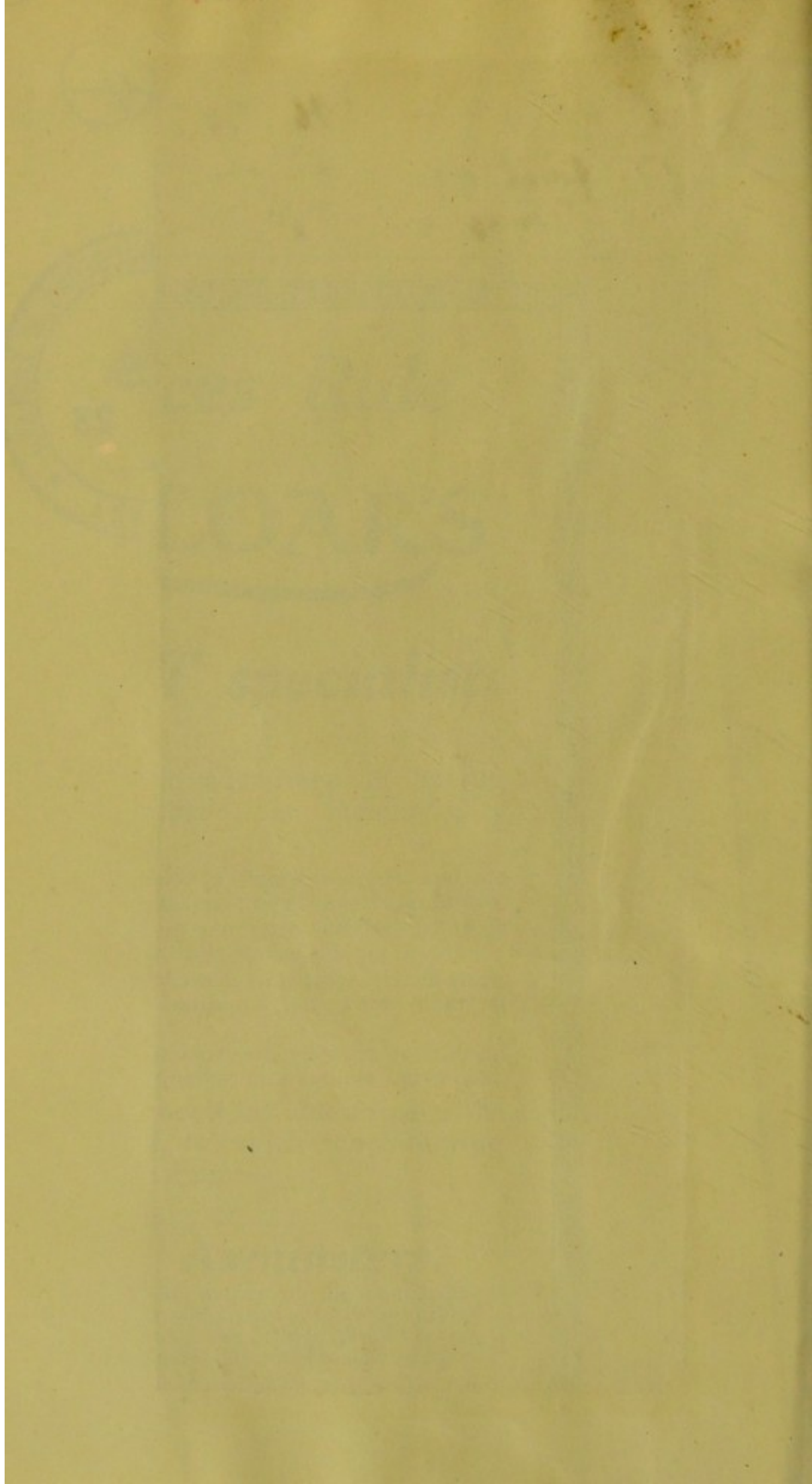
A POISON MUSEUM
STUDENTS.

AIDS IN TRACING CRIME.

The remarkable progress made during the last few years in the science of legal medicine has led to the formation at University College Hospital Medical School of a museum of specimens for the use of students reading this subject. The museum, though as yet a small one, is, as was reported in *The Times* of Saturday, of a highly interesting character, and illustrates how many difficulties and pitfalls surround the medico-legal expert who is called upon to give evidence in an important case.

Poisons and specimens illustrating the effects of poisons on the tissues and organs of the body necessarily occupy an important place in the collection. Arranged round the walls of the museum are bottles and jars containing samples of all the common toxic substances—arsenic, antimony, prussic acid, carbolic acid, oxalic acid, mercury, belladonna, opium, nuxvomica, calabar bean, croton seeds, and many others, and of a number of the rarer varieties, including hyoscyamine, of sinister repute since the Crippen trial, and pyridin, a most deadly liquid which in very minute quantities is found in dirty tobacco-pipes, and which, with nicotine, accounts for the disastrous effects of over-smoking. In addition to the actual poisonous substances, there are frames containing the leaves of poisonous plants; these have been collected as an aid to the identification of material found in the stomachs of persons the circumstances of whose deaths may have given rise to suspicion.





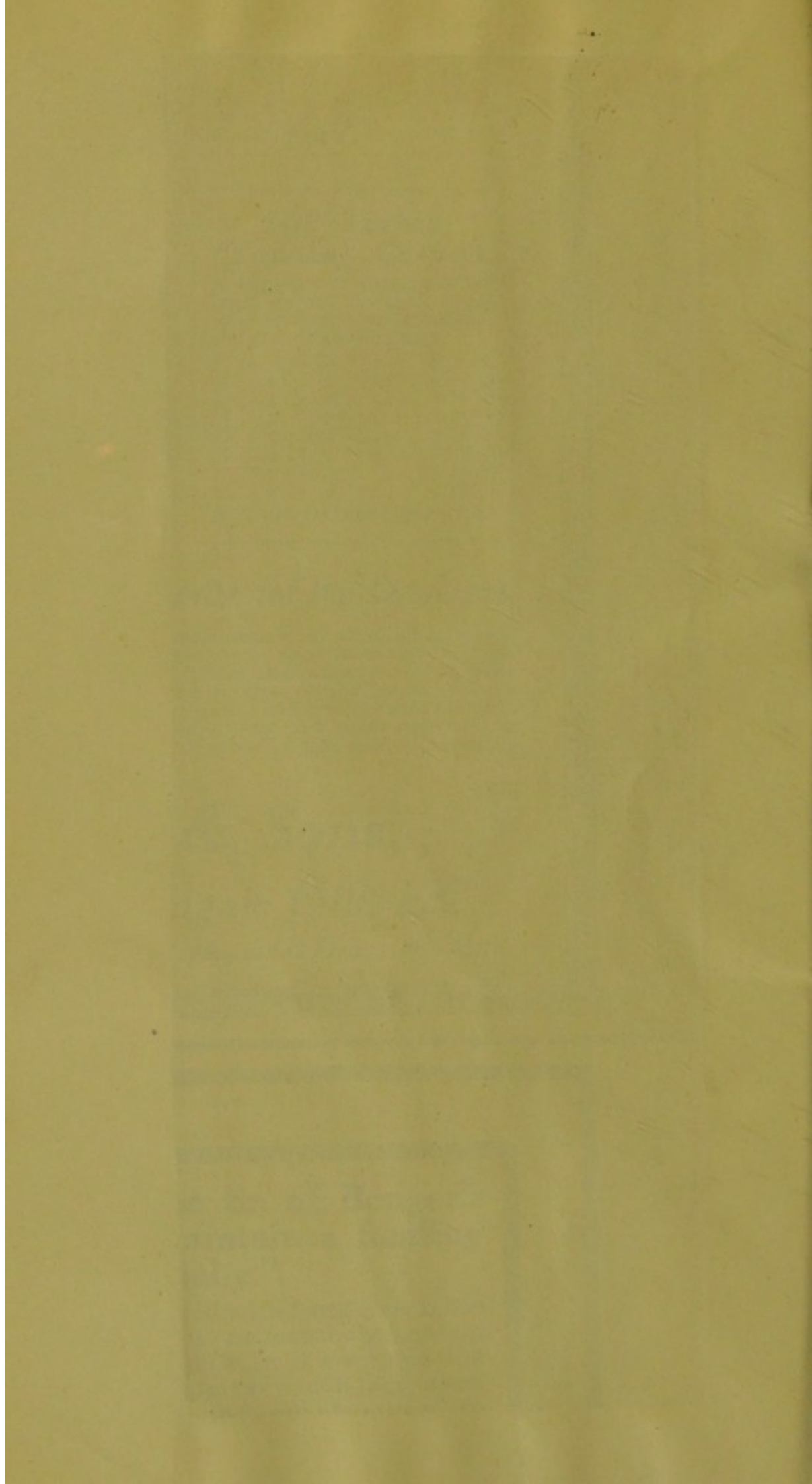
EFFECTS OF POISONS.

The effects of various poisons on those swallowing them are illustrated by a row of rather forbidding-looking bottles, containing actual specimens. In one of these bottles are the tongue and throat of an unfortunate individual who drank a quantity of nitric acid—*agua fortis*. The tissues are badly burned and scarred, the powerful acid having eaten holes in the mucous membranes in several places. Another similar specimen shows the effects of carbonic acid, and the peculiar darkening of the organs caused by this corrosive. Antimony poisoning is illustrated by a piece of the wall of the stomach of a victim, whilst the appearances following the taking of ammonia—which does not scar—and muriatic acid are also shown.

In criminal poisoning cases it has frequently happened that the body of the victim has been exhumed in order to carry out tests for the suspected material. In these cases it is of first importance that the medico-legal witness should differentiate absolutely, not only between poisons entering the body before death and poisons engendered during the process of decomposition, but also between the appearances of corroded tissues and of tissues wasting away towards what may be termed "natural dissolution." To aid the student in gaining a clear idea of these appearances, specimens have been prepared showing various organs, and more especially the walls of hollow viscera like the stomach, in an advanced *post-mortem* condition. These are arranged close to the specimens of poison-effects, and thus afford a very striking and instructive contrast. The apparatus used in testing for arsenic and antimony is exhibited. These tests are among the most delicate known to chemistry, and render it almost impossible for these substances to be used and to escape detection. Arsenic, in particular, remains in the body long after death has occurred, and has even been recovered from the soil surrounding a grave.

GUNSHOT WOUNDS.

Exhibits illustrating gunshot wounds of various kinds are given a prominent place. The fact that the site of entry of the bullet is usually marked by a small hole, while that of its exit presents a large ragged wound, is illustrated by a specimen of a human foot. This foot was pierced transversely to its long axis. On one side is a small aperture about the size of a sixpence; on the other side there appears an extensive laceration extending from the ankle almost to the roots of the toes. The splintering of bone which often accompanies a shooting accident is demonstrated by a shattered humerus (long bone of the arm), whilst a skeleton of an elbow joint shows how a bullet cut off and carried



away the head of one of the bones of the forearm. Another interesting exhibit is the skull of a suicide who placed the muzzle of a revolver in his mouth against his palate. The bullet passed through the nasal chamber to the base of the brain, traversed this organ, and found egress through a hole in the vault of the cranium.

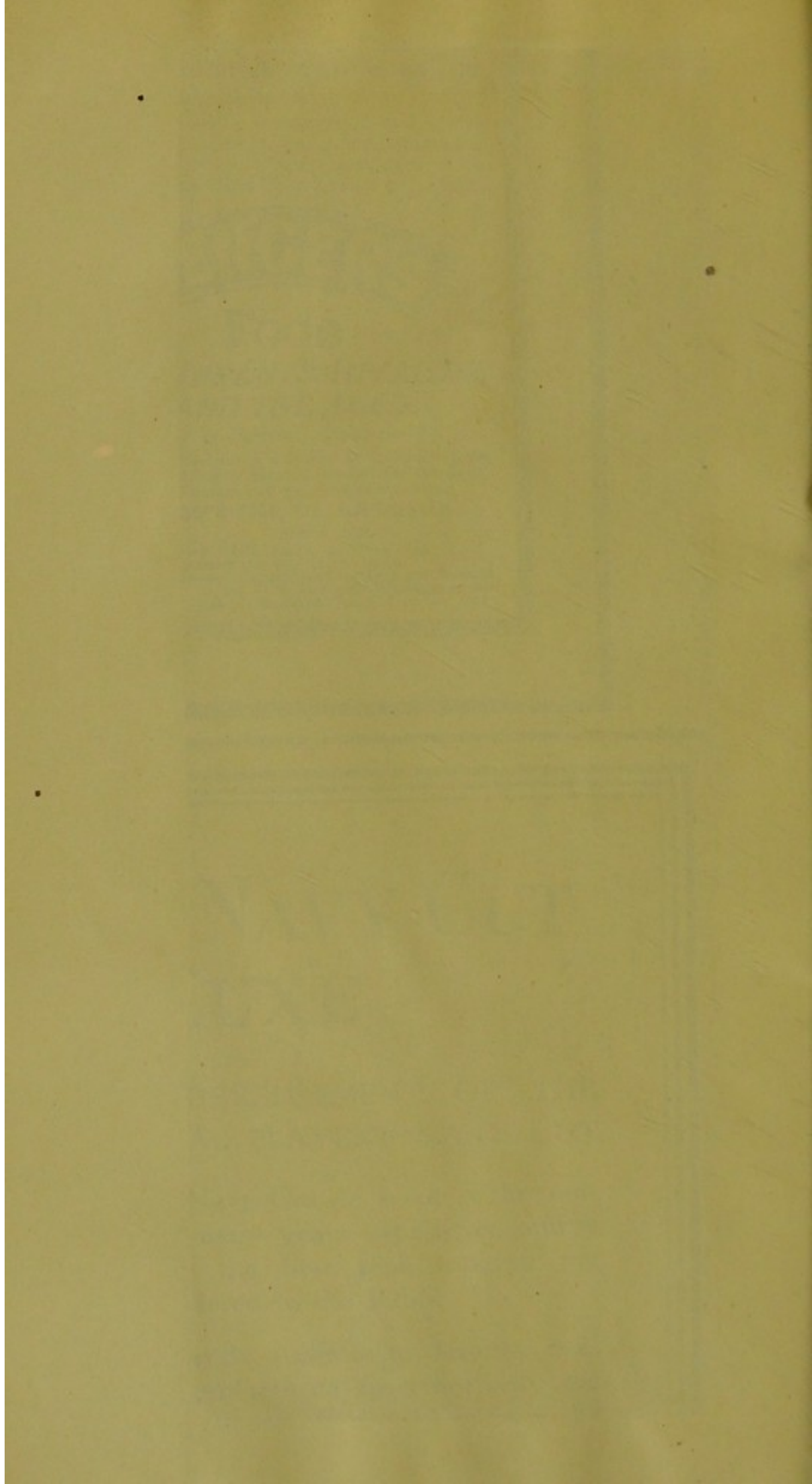
Few people, probably, know that the liver is a comparatively brittle organ, capable of being fractured. That such is the case, however, is shown by a specimen taken from the victim of a street accident. This liver is literally cracked in two and presents an appearance like that of a loaf of stale bread which has been torn asunder. Specimens illustrating the important differences between punctured, contused, incised, and lacerated wounds have not yet been added to the collection.

PENALTY OF DISOBEDIENCE.

On the other hand, there is a most remarkable exhibit showing how disregard of instructions cost a patient his life. The specimen consists of a piece of windpipe in which a lump of meat has become firmly fixed. The victim, in defiance of orders, consumed a heavy meal shortly before taking an anæsthetic; he became sick during the course of the operation, and the meat was sucked into his air passage. All efforts to dislodge it proved unavailing. On the table in the centre of the museum lies a suit of clothes worn by a labourer who was struck and killed by lightning. The remarkable feature of this exhibit is the small amount of damage actually done. With the exception of a hole about 3in. in diameter, and situated in the region covering the heart, the suit is uninjured. The hole is clean cut, and except round the edges there is little or no evidence of burning. A watch worn by the victim was completely fused.

IDENTITY OF BLOOD STAINS.

Beside this suit are a number of knives showing dark stains on their blades, a heavy piece of iron, similarly stained, and some pieces of cloth and wood. These specimens have been selected to illustrate the effects of various fluids and corrosives. Old blood stains on metal are notoriously difficult to differentiate from rust and the stains left by the juices of certain fruits, notably apples and oranges, while stains on cloth are always apt to be misleading. Happily in most of these cases the microscope affords a satisfactory solution of the difficulty. While avian blood can always be distinguished from mammalian microscopically, the only animal whose corpuscles are quite distinctive and unmistakable is the camel. Medical jurists had until recently no certain means of distinguishing the blood of a man



from that of, say, a dog. Research, however, has evolved a new and most subtle process whereby, in the case of fresh blood at any rate, absolute differentiation can now be achieved, and even, in certain instances, the fact of consanguinity established.

There is a photograph in the museum of Léon Beron, the man murdered on Clapham Common some years ago, which shows the remarkable series of cuts and gashes made after death upon the cheeks of the victim. These were supposed to represent some secret sign. On the brow is a deep horse-shoe shaped wound—evidently that by which the murdered man met his death. The picture illustrates in a striking fashion the difference between wounds made before and those made after death.

