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# The Tell-Tale Blood Stain

The experts have pretty well established he complete individuality of the thumb-print. still more subtle and, it is claimed quite as infallible, a mark is the blood stain, says the St. Louis Republic. It may not be so easy, however, to fill up a collection of blood stains of suspects for a practical rogues' galery. With the perfection of methods, now in

advanced experimental stage, scientists ll be able to run to earth criminals from the entification of blood from the merest spots and flecks left on the scene of crime by prinnal or victim.

Bloodhounds of the future will be found in nemical laboratories, where mild-eyed scientists are pursuing their awfully exact labors as auxiliaries of the arm of justice. Their results will be as rapid and many times more reliable than those of even the keen-nosed

Discoveries made within the last year in his branch of scientific research are fairly sensational, and form a fitting climax for the years of toil devoted to it. Hand in hand with the criminologist the blood specialist is drawing a net, which will more surely bring to punishment those who do murder upon their

A blotch of human blood, left on an axe handle, a door knob, or bit of raiment can be converted into a document of unanswerable evidence of guilt. First the scientist can demonstrate positively that the spot is human blood, and then by comparison identify the blood as that of a certain individual.

Another valuable but wholly unconscious aid in the great system is the cotton-tail rabbit and guinea pig. These animals are not set on the trail of the murderer, but just as effectively assist in apprehending him by lending their bodies to the manufacture of serum used

Probably the leading authorities in this line of work is Prof. E. Friedberger, of the Berlin University, who has for years devoted his energies exclusively to research of blood and kindred analysis. It is Prof. Friedberger who predicts for the next few years perfection of a process for exact identification of individual human blood.

In the United States the work has been pushed by several scientists, chief among whom is Dr. R. B. H. Gradwohl, of St. Louis. Though still a young man, Dr. Gradwohl has worked with a number of the leading European specialists, and his original research in blood analysis and its practical application has caused favorable comment in this country and abroad.

For the identification of human blood the process seems apparently simple, though requiring extremely careful technic if satisfactory results are to be obtained. But the simplicity was only arrived at after years of experiment, and the expenditure of untold sums.

In addition to the specific results aimed at by the tireless investigations, numerous interesting facts were developed, many of which tend to support the theories of evolution and the descent of men, given by Darwin and other biologists of the last century.

The persistence of the chemical blood relationship between the various groups of animals serves to carry the investigator back into geological times, and work along these lines is still in its infancy. Scientists are convinced it will lead to valuable results in the problem of evolution.

After finding that human blood would give a certain reaction under given conditions, it was necessary to determine whether or not the blood of any other creature would act likewise. For a blood spot, on which as evidence the life of a man might hang, could possibly be that of an ox or dog, or bird.

So scientists set out to gather specimens of blood of animals from every section and part of the world. In this special work George H. F. Nuttall, of Cambridge University, took the leading part. Backed by the British Government, which gave him an unlimited expense account for his investigation, he gathered over 1,000 different kinds of bloods, all of which he subjected to the precipi-

Of all these the only ones showing a reaction like that of the human blood were specimens from certain rare apes, chimpanzees, ourang-out-angs and gorillas.

In and about Missouri there are no wandering gorillas or apes to murder people, as in Edgar Allan Poe's famous tale, so that for all practical purposes the test for human blood is specific enough to be the final word in any court of justice.

Another valuable point is that neither age nor smallness of the spot to be examined can interfere with carrying the investigation to a successful and certain conclusion. As much human blood as could be dried on the edge of pin can be as positively identified as though were a whole bucketful.

To demonstrate that the age of a specimen unted nothing, and that time does not nge the chemical action of human blood, ts on weapons in the museum of the Tower ondon were subjected to the test and gave erfect reaction, showing beyond cavil that y had been stained by the life fluid of man.

According to Dr. Gradwohl, the possibilics which these discoveries have opened are practically limitless. While their exact appliation is still somewhat vivionary, just as is the future of aeroplanes and commercial navigation of the air, still what has already been lone takes much from the realm of the im-

In Germany the principle has been put to commercial use in the detection of adulter-

ation of meat products. The day when horse and dog meat may be ground into sausage has passed. By aid of science German food inspectors can tell positively whether Fido and Dobbin help to fill sausage skins ,or whether their contents are really good beef and pork. Had this discovery been available to the Chicago authorities a few years ago things in the case of Lutgart, whose wife was believed to have been minced in the sausage mill, might have been made much clearer, and justice considerably expedited.

The police all over the world have been confronted by numerous cases where, had they been able to positively identify blood spots, conviction of murderers would have been a comparatively simple matter. In numerous European cities, especially in Germany and France, laboratories for blood tests are soon to become a fixed adjunct to the prosecutor's department.

Prof. Friedberger, of Berlin, says in his belief it will be a matter of only a few years before the method of identifying individual blood will be brought to such perfection as to make all tests conclusive.

An important feature of the tests, lies in that they are not really tests of blood, but of albumen. The reaction in the antisera is produced by the albumen in human blood, or in that of animals, and not from any other constituent of the fluid.

Briefly, the method used is to inject a rabbit with human blood. From four to six injections are made into the veins of the rabbit, which is then left to pursue the even tenor of its way during several days, while the serum is forming in it.

At the end of a given time the rabbit is required to give up about a dozen thimblefuls of its blood, which are drawn from the ear and caught in a sterilized glass test tube. This is placed into a centrifugal apparatus and whirled around at an indescribably fast speed for a few minutes. The result of the centrifugal action is to separate the solid from the liquid parts of the blood, and the former are gathered at the bottom of the tube, leaving the serum as a sort of light, pinkish liquid at the top. This liquid is decanted and placed in a series of smaller tubes, diluted from 100 to 10,000 times.

The blood spot to be tested is prepared by dissolving it in a salt solution. This is introduced into smaller tubes containing the serum, and if it should really be human blood, a small white ring, distinct and peculiar in character, is formed at the surface of the antisera. Technic with different authorities differs in details, but in effect the same general principles are applied, results being based upon the action of the two reagents, whatever may be the methods employed in bringing them to-

While the routine appears simple enough to the layman, it is in reality extremely complicated, and requires all the expertness and skill gathered in years of laboratory practice. The smallest error or inadvertency frequently negatives results.

The next step will consist in devising ways and means for applying blood identification to the actual operations of police usage, so that society at large may benefit from the labors of the men who have been pioneers in this branch of scientific research. Already numerous ways have been suggested, which template using it as an adjunct to the Bertilon system now in use in all the leading cities of the Western world.

Experts who have gone into the matter predict that within the next decade blood samples, carefully classified and preserved, will form part of the data of detective bureaux, and play an important part in detecting certain kinds of crimes and criminals as measurements and photographs.

Each department will include at least one operative, trained to gather blood samples. In working upon murder cases where blood has been shed, strictest attention will be given to gathering this variety of evidence, so that the smallest speck of gore left on the trail of a murderer may prove as damaging testimony as a thumb print.

There is no likelihood that detective bureaux will own and operate their laboratories, but samples to be investigated will be turned over to specialists. The equipment and paraphernalia for this work represent an enormous outlay of money and labor.

# CHILDREN SPOILED AT HOME

We are often told that this is the age of the child; certainly children were never more coddled or given more costly toys. In St. Louis twelve-year-old Thornton Howard, son of the president of the Commonwealth Steel Company, got for a Christmas present a \$30,-000 playhouse-not a theatre, but a house to play in-which the newspapers describe as "a wonderland," says the Springfield Republican. It stands three stories high, and has a natatorium, a gymnasium, a machine shop, a sun parlor, a bowling alley, a billiard room, shower baths, a garage, and everything else that a boy could want or a fond parent would think of for him. The only thing not mentioned is a library-anybody can have books. but not everybody can have an automobile or a swimming pool 30 by 12 feet, lined with white brick and decorated with carved marble or a domical sun parlor made entirely of glass. We are told that Master Thornton is pleased and "expects to spend a great part of his time with his chums in the house." This shows a good spirit, yet it may be doubted whether he will get any more fun out of it

than the old-fashioned boy extracted from the old-fashioned play house constructed in the back yard or perhaps in an apple tree.

Certainly he is not likely to grow up with a just concepton of what things cost. For the price of this "wonderland," which will soon come to seem no very wonderful thing, a public library adequate for a considerable city might be built. It could have been converted into a respectable college building or into a hospital that would save many lives. As a pleasure house for one boy, or even for his chums, it seems extravagant, not merely because the money might be employed more usefully, but because it is not unlikely to be a bad thing for the boy.

Turn, for illustration, to what happened on Christmas in Orange (N. J.) where another spoiled rich man's son and his chums drove recklessly through the streets in a costly high powered automobile. Exceeding the speed law, which to a certain class of rich malefactors is a joke, they ran down and injured a young woman. Instead of stopping to help and to carry her to a hospital they increased their speed. In their wild race to escape before the number could be taken they ran over and killed a boy.

So far was this from sobering them that they put on full speed, and when the machine was finally wrecked by skidding into a curb they ran off on foot, and when overtaken fought tooth and nail against arrest until they were subdued by force. Perhaps this boy and his chums were bad boys; perhaps if they had been poor they would have been robbing orchards or picking pockets to buy theatre tickets. Yet the chances are that wealth was the demoralizing thing; whatever the effect of poverty on crime may be, it is less disastrous than indulgence,

If the simple life is desirable for all, it is imperative for the children of rich men. These can offer their sons every advantage, but they ought to know that no luxury of mechanical toys or private tutors or automobiles, or foreign travel, or costly play house with marble swimming pools can make up for a training in vanity, self indulgence, idleness and disregard for the rights of others.

The extravagant outlay of well-to-do Americans on their children is a scandal to intelligent foreign observers, who contrast this empty luxury with the Spartan severity with which princes are trained. In an aristocracy pampering the young is carefully avoided; a plutocracy seems to rate money higher and children not so high. It has been explained that the American mother is responsible for this coddling, this haste to gratify every expensive craving for playthings or for pocketmoney. But surely the American father, if his head is not altogether, filled with business, ought to have something to say about it.

At worst a boy who threatens to deteriorate can be packed off to a particularly plain and efficient school, where plutocratic pretensions are snubbed. No one thing has done so much for the upper classes of England; the "playground at Eton," to which Wellington ascribed the victory of Waterloo, has done much more than that for England. It is hard to bring up either a boy or a girl sensibly in a house where a great deal of money is being spent, and a luxurious American home is the worst of nurseries. But is a \$30,000 toy house the best of substitutes?.

# "HOTEL" FOR CONVICTS

An important step forward in the reform of our penal system is marked by the erection at Camp Hill, Parkhurst, just inside the eastern end of Parkhurst Forest, of the new prison for the treatment of habitual criminals whose reform will be attempted by means of indeterminate sentences; and a more humane treatment of those who show a disposition to return to the paths of virtue, even to the extent of monetary recompense for prison duty well and faithfully performed.

Band concerts and nature study lectures have under the Home Secretaryship of Mr. Winston Churchill, brightened the lot of the 700 odd prisoners in the old convict prison, hard by the new penal establishment, but this is a small concession compared with the delights of a daily social intercourse at meals and literary and other recreation which will he the pleasant experience of the prisoners in what has been described as the new prison hotel at Camp Hill, the first part of which is practically completed, and will be shortly ready for the first batch of fifty prisoners who are expected to take up their quarters there early in the new year.

Another still more humanizing feature of the new prison will he the fact that with their prison earnings the well behaved convicts will be allowed the use of a "dry" canteen, where they will be able to supplement their regulation fare with table dainties of various kinds, although they will not be allowed to indulge with pipe and glass in true canteen style. No money will change hands at the canteen, which will be conducted on the "I. O. U." system, and the cost of "purchases" will be deducted from the official gratuities earned by the canteen patrons.

In addition to the privilege of association at meals and recreation, etc., the prisoners will have some suggestion of home life in their cells, which are finished in bright colors and are splendidly lighted with quite large cottage sash windows of clear glass, which can be thrown up or pulled down at will by the occupant of the cell. There is. however, a steel grid outside to prevent es-

Through some of these windows the convicts will be able to catch glimpses of the outside world and of the charming sylvan glades of the forest. Much of the prisoners' time will be occupied in the cultivation of extensive garden and farm lands, which are now.

# Unionists on Home Rule

Ulster's preparations for resisting Home Rule are going briskly forward, and indicate a temper in the great province of the North that will never submit to the measure Mr. Redmond is framing. Even if Ulster were left alone to fight Home Rule, she would not prove unequal to the task, but she will fight shoulder to shoulder with the Unionist party, whose policy on the question was laid down by Mr. Bonar Law in a recent speech to his constituents. He declared that there would be no shrinking from strong action on the part of Unionist members of the House of Commons to defeat one of the most ignoble conspiracies which has ever been formed against the liberties of free born men. The Unionist party will fight against Home Rule as they have never fought against any other measure introduced by the present Government, and in the face of this opposition and that of the loyalists in Ulster it is difficult to see how the bill can be passed in Parliament, or, if passed, how it can be imposed upon the

### Not Peace, But a Sword

Mr. Law said that many people were in favor of Home Rule because they were sick of the Irish question, and they thought that Home Rule would end it. It was the duty of the Unionists to show them that the adoption of the measure would be the beginning, not the end, of the Irish question. It would bring to Ireland and to England not peace, but a sword. It is because it would not settle the Irish question that it is being supported by men whose political existence depends on Irealnd being kept in a state of turmoil. Mr. Law declared the Unionist policy with regard to Ireland to be the same as the Unionist policy with regard to England and Scotland. Mr. Redmond's policy was to give Ireland less industry and more politics, while the Unionist policy was to give Ireland more industry and less politics.

### Nationalists Block Reform

Part of the Unionist policy with regard to Ireland was to complete the work it had begun in the Land Purchase Bill. There were difficulties in the way of carrying out this measure, but these difficulties were being magnified by the Nationalists, and they had been created largely because the British people had chosen a Mahdi or a Mullah as controller of their finances. Under Tariff Reform, the finances of England would be put once more on a sound basis, and there would be plenty of money for carrying out the Lanl Purchase Act. In further proof of the assertion that the Nationalists did not want Ireland contented and prosperous, Mr. Law cited

being cleared of trees and other forest growth in preparation for the new establishment.

The new prison will accommodate nearly 300 prisoners in five prison halls, four of them two storey buildings and the other of one storey only. There is a prisoner's canteen. about the size of a cottage room, and an attractive looking bakery and cook house, beautifully fitted with all the latest conveniences for attaining perfection in the culinary art. No epicurean convict need fear that his food will not be cooked to a nicety here. The twostorey prison blocks will each accommodate hity prisoners whose "apartments" run along on either side of the central hall. At the end of each floor is the association hall, where the meals will be partaken of by the "boarders" en famille what time they discuss the weather and the hardships that have to be put up with by the criminal classes. The association rooms have very large windows and are remarkably well ventilated as well as lighted. The furniture for the new "hotel" is not by Maple or Waring and Gillow but will be supplied from Parkhurst, and has been made by the convicts themselves. The prison itself will be heated by a hot water apparatus the pipes of which run through the cells.-London Weekly Despatch.

# YEGGS LEFT HIM RICHER

Safe blowing is no longer either popular or profitable for the "yegg" who tries to pull off a job in Wilmette.

This peculiar situation was shown when, following the visit of two "petermen" to the feed store of Frank Kutten, 709 West Railroad avenue, Kutten discovered he was a richer man than he was before his safe was robbed.

The men obtained 50 cents in pennies and 90 cents in stamps. Kutten acquired two \$5 horse blankets, which the "yeggs" thoughtlessly left behind them.

Kutten attributes his luck to his thoughtfulness for the comfort of visiting safe blowers. Several days before a safe in a neighboring store was blown and ruined, while all the intruders got was 23 cents. Taking his cue from this, Cutten hung a card on the door of his safe, which read:

"Dear Yegg-Don't waste your powder. The safe is unlocked. Help yourselves. You're

One night the yeggs broke into the store through a small rear window. They read the sign and opened the door. They took the pennies and stamps, and then, apparently not being used to such courtesy, and usually being obliged to use blankets to deaden the sound of the explosion, they left the store without taking their two blankets with them.

On a card was scribbled in pencil: "Thanks, old pal, fer your perliteness, but no more Wilmette for us yeggs."-Chicago the attitude of the party to the Irish Agricultural Organization Society, whose aim was to stimulate the farming industry in Ireland. Yet, only a few days ago, at the instigation of a prominent Nationalist, the Irish Board of Agriculture passed a resolution objecting to any money from the Development Fund being given to this society.

## The Ulster Loyalists

Speaking of the loyal minority, Mr. Law said that it constituted, at the very lowest estimate, one-fourth the people of Ireland. This minority pays more than half the taxes, does more than half the trade of the country, and, from the point of view of character and everything that makes for strength, it represents at least the half of Ireland. To the majority in Ireland Home Rule would come as a doubtful blessing; to the loyal minority it would come as an intolerable curse. It was true that Mr. Redmond and other Nationalist leaders were full of benevolent promises to the Protestant minority, but there are no guarantees that the promises would be carried out. The Protestants of Ireland believed that their religious liberty would not be safe under Home Rule, and although Mr. Birrell had said the other day that the Irish lovalists had no more religion than billiard balls that meet in collision on the billiard table, this merely revealed his profound ignorance of the people of Ulster. They do not want any supremacy, religious or otherwise, over the Roman Catholic population of Ireland. They demand only equality, and they believe that under Home Rule they would not be given it. Certainly, if the majority chose to do so, it could impose disabilities of the gravest kind on the minority under Home Rule.

#### What Ulster Wants

Mr. Law spoke with eloquence of the men of Ulster. "They have sympathized with us in good times and bad, and in all our troubles. In their case there were no shouts of jubilation when the news came that our armies were defeated and our soldiers lying dead in the defence of the country. They sympathized in our sorrows; they shared in our triumphs. They have turned what was itself one of the most prosperous spots in the whole one o fthe most prosperous spots in the whole of the United Kingdom. They ask now that they should be given the same privileges, and nothing more, that are enjoyed by every man and woman in Great Britain. They ask-only that they should enjoy these, and should be able to hand down to their children the heritage which they have received, the privilege of British citizenship and the protection of British law."-Toronto Mail and Empire.

## CHAMPAGNE AND ELECTRICITY

The idea of using a wireless telegraphic station for a purpose of "aging" cognac or clarifying champagne is, at first thought, fantastic, but is being tried with success.

Many years ago chemists conceived the idea of utilizing the action of electric currents of high frequency in the perfumery industry, producing a kind of electrolysis, which, in a way as yet unexplained, unites and compounds the diverse essences that enter into the composition of a scent.

This phenomenon inspired some interesting experiments recently undertaken in France. An electric generator of high frequency is installed in the store rooms, ware rooms and wine vaults to send Hertzian waves all around the bottles. By this two widely different results are expected to be obtained—the aging of cognac and the drawing out of the deposit which the fermentation causes, which is expected to accumulate around the cork.

The apparatus used for the application of the Hertzian waves is kept a profound secret by the manufacturers.-London Chronicle.

## JAIPUR

Jaipur, "the City of Victory," which Queen Mary visited the other day, is a city of the "Arabian Nights," with great streets flanked by rhubarb colored houses, a great palace towering above all. It is the capital of the great state of the same name, ruled by the chief of the famous Rachlevaha clan of the Rajputs, descended from the greatest of the legendary heroes, Rawa, who in turn claimed the sun for his ancestor.

But the Queen has really gone to see the ancient capital of Jaipur, Amber, the view from which is magnificent. Days can be spent in wandering over the palace, a veritable fairy castle. Marble windows an inch thick are carved with delicate and fantastic designs, the ceilings are ablaze with gold and glass, and the halls have doors of burnished copper. The courts and the gardens, fragrant with the perfume of the orange and jasmine, are vast enough to lodge an army. The palace was abandoned in 1728, when the court of the prince was moved to the great new palace in Jaipur.

"Oh, love," sighed the sentimental lover. I would these were the knightly days of old, that I might go forth and perform some brave deed to prove my love."

"But so you may, George," interrupted the girl. "Go forth and speak to father."

Neighbor-I s'pose your Bill's 'ittin' the arps with the hangels now? Long-Suffering Widow-Not 'im. 'Ittin' the hangels wiv the 'arp's nearer 'is mark! Black and White.