"WASHED" COAL AND COAL WASHING MACHINES

How Bituminous Is Freed from Such Impurities as Fire Clay, Slate, Sulphur, Etc.—Consumer Benefits and Lower Grades Are Enabled to Compete with the Higher.

By MALCOLM McDOWELL, Author of "Shop Talk on the Wonders of the Craft."

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"WASHED coal" is becoming fashionable with users of the bituminous. A facetious soft coal dealer remarked a few days ago, "Pretty soon you people will want your coal not only washed, but clear starched and ironed with a domestic finish."

"Washed coal" on sign boards and listed with "smokeless," "Hocking Valley," Indiana block," "third vein" and other brands of steam and domestic fuel of the bituminous order is not what most coal consumers think it is. Many soft coal buyers have a vague idea that the enterprising coal man turns the hose on his coal pile, cleans off the mud and clay, labels the sprinkled lumps "washed coal" and tacks on an extra quarter of a dollar a ton on the ground that it is something particularly fine. Others—and some of these are intelligent business men—think that washed coal is mined from the bed of a river and is celaned by the current as it is lifted to the surface.

Soft coal is "washed" to rid it of certain impurities which reduce its fuel value. The method of separating fire clay, sulphur, slate, bone coal and other impurities from the coal is called "washing," because flowing water is the principal agent employed to do the separating. The foreign matters in coal are heavier than the coal, and if the impurities and the coal are agitated together in the water the slate, sulphur, etc., will sink to the bottom and the coal will float. Clean coal, of course, will sink in still water, but if the water is moving with some velocity the lumps will float in suspension long enough and far enough to permit of its separation from the deleterious substances.

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"Washed coal" has been produced for some time, but it is only within the last few years that washers have been recognized as something which every well regulated and up-to-date soft coal shaft should have on the premises. Now there are great buildings with elevators, bins, conveyors, jigs, troughs, chutes, screens, huge pumps and much water which wash from fifty to one hundred tons of coal every hour, and the discriminating coal buyer will do well to purchase washed coal, for he will get more fuel to the ton and fewer clinkers.

When there is more than thirty pounds of sulphur, in the form of iron pyrites, sulphate of lime and magnesia or organic sulphur, in a ton of bituminous coal it is not good fuel. The iron pyrites occur sometimes in solid, dense lumps which are easily separated from the coal by "washing." But when the iron pyrites take the form of thin flakes, liberally sprinkled thru the mass, it floats away with the good coal and is not easily removed. The thin, white sheets seen in some coal are sulphate of lime, and when it is found in small parts scattered in the coal it is a difficult task to get rid of it. "Bone" coal is a trial and a tribulation to the coal producer. It is slaty coal—sometimes more slate than coal, and again more coal than slate—but at all times a nuisance. Fire clay is easily washed out, but it takes sweet revenge by settling down, a thick, sticky mud, clogging the screens and making trouble generally. But all these impurities are floated and bumped and screened and jigged until the good coal is pretty well rid of them.

* * * * *

The simplest appliance for washing coal is the trough washer. It is an open-end box, set on a slant. The coal, carried thru a flume with the water, runs into the higher end. The heavier impurities sink to the bottom, but the lighter coal, swept along by the swift current, is caught by the boards of a conveyor which moves against the stream and is lifted out of the trough.

The "Bumping table," another form of washer, is a wooden trough about eight inches deep, eight feet long and two and one-half feet wide, which is bumped at regular intervals against a post at the higher end. The water and coal enter at the upper end, and when the table is bumped the impurities are jolted uphill and the water carries the clean coal off the lower end.

But the improved washers use a "jig" for separating the foreign matters from the coal. This is a large box having two compartments. In one a plunger works up and down, forcing water, which fills the compartments, under the partition—which comes but half way down from the top—up thru the screen which forms the bottom of the other compartment. The water—worked up and down by the churning motion—has enough force to lift the coal, as it is fed into the jig, but not enough to more than agitate the impurities. This action separates the coal from the foreign matter, moving the coal thru the opening provided and working the refuse to a hole near the center, where it falls into a box to be carried off by a screw conveyor.

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In a modern washing plant the coal is lifted to the top of the high building and dumped onto screens, which divide it into its several sizes. The nut coal falls into the jigs, but the fine coal finds its way into a trough of running water. After the nut coal is jigged it is delivered to abumping screen, which carries it along until the water escapes, and then the clean nut coal falls into the shipping bins over the loading track.

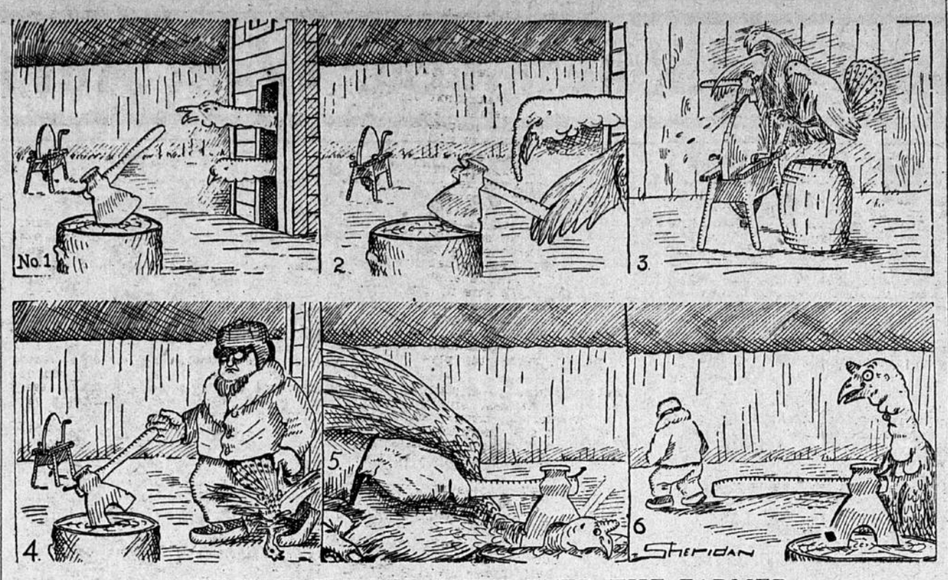
The fine coal in the meantime is swept along with the water to a "grading trough," which is simply a settling tank. Here the coal settles gradually, the larger particles first and the finer last. Each size is lifted out and fed into its own jig, so that the mass of coal which was elevated to the top of the washer is not only washed, but is separated into four or five merchantable sizes.

Last of all, the water which has been doing the work runs into the "sludge" tank, a deep trough nearly 100 feet long. Here the coal dust, which is too light and fine to be jigged, bumped or screened, settles to the bottom, from which it is taken by scrapers carried on link belting to one end, where it is caught by the buckets of an elevator and lifted out.

* * * * *

Some soft coals are so pure and clean by nature that for years they have commanded higher prices than their dirtier competitors. But the coal washer has come to the aid of the less fortunate mines, and now "washed coal" is making serious inroads on the trade hitherto practically monopolized by the higher grade coals.

Sulphur is coal's worst enemy. In the form of iron pyrites and sulphate of lime and magnesia most of the sulphur can be removed by washing. But organic sulphur cannot be eliminated by mechanical processes. The chemist is the man who must discover the way to get rid of it, and he who invents a process which will cheaply and effectively remove organic sulphur from coal has a fortune in his grasp.



HOW THE TURKEY OUTWITTED THE FARMER

UP-TO-THE-MINUTE FASHIONS. . . . . .

A Daily Hint of Practical Value to Journal Readers of the Fair Sex.

The fashion pictures given daily in this department are eminently practical, and the garments pictured can be reproduced easily from the paper patterns, which may be obtained at trifling cost thru The Journal. The models are all in good style, pretty and original in effect and not too elaborate for the ambitious amateur to reproduce.

4578 Girl's Apron, 6 to 12 years.

GIRL'S APRON 4578.

Pretty aprons are always in demand. This one is eminently well adapted to school use and is as charming and becoming as it is dainty and useful. The model is made of lawn with trimming of embroidery, but all the materials used for aprons are appropriate. The frills over the shoulders give an effect of bretelles, are peculiarly desirable and mean the breadth which is so essential to childish figures.

The apron consists of the body portion and the skirt. The body portion is made with a bib at front and back and with frills attached to narrow straps that pass over the shoulders. The skirt is straight, hemmed at the lower and gathered at the upper edge.

The quantity of material required for the medium size (10 years) is 2 yards 36 inches wide, with 2¾ yards of embroidery 5 inches wide and 2¾ yards of insertion to make as illustrated.

The pattern 4578 is cut in sizes for girls of 6, 8, 10 and 12 years of age.

In ordering pattern fill in this coupon:

PATTERN NO. ——

Size .....

Name .....

Address .....

CAUTION—Be careful to give correct Number and Size of Patterns wanted. When the pattern is bust measure you need only mark 32, 34, 36 or whatever it may be. When in waist measure, 22, 24, 26, or whatever it may be. When misses' or child's pattern, write only the figure representing the age. It is not necessary to write "inches" or "years."

Pattern for this garment will be sent postpaid on receipt of 10 cents. Be sure and mention number of pattern. Address

PAPER PATTERN DEPARTMENT, JOURNAL, MINNEAPOLIS.

BUYING, SELLING AND BUILDING

REAL ESTATE TRANSFERS.

William H. Obert to George W. Anderson, part lots 13 and 14, block 6, Bottineau's second addition, $1,150.

Ida B. Alden and husband to Daniel S. Bailey et al, part lot 19, block 17, Prospect Park first division revised, $500.

Lowell E. Leighton and wife to Joseph W. Broz, W½ lot 2, block 15, St. Louis Park, $700.

L. Louise Kento to Charles S. Brearley, lot 12, block 26, Murphy's addition, $1,850.

Edward C. Gale and wife to Hans P. Erickson, lots 28, 29 and 30, block 11, Park addition, $500.

Commonwealth Title Insurance and Trust company to David P. Jones & Co., lot 7, block 6, Jewett's addition, $275.

Ellen Coffey to William P. Gilmore, S½ lot 1, block 3, Marshall's addition, $1,500.

Zulma O. Riviere and husband to Rosanna Gilliland, lot 3, block 6, subdivision of lots in Ferrant's first addition, $210.

John M. Glennon to John Hankinson, lot 2, block 2, Boulevard addition, $4,000.

Julia A. Reid to A. G. Holmdale, lot 11, block 6, Pleasant Park addition, $3,500.

Kate M. Jones and husband to Edward I. Pratt, lot 5, block 66, Remington's second addition, $1,000.

Walter Evans et al. to David J. Saussels, in section 4-119-22, $2,350.

Robert W. Webb and wife to James E. Smith, lot 7, block 5, Silver Lake addition, $200.

Daniel M. Robbins and wife to Ena Enow, lots 17, 18, block 3, Portland Park addition, $570.

Charles S. Brearley to Sidney A. Snow, lot 2, block 23, Murphy's addition, $2,000.

John W. Lynch and wife to Harry S. Swenson, lot 12, block 16, Minnehaha addition, $300.

Elizabeth S. Eddy to Mary O. Wasson, in section 32-117-22, $400.

Nancy S. Colgrove to Calvin C. Taylor, lots 16 and 17, block 17, Palmer's addition, $150.

Henry B. Hirth to Francis P. McDougall, lot 21, block 3, Byrona addition, $125.

Helen S. Noble and husband to Francis L. Moffett, part of lot 4, block 34, St. Anthony Falls, $900.

Norman L. Newhall to Harry T. Maxwell, lot 17, block 5, Wyant & Kichlli's addition, $900.

Patrick F. Cupney and wife to Mary L. Martin, lot 30, block 5, Sibley addition, $650.

Samuel Glading to Amie B. Leitch, lot 6, block 1, Winthrop Park addition, $4,200.

Peter E. Schock and wife to Joseph P. Kohl, part of lot 11, Auditor's subdivision No. 29, $4,400.

James C. Millard and wife to Jalmer E. Johnson, block 2, Richardson's second addition, $1,450.

Eliza L. Reed et al. to Norman L. Newhall; lot 17, block 5, Wyant & Kichlli's addition, $800.

E. A. Conrad (guardian) to Norman L. Newhall, part of lot 17, block 5, Wyant & Kichlli's addition, $177.

Gottlieb Schreiber and wife to Mary E. Neumuth, lot 25, block 1, Cornell's addition, $700.

Seven minor and unpublished deeds, $2,730.

Total, 36 deeds, $38,647.

BUILDING PERMITS.

J. K. Gilman, 513-17 Third street S, stone foundation for warehouse, $5,000.

Nora S. Brice, 2708 Fremont avenue S, dwelling, $3,400.

T. H. Long, 1105 Twenty-sixth avenue N, brick store, $3,500.

Seven minor and unpublished deeds, $2,730.

Total, 10 permits, $13,141.

There is conclusive evidence to show that in one unbroken nocturnal flight the European bird known as the northern bluethroat passes from Central Africa to the German sea, a distance of 1,600 miles, making the journey in nine hours.

CRADLE, ALTAR AND GRAVE

MARRIAGE LICENSES.

Joseph Arens and Julia Bukosky.
Ira B. Hollis and Agnes C. Peterson.
Adams Walker and Selma Johnson.
William H. McCoy and Alice M. Glenn.
Gust Crosby and Rena Juel.

BIRTHS.

Cross—Mr. and Mrs. Charles H., 516 Thirteenth avenue SE, a son.
Wagner—Mr. and Mrs. B. E., 525 Plymouth avenue N, a son.

DEATHS.

Johnson—William E., 2303 Buchanan street NE.
Hurek—Oren Thomas, 704 Fifteenth avenue SE.
Petri—Orlanda, St. Barnabas hospital.
Gallagher—Milchsel, city hospital.
Sundstrom—E., city hospital.
Barker—Frank T., 2220 Seventeenth avenue S.
White—James Howard, 2817 Morgan avenue N.
Gruidl—Elizabeth, 2728 Bryant avenue N.
Hayes—Jennie, city hospital.
Woodruff—Myron, 946 Twenty-seventh avenue S.
Morrison—Mary, Asbury hospital.
Worrell—Mary Louise, Northwestern hospital.

IF YOU DO NOT KNOW YOU OUGHT TO KNOW

THAT—

Ten per cent of all the children of the world walk by the time they are ten months old.

The great De Beers property was originally sold for $30,000. A year later it changed hands for $563,000. It yields some years as much as $25,000,000 in diamonds. The Kimberly patch was originally bought for $40; it has produced $100,000,000 in diamonds. Stock in the Kimberly sold originally for $50 and the price has gone up to $3,000 a share.

The state of Minnesota possesses 7,771 schoolhouses or one schoolhouse per 225 inhabitants of the state. These schools, with their libraries, furniture, etc., represent an investment of $18,000,000.

The average age of death of the poorer classes of laborers in England is 29; that of the merchants and well-to-do Englishmen, 55.

There are four times as much tonnage in steam than in sailing vessels under the English flag and five times as much under the German.

One town in France uses up 2,650,000 pounds of roses and 660,000 pounds of orange flowers a year in the manufacture of perfumes.

The coal strike of last year seems to have encouraged thrift among the miners; there are 6,000 new savings accounts in Wilkesbarre alone.

English and German experts still look upon granite, stone and concrete as fireproof or fire resisting materials for building; bricks, tile and other burnt clay products are the only absolutely fireproof materials. Concrete disintegrates, limestone burns up into powder, sandstone chips all to pieces and granite goes off like a pop gun under the action of a hot fire. And still some people, even here, have been bamfoozled into believing that wood can be made fireproof.

BAN ON FLIRTING LEADS TO STRIKE

Northwestern Co-Eds Plan to Coerce Authorities Into Granting Them More Privileges.

New York Sun Special Service.

Chicago, Nov. 18.—Northwestern university coeds living in Willard hall declare they will go on strike for more privileges. Just how the strike will be managed they do not say, but this they are determined there shall be a strike.

"We feel that living in Willard hall is much like living in jail," said Miss Charlotte Thompson. "There are certain things that we have a right to demand, and if we are not granted what we wish, why, we'll strike, that's all there is to it."

The rules prevent the young women from receiving callers except at certain hours and order that they shall not be permitted the use of the telephone and must be chaperoned when going to the theater.

Students in the hall have requested Mrs. Martha Foote Crowe, dean of women, to make changes in the rules. Mrs. Crowe has refused, and the janitor at the hall has been provided with a star and has assumed the role of watchman. His chief duty is to keep coeds from answering the whistles of men students. This act was the last straw, and at a meeting yesterday the young women decided to adopt stringent measures for regaining their lost rights.

BRIDEGROOM HIRED A MASCOT

Banker Rubs Colored Dwarf's Head for Luck Before Securing His Marriage License.

New York Sun Special Service.

Cincinnati, Ohio, Nov. 18.—Edward S. Rodgers, vice president of the Merchants' National bank, this afternoon hired Stanley Mason, a dwarf colored newsboy, to act as his mascot when the banker went to the courthouse to secure a license to wed Miss Anna H. Orr, daughter of Dr. George P. Orr.

Before taking the necessary oath, Rodgers carefully rubbed his hands over the colored boy's head.

The group presented a queer sight on the streets going and coming from the courthouse, the bridegroom to be and his best man, Attorney Dan Wilson, both big men in tall silk hats and long frock coats, walking on both sides of the colored mascot, who is scarcely three feet tall.

The boy was well paid for his trouble and the banker considers the outlay particularly well invested.

CHRISTIANITY A DIRE DISEASE

President Patton of Princeton Delivers Remarkable Address in a New York Church.

New York Sun Special Service.

Washington, Nov. 18.—Christianity as it exists to-day was characterized as a "dire disease" by President Patton of Princeton in an address at the centennial services of the New York Avenue Presbyterian church. He foretold "a great disaffection" which, he said, would come to all churches in the future. He ridiculed those who reduced Christianity to a mere set of morals and lost sight of the individual soul in their efforts to reform society as a whole.

"What I contend," he said, "is that Christianity must be more than ethical to be truly ethical. It has moralized the world not only by preaching precepts, but by speaking as one having authority—detailing dogma and doctrine. And when you give up this dogma and doctrine you let go the guards against man's selfishness and evil."

TO DEDICATIONIZE THE BRIDGE, YES

Alderman Holler, a Webber-Fieldian Professor of Languages, Tells New York Council About Plans.

New York Sun Special Service.

New York, Nov. 18.—The aldermen have appropriated $20,000 to pay for the opening festivities of the Williamsburg bridge. Alderman Holler of Williamsburg, who is something of a joke on the board, and is chairman of the committee, in his speech on the subject, said:

"I tell you what we have propositioned to do already yet. The bridge shall be decorated from end to end and illuminationed at night, yes. The mayor and Manhattan aldermen will come over from the Manhattan side and the Brooklyn aldermen will come over from the Brooklyn side and they will in the center, on a stand, meet where the commissioner will give away the bridge and Mayor Low will speak for its acceptance. There will be soldiers from Brooklyn and soldiers from the army of Manhattan and from the sailors of the harbor, and there will be music."

FIND BONES OF A MONSTER

Immense Skeleton Is Unearthed in Rockaway Inlet.

New York Sun Special Service.

New York, Nov. 18.—Workmen dredging the Rockaway inlet have brought up from a depth of thirty-five feet part of a skeleton of enormous proportions. Many thought the bones belonged to the skeleton of a whale. Some wise ones said that it was the skeleton of a prehistoric dinosaur or mastodon. The bones were in a perfect state of preservation. The largest, which seems to be a jaw bone, measures from end to end fourteen feet, is two and a half feet in width and weighs about 400 pounds.

BROKEN PARTS SUPPLIED

Youth's Companion.

"My brother bought an automobile here last week," said an angry man to the salesman who stepped forward to greet him, "and he says you told him if anything broke you would supply a new part."

"Certainly," said the clerk. "What does he want?"

"He wants two deltoid muscles, a couple of knee pans, one elbow and about half a yard of cuticle," said the man, "and he wants 'em right away."

THE WEATHER

Minnesota, Wisconsin and Iowa—Fair to-night and Thursday; fresh northwest winds. Upper Michigan—Fair to-night and Thursday, except snow flurries near Lake Superior; brisk northwest winds. North Dakota—Fair to-night and Thursday; variable winds. South Dakota—Fair to-night and Thursday; rising temperature in western portions; variable winds. Montana—Fair to-night, followed by snow Thursday in northwestern portion; rising temperatures; variable winds.

SANTOS-DUMONT IS SUCCESSFUL

M. Santos-Dumont went up yesterday in his Omnibus No. 10 and had some trials with the guide rope in the park of his balloon shed at Nueilly. Everything worked to perfection.

He had many demands from prominent people who were present to go up. M. Santos-Dumont gave the preference to Colonel Page Bryan, American minister to Portugal, for the first trip, but afterward many others were favored, among whom may be mentioned Mr. Mackay of San Francisco, and Mrs. Chatfield-Taylor, and all were immensely delighted with their experience. Some even expressed their willingness to go as far as England, or even the United States.

The giant airship maneuvered with the greatest ease, obeying every wish of the distinguished aeronaut.

THE MISSING MAN

By MARY R. P. HATCH, Author of "The Bank Tragedy."

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CHAPTER XV.

"Dead and Buried."

"Are you sure?" asked the president.

"Yes. They had been at their old business, Ashley and his friends, and had started a deposit bank. It was in Goodwill, a smart little village of mushroom growth. They forged the charter, for aught I know. But, any way, the bank burst up in a few weeks; for the three, Ashley, Scoville and Brown, presumably gave the little town the slip and took the deposits with them. The others got into hiding, as they always manage to do; but Ashley got nabbed."

"When was that?"

"As near as I can learn, the very day Hamilton disappeared."

"As long ago as that?"

"Yes; you see, the excitement, tho intense in Goodwill, was hushed up purposely to aid the arrest. That was the work of the local authorities—keeping it as still as possible. Then after he was arrested Ashley was found to be insane and sent to an asylum in Nebraska, from which he escaped and was drowned. But I didn't learn this to be a fact until very lately. I thought at one time that this Ashley was certainly Hamilton."

"Did they arrest him in the place where Hamilton disappeared?"

"Within a few miles of Portland, and that is near enough. I learned about the Nebraska affair six weeks ago. I was sick, and I sent word to Swan. He came to Grovedale, I believe."

"Yes."

"That was his own notion. I didn't send him. Swan is a bright fellow, but very excitable; flies off on a tangent when he might as well keep still. Got some notion about a workman up here."

"Yes; Primus Edes. Mrs. Fry (he boards at her house) told me she sent him a letter she found in Edes's pocket. Did you see it?"

"Yes, it was from his wife apparently, nothing of importance."

"Was her name or address given?"

"No address, I believe, but a name like Rose or Violet—some flower name. I don't recollect it. Swan seemed to be puzzled, because he said Edes denied having ever been married."

"Is that so?"

"Yes, but as I told Swan, it was of no earthly consequence to us, for my man was dead and buried, and so ended the Ashley matter."

"You said he proved to be insane when taken."

"Yes; I investigated that part of the affair thorcly, and I went to the jail where he was first taken, and saw the entry, and a description of the prisoner. I also saw the entry at the asylum."

"How did they tally with the appearance of Ashley?"

"Well, that's the strangest part of it," and Bruce hesitated a moment.

"How so?"

"At the jail he was entered as light-haired, and at the asylum as dark."

"But disguises of that sort would be nothing, I suppose, for a man like Ashley, would it?"

"Why, yes. Just consider a moment. If it had been the other way, entered the first time dark and next light, it would imply simply colored hair, of course, and it would come out the natural color. But to turn from light to dark without the aid of dye, that is impossible, for, of course, there could have been none in his cell."

"Then what do you think?"

"I think there must have been a mistake I think he must have had dark brown hair when he was arrested, but by mistake he was entered as light-haired."

"Any visitors to see the prisoner?" asked the president, much interested; "if so, a preparation might have been brought to him."

"I asked the jailer that same question. He had no visitors. The man's wife came to see him. The prisoner was thoroly searched after she went away, but she brought nothing with her."

"Was the jailer present during the interview?"

"Nearly all the time. He left them together for a few minutes. The jailer said the woman acted strangely when she saw him. She gave a shriek of astonishment, it seemed to the jailer.

"'Is there anything strange about him?' the jailer asked her.

"'No,' she said in a moment; 'but it crazes me to see him here,' and then she began to talk excitedly to the prisoner."

"I suppose he was greatly agitated?"

"No, he wasn't. He was apathetic, not to say stupid, thru the whole interview; and, strangest of all, declared she was not his wife. She seemed deeply affected by this, and when she was going away the jailer asked her what it meant, and she said, 'Oh, I don't know, I don't know. He is my husband.'"

"Had the woman green hair? I believe you said she had."

"Yes, she had green hair, or as near that color as any."

"When he came to trial he was found to be insane, you said?"

"Yes; and that explains, perhaps, the prisoner's denial. He was doubtless insane then. Well, he was sent to the asylum to be treated, and he escaped in a few weeks and was drowned."

"Is there no possibility of mistake about that part of the matter?"

"None whatever. The body was recovered in a few days after his disappearance, and was easily identified by the officials, for the clothes were the same he wore from the asylum. He was drowned not three miles distant."

"Did you talk with those who identified the body?"

"I did. I questioned closely into the matter. There is no doubt whatever that the man was drowned."

"No doubt it is as you say," said the bank president. "It is interesting to me to learn something about the methods used by men of your profession. Well, that removes Ashley. What do you think about Hamilton's story?"

"I am inclined to believe it. This Ashley affair was a false light, and blinded me for a time. It isn't to be wondered, at perhaps, when the green-haired woman's connection with the matter is taken into account. No doubt she was on her way to Canada to join Ashley when she saw Hamilton and thought she recognized her husband. His many disguises probably misled her for a time. So she followed him for a short distance, and then, learning her mistake, did not go thru to Portland, but took a train north of Mechanic Falls."

"Yes," said Mr. Hartwell, thoughtfully, "that would explain the matter, and also how you were misled. But it is the most astounding thing about Hamilton's loss of memory! I could not believe it at first, but the idea seems more feasible as I think about it longer. We supposed him to be so thoroly reliable in every way, it seemed impossible that he could be a rogue after all."

"If he could only remember what he did while he was away," said Bruce, thoughtfully, "the mystery would clarify, but I see he fears he may have done strange things."

"Mr. Bruce," said the president, suddenly, "Tony Osborn had a curious notion in regard to this matter," and he mentioned the hypnotic idea as set forth by Tony, and related the strange performances of Dr. Major, which he himself remembered witnessing.

The detective was much interested in all new or unusual workings of science. Hypnotism was more captivating, even, than phrenology, he thought, and he was at once struck by the ingenuity of young Osborn's reasoning.

"Well," said he, after the subject had been discussed at some length, "Osborn may be right, and it might have been Ashley who received the money and altered the notes; but he is dead, and, in any event, it would be difficult to have proved the matter. If I were allowed to state my opinion of what is right, I should say, let Hamilton repay the loss sustained by the bank; for this hypnotic theory, tho very ingenious and not too unreasonable for the belief of men like myself, would only cover the affair with ridicule and imbue the minds of the poor people with a feeling of insecurity."

"I think you are right, Mr. Bruce," said the president. "At least, that is the way the matter looks now. Of course, the examination may bring out new facts, so it is as well not to make up our minds to any great extent."

"It is an irksome condition of things for Hamilton," said Bruce, "but unavoidable."

"Yes; but unavoidable, as you say. I must confess, he bears it with remarkable equanimity. Looks like innocence, hey?"

"Yes; if it's a spurious article it is well imitated. By Jove," said the detective emphatically, "it is the most mysterious case I ever was concerned in!"

CHAPTER XVI.

The Examination.

The period of waiting was most irksome to all concerned in the examination, which was fixed to take place in two weeks' time. Meanwhile, Deputy Sheriff Gray was domiciled at Mr. Hamilton's residence, and treated courteously by Constance, as well as by her husband, who had a second bed put in his own room for the officer's convenience. The probabilities of escape seemed infinitesimal when taken into account with the fact that Mr. Hamilton had returned of his own free will. Therefore the surveillance was as slight as was consistent with the sheriff's ideas of what was proper and reasonable. Sometimes the two walked out together. Mr. Hamilton was allowed to write and to receive letters with no hindrance, but, indeed, he invariably offered the few he wrote for the inspection of Mr. Gray, if he chose to read them. They were chiefly letters of inquiry to various banks, and to his fellow-workmen at Seattle, Wash., and the day after his arrival he forwarded to them the sum they made up to aid his return to Grovedale.

As the day of the examination arrived it became evident that there was to be a large attendance at the courtroom. It was understood it had been called by Hamilton, rather than to await the slower action of the supreme court, whose next term was yet at some distance. The case might be dismissed and no action be taken by the grand jury. Therefore, as the matter was one of great interest to the public and country at large, the attendance was such as was rarely seen in the courthouse at Grovedale.

The attorney general, bank examiner and the county solicitor were present, also two eminent specialists in brain diseases, and one or two witnesses from Seattle. Of course, the bank officers were none of them absent, nor Mrs. Hamilton. Tony Osborn sat as near the bench as possible, while ranged around were all of the more prominent citizens of Grovedale and adjacent towns, while several of their well known bank officials, among them Simon Low, were recognized in the seats reserved for the witnesses.

Justice Bailey, it was evident, was well pleased with the position he was about to assume in the eyes of the public.

I have no intention of giving a prolix account of the examination, only a general summary of particulars. The justice, with great dignity, before swearing the witnesses asked Mr. Hamilton if he wished to be examined personally, assuring him that he was not compelled to answer a single question unless he chose.

"I am well aware of that," said Mr. Hamilton, "but I shall answer probably every question you put to me that I can."

"That is well," said the justice, "but the law compels me to caution you, as all questions and answers will be written and presented for use in case of a trial by jury, that you should answer truly, if at all, Mr. Hamilton: Such questions as you choose to anwser you can answer; but you can, also, refuse to answer any question, saying simply, 'I decline to reply to that question,' and at any time you decline to be questioned any further your examination can close."

Mr. Hamilton listened with courteous attention and was afterwards sworn.

He related the story of his leaving home, as he had done to his wife, and Mr. Carter, and to the officers of the bank. There was much excitement manifested at his assertion that he lost all sense of personal identity when or about the time he reached Portland. He evinced no embarrassment when the name of Mrs. Anderson, or Lenora, was mentioned, but stated calmly, as he had done to Constance, how and under what circumstances he had met her. He also said that it was the first and only time he had ever seen her.

The justice then questioned him regarding his many mysterious absences in the month of May.

For the first time the cashier appeared to hesitate, looking about the room for a moment with uncertain gaze. But he answered with composure in a moment:

"I went away on business."

"Each time?"

"Yes, sir; each time; or I might amend the statement by saying, business united other matters, which included recreation."

"Will you tell us what the business was—of what nature?"

"I must decline to answer that question, not because I should not care to have it known, but because it is, or was, connected with other parties, or persons, who would object."

"Was it connected with any secret society?"

"That question I must decline to answer also. But I will say this much, if the matter ever becomes known to my fellow-townsmen, they will not think the worse of me for it;" and he stood proudly erect and threw a bold glance about the courtroom, which immediately restored the attitude of the audience to its normal one of interest, toleration, and seeming belief in his truthfulness.

One of the specialists, Sidney W. Lamb of Boston, was allowed to question Mr. Hamilton and to examine him professionally with a view to discovering whether he whether he was, or had been, mentally deranged, as in that case he could not be held accountable for any act performed at such a time. Section 3 of New Hampshire Laws regarding savings banks expressly states, "Any officer of any savings bank in this state who shall embezzle, abstract, or wilfully misapply any of the moneys, funds, or credit of the bank, or shall make any false entry in any book, report, or statement of the bank, with intent in either case to injure or defraud the bank or any company, body politic or corporate, or any individual person, or deceive any officer of the bank, or any committee or examiner appointed to examine the affairs of any such bank, shall be deemed guilty of a misdemeanor, and upon conviction thereof shall be punished by a fine not exceeding $20,000 or by imprisonment not exceeding ten years."

This section seemed to have a bearing upon the case in question, altho not formed with any such in view. Still, if it could be proved that the cashier of the savings banks was mentally unsound at the time when he presented the altered note to the Boston bank and received the money thereon, even tho he altered the note himself, he could not be called to account by fine or imprisonment, and unless the safety of the public or his own welfare demanded he could not be sent to an asylum. Therefore, this was an important part of the proceedings, and the result of the examination of the specialists was eagerly awaited. Their report, however, was postponed until other witnesses should be examined. The letter which had been found under the president's door was produced.

(To be continued to-morrow.)

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