

my attention by folks who come to have microscopic analyses made. Not very long ago the result of one of these analyses came near leading to a tragedy. The principal things an expert microscopist is called for in the courts is to testify as to blood on clothing or something of that sort in a murder trial, or as to writing in cases of forgery. I can tell instantly whether a stain is blood or not, no matter how dim and indistinct it is, and this is often most important in the detection of crime."

"Can you distinguish animal blood from human?" asked the reporter.

"I have frequently heard of expert witnesses testifying that certain stains were made by human blood. I think they are wrong to assume to so much knowledge. The little corpuscles of a sheep's or a dog's blood are, as a rule, smaller than those of a man's, but it has been discovered by careful study that the largest of the sheep or other animals and the smallest of the man may be the same size. This of course does away with all certainty of distinction. A bird's blood may be distinguished from human, because its corpuscles are of a different shape. But this does not lessen the importance of discovering blood stains on a murderer's clothing. The circumstances and other evidences will do the rest.

"Some of the most interesting cases," he continued, "are those of handwriting. I have had a very thorough study of this under the microscope, both as to individuality of form and as to various sorts of ink, and the effect of time and condition upon them. I can very readily discover forgeries, interlineations or erasures. I do not think I could be deceived in this unless the man that did the work had the same facilities for doing it that I have for detecting it—that is, unless the forger was a microscopist. One case in which I testified was where a man was being sued on a bond involving \$100,000. He acknowledged that he had signed a bond for one of the parties named in the bond produced, but claimed that the second name had been added since. The person he signed for, he said, was reliable and trustworthy, but the other person was not, and he would never have signed the bond had his name been upon it at the time. All the writing on the document was in the same hand and appeared to have been written at the same time. Under the microscope I discovered by the age of the ink, that

the second name had been added some time after the paper was signed, and that the pronoun 'him' had been changed to 'them' whenever it occurred on the bond. Another case I was called into was where an old man's name had been forged to notes by his son-in-law. There were ninety notes for \$1,000 each, which the old man pronounced forgeries, and on examining them I found them to be such. Without knowing anything of his habits, I knew as soon as I saw his genuine signature that he always wrote it with a gold pen. The forgeries were all written with a steel pen, and there were enough points of difference for me to be able to distinguish them from the genuine in every case. In a murder trial in Maryland there was a curious case of forgery involved. A faithless wife and her lover determined to put a troublesome husband out of the way. The husband remarked one morning at breakfast that the coffee tasted strange. A few minutes later he fell in a fit and died. At the inquest a note was produced purporting to be from the deceased, written just before his death, confessing that he had taken his own life. Nobody could be found who had ever seen any of the man's writing except his signature, and that appeared to be all right on the note. There was nothing to compare the rest of the writing with. I examined the note very carefully, and found that while the body of the manuscript was written freely and naturally, as if by some one used to writing, the signature was very black and heavy and seemed to have been drawn. Another thing was that, while it must have taken considerable pressure to make it so black (the whole was written with a pencil), there was no impression through the paper. I pronounced the note a forgery. I knew beyond a doubt that it was. The friends of the widow threatened to kill the expert, but they gave up the note as a defense and took up another line, by which they secured an acquittal. After it was all over with, and the accused could not be again put on trial, his sister-in-law bragged that she had written the note and traced the signature from an original by holding it against the window-pane. The hard, smooth surface of the glass was what had prevented the pencil lines from showing through the paper. The question was raised in another case as to whether an erasure on a bond for \$40,000 had been made before or after it had been