

WHO IS THY FRIEND.

Who is thy friend? The man that shares thy pleasures in banquet hall or beauty's witching bowers. He that will dance with thee to foxy's measure. And make no reckoning of the squandered hours—To whom the revel and the game is all? These are the friends that help men to their fall.

ACCIDENTALLY INNOCENT.

No lawyer likes going into court with a thoroughly bad case, yet how can he help it sometimes?

I should have more patience with the question, "Do you ever think it right to defend a man whom you believe to be guilty?" were it less frequently put by people who spend six days of the week seeking to get the upper hand of their neighbors, and the seventh trying to circumvent their Maker.

Was it my place when George Gilbert's little care-worn wife came with tears glistening in her eyes, to beseech me to do what I could for her imprisoned husband, virtually to turn my back and leave her tired, troubled heart to break or not as it might?

"I am sure he never meant to be dishonest," pleaded the loyal little woman; "he was tempted by a crafty and designing man, but instead of running away, as others would have done, he came back and confessed his fault, offering to let his whole salary go toward making up the lost money till every cent was paid.

"In the first place, I'll see Messrs. Mangle & Meek," I said. "Mr. Mangle may be brought to hear reason after all—if he can only be made to see his interest in it."

The pale, despondent face cheered up a little. My words seemed to have inspired a sort of undefined hope that I was far from feeling myself.

"Young man," his manner said, "don't waste time in appeals to sentiment; you won't if you'll only look at me."

I took the hint and came at once to business, repeated Gilbert's offer, and put it as strongly as possible that more was to be gained by leniency than harshness—all of which Mr. Mangle listened to with a conscientious scowl.

"I cannot be a party to compounding a felony," he answered with a solemn intonation.

"Nor have I asked you," I replied, not a little nettled. "I have merely mentioned a plan of paying back your own, leaving it to your generosity to press or not to press this prosecution."

"Oh, its all the same," was the contemptuous rejoinder—"anybody but a lawyer, with his head full of quibs and quiblets, could see that. Besides, there is something rather cool in the proposal to retain your friend in our employ under pretence of working out the money he has stolen, with the opportunity of filching twice as much in the meantime."

I felt my temper rising, and not caring to imperil my client's interest by an outright quarrel, I took a hasty leave.

Had I been in the prisoner's place on the morning fixed for the trial, I could hardly have ascended the court-house steps with more reluctance than I did. And when I entered the court-room, and found Gilbert and his wife already there, and noted the hopeful look with which the latter greeted my coming, my heart sickened at the thought of the bitter disappointment coming.

"The People vs Gilbert," called out the judge, after disposing of some formal matters.

A jury was immediately impaneled and the case opened by the District Attorney.

Mr. Meek was the first witness. The nervous, hesitating manner in which he gave his evidence would have greatly damaged its effect had it not evidently arisen from a disposition to do the prisoner as little hurt as possible. But no softening could break the terrible force of facts he was compelled to relate.

In his partner's absence he had employed George Gilbert as a clerk; had found him competent and trustworthy; had sent him on a trip to make collections; after receiving a considerable sum, he was induced by a respectable looking gentleman, with whom he had casually fallen in, to join a social game of cards; at first they played for amusement, then for money, and after losing all his own, in hope of retrieving his loss, with the fatal infatuation of that dreadful vice whose end is swift destruction, he had hazarded and lost the last dollar of money he had in trust for his employers.

Mr. Meek's voice faltered as he closed his narrative. He was about to volunteer something about the prisoner's good character when a disapproving glance from Mr. Mangle brought him to a halt.

Just then the prisoner chanced to turn his head, and catching a glimpse of the senior partner, who had just entered and was standing among the crowd, he started quickly, then whispered hurriedly in my ear.

"Turn aside your face," I whispered back. And the case for the prosecution was closed.

"Have you any witness for the defence?" inquired the judge.

"I will call Hezekiah Mangle," I replied.

A buzz of surprise greeting the announcement, in the midst of which Mr. Mangle stepped forward and was sworn.

"You have been absent for the past year, Mr. Mangle?" I began.

"I have."

"Traveling in different parts?"

"Yes, sir."

"The prisoner was employed by your partner in your absence, and was arrested about the time of your return?"

"Such was the case."

"Have you ever seen him?"

"Not to my knowledge."

"Or met him in your travels?"

"If he will turn his head this way I can tell better."

At my bidding Gilbert turned and faced the witness.

The effect was electrical. Mr. Mangle turned red and pale by turns.

"One other question, Mr. Mangle," I resumed. "Do you recognize in the prisoner a young man from whom you won a thousand dollars at 'poker' while on your travels?" and I named the time and place at which the prisoner had met with his misfortune.

The man of iron nerve hesitated worse than his amiable partner had done. He was halting between a point blank lie, which might entail the penalties of perjury, and the truth, which would cost him money.

Cowardice performed the office of science, and the truth came out. The firm's money, which George Gilbert had lost, had been won by the senior partner; and the court instructed the jury that, as the sum in question had actually been delivered to one of the joint owners, who was bound to account to his associate, the prisoner could not be convicted.

"God bless you, Mr. Parker!" faltered the happy little wife. "I knew you would bring us out all right."

It was evident the truthful woman's nature gave me all the credit of a result in whose achievement my share had been next to nothing.

The lesson was not lost on George Gilbert. His first false step was his last, and the richest fee I ever received was the heartfelt gratitude of his noble, faithful wife.

Instinct or Reason.

A small English terrier, belonging to a friend has been taught to ring for the servant. To test if the dog knew why it rang the bell, he was told to do so while the girl was in the room. The little fellow looked up in the most intelligent manner at the person giving the order (his master or mistress, I forget which), then at the servant, and refused to obey, although the order was repeated more than once.

The servant left the room, and a few minutes afterward the dog rang the bell immediately on being told to do so. I give the following as told by my wife, now dead, who personally witnessed the transaction on various occasions. At her sister's house in Kent, a donkey which, when not employed by the children, grazed in a field with some cows, was in the regular habit of acting as follows: At the usual hour for the cows to come home to be milked the donkey lifted the latch of the field gate, opened and held back the gate (which otherwise would have swung close again) till all the cows passed out, then allowed the gate to shut, and went home with the cows. Of course no one taught the donkey to do this, but the quadruped gave the biped a practical lesson, from which I am not aware that they drew the abstract verbally formulated the conclusion that reason may be exercised without rhetoric.—Nature.

Rubber hose is made by wrapping rubber cloth around a tube of the required size, the number of piles depending upon the required strength. The tube is then placed in a heater and subjected for a sufficient time to steam pressure of eighty pounds to the square inch, equal to 280 degrees Fahrenheit, which melts the sulphur and vulcanizes the gum. The tube is then withdrawn from the hose.

One of the latest uses proposed for steel is in the making of tin-plate, and some prominent manufacturers, it is said, are about to adopt it in the place of iron.

Come and be Shone.

The Detroit brigade of bootblacks was increased by one recently. A passenger train from the East carried one more passenger than the conductor knew of, because the said passenger was concealed on the trunk and looked more like a hunk of mud than a live boy 14 years old. He came across the river with the others, and after a brief look around the depot he walked up to a hackman and said:

"Old boy, I'm right from Jersey City, with nothing to eat for two hull days and not a red cent in my pocket. I'm game, I am. Lend me a quarter and I'll make it a dollar before noon."

"I don't know you," replied the hackman.

"Nor I you, but that's all right. A man who won't lend a live boy a quarter to get a start in life is no man at all. Come what d'ye say?"

He got the money and walked up to a bootblack who stood shivering in the cool air, he said:

"Boy, you'll never make a shiner in the world. Your forte is landscape painting or counting bank notes. I'll give you a quarter for your kit, and if you ever want money for a pint of peanuts call on me."

It was a trade. There was a new box of blacking and a pretty fair brush, and the new boy no sooner had the box under his arm than he cried out in a wonderfully shrill voice:

"Come and see me! Come and be shone by a chan who can make yer butes look nicer in two minits than a slouch could in four days. Hold out your feet an' g'in me a chance to lay the cornerstone of a fortune—and don't you forget it!"

He secured five "blacks" as fast as he could work and in twenty minutes he had paid back the quarter. In half an hour he was fifteen cents ahead, and then he rubbed his aching arms and said:

"I've got to drop suthin' down for my stomach to lay hold on, and then I'll come out and make the fur fly. I'll take two hours to get limbered up and feel like a buzz-saw run by chain lightning, but when I do get to work in earnest I shall use up a brush in nine minits all day long."

After he had procured a cheap breakfast at a restaurant he found himself confronted by four or five bootblacks, who looked as if they had planned to give him the bounce.

"Morning gents," said the new boy as he looked from one to the other. "No use giving me any copperas, my beauties, for I've struck this town to stay. I'm right on the black. I'd rather black butes, but I kin black eyes if I'm forced to. I'm a Keeley motor—only more so. I strike, kick, bite and pull hair all at one motion, and it takes three policemen to pull me away from the mangled remains of my victim."

The boys consulted together and concluded not to tackle him, and in five minutes more they were giving him their friendship. He led them back to the depot, stood them in a line and said:

"Now slouches, you stick by me and I'll stick by you. This town hain't never bin half worked, and I know it. Down East we all thought you used dishwater and stove-blackening instead of shoe-polish. Repress yer emotion a few minutes and see me tear myself to shinders."

The new boy moved around like a top, worked like a pony and made twenty cents in about ten minutes. Putting the "chink" down into his vest pocket, he swung his box over his shoulder and remark:

"Sixty cents afore ten o'clock of the first day is good 'nuff. Now I want to go up town, see the streets, study architecture, steal a dog, and this afternoon I'll feel as if I was born here and had been in jail a dozen times. Ta-ta, children; don't spend your money for taffy while I'm gone!"

He Wants Some "Scenery."

On a train coming east over the Central Road the other day was a Californian bound for New Jersey, and the train had scarcely left Chicago behind when he stopped the conductor and said:

"On which side of the car can I best see the mountains?"

The conductor told him that there were no mountains along the route, and the man indignantly replied:

"What in blazes did you build the road for? What do you suppose I'm traveling for? This must be a one-horse road if it don't take in at least one mountain!"

He cooled down after a while, but in half an hour he tackled the brakeman with the query:

"Does this road pass by any old ruins of interest?"

The brakeman couldn't remember any ruins except an old log house here and there, and the Californian was man in a minute.

"Do you think I shipped on this road as freight or live stock?" he called out.

"If you don't run past any old ruins why don't you say so on the time-cards, and not be deceiving the people?"

When the conductor next came along, the Californian was looking from the window to catch sight of the bridges, and he turned and said:

"If we come to any bridges over eight hundred feet long just give me the world. I don't care about seeing any shorter ones."

The conductor had to admit that the road was trying to get along with a few short bridges, and the passenger bobbed around in his seat and replied:

"What did you want to build your old road for? If you haven't any long bridges on the line why don't you hunt for a new one?"

About thirty miles west of Detroit the Californian caught sight of a lake afar off, and going out on the platform he asked the brakeman:

"Don't we run along the shore of that lake, over there?"

"No; we are as near as we shall go."

"You are, eh? Then that settles this road with me! When I come back I'll ride in a lumber wagon! You can take your confounded railroad and eat it, but you can't fool me again. Looks to me as if the folks who built it simply wanted to connect Detroit and Chicago, and don't care a cent for scenery. I'll get off at the next station and walk."

Scientific Notes.

Ivory is rendered flexible by steeping in a solution of hydrochloric acid.

For attaching labels to glass or porcelain, gum tragacanth is generally employed.

Zinc white does not possess the body of white lead, requiring more to cover a given surface.

Dr. Otis Johnson of the University of Michigan, gives the following new test of arsenic: Place the mixture containing arsenious or arsenic compounds in a Marsh apparatus, with a concentrated solution of potassic hydrate and a little aluminium wire. Upon warming, arseniureted hydrogen will be evolved, which may be subjected to the usual tests.

Boudet, of Paris, secures an electrical inscription of speech in this way: A very sensitive microphone, in which the carbons are held together by a piece of paper folded in the shape of a V, is used as a transmitter. The receiving telephone has the diaphragm and cover removed, and a string fixed at one end on the wood, and at the other end to a small piece of soft iron resting on the magnet. A light bamboo, with whalebone point, is attached to the spring, and makes representative traces of the words received on decalcomanie paper.

In a recently-published work of M. Gaston Plante, *Recherches sur Electricite*, the author suggests that the electric current, under certain conditions, might be substituted for diamonds in the operation of drilling rocks. He states that electrodes of platinum would not be necessary, for here it is not the metal of the electrode that is a saline solution. Metallic points to projections usually located at the extremity of the drill, isolated on a part of its length and actuated by a rotary movement, would lead the electric current to the surface of the rock to be pulverized, and would thus replace those numerous and expensive diamonds which are set in the head of the drills employed in the present system of rock boring.

FISH BREEDING.—The Wisconsin State Fish Commission this year have had hatched at the Milwaukee and Madison hatcheries, and distributed, \$10,000,000 Lake Michigan whitefish. These have been planted at various points in the lake. Some 4,000,000 Mackinaw trout have been planted this season in large inland lakes and favorable spots in Lake Michigan. Five hundred thousand Lake Mendota whitefish have been distributed in the larger lakes of Eastern Wisconsin. There is a very large demand for these fish this year. The Commission have 50,000 Mackinaw trout at Nine Springs for distribution to private parties who desire them as breeders. Mr. Welch is corresponding with Seth Green with a view of obtaining 100,000 eels from Hudson river. These will be replanted in the small inland lakes. It is the intention of the Commission to take large quantities of black bass early in June from the inland lakes, where they are running in large shoals, and transplant them to waters where there are none. Mr. Welch says he is constantly receiving letters from all portions of the State reporting that the young fish planted by the Commissioners are appearing in great numbers, especially the Mackinaw trout and speckled trout of the first distribution, while whitefish have appeared by millions upon the spawning-beds along the shores of Lake Michigan that for a dozen years have been barren.

An Arctic Relief.

The old Arctic ship *Resolute*, which formed part of Captain Austin's expedition in search of John Franklin in 1850, is about to be broken up at the Chatham dock yard. Ornaments and handsome pieces of furniture are to be made from the best timbers, which the Admiralty intends to present to the President of the United States as a souvenir of the occasion when the ship was found by American whalers abandoned in the ice, and the government of the United States had her repaired and refitted, and presented her to the British Admiralty. This ship was sent to England in charge of Commander Henry J. Hartstein, who received the Queen and Prince Albert on board, and was in turn entertained at the palace, dining with the royal family. Before her abandonment in the ice the ship received on board Captain McClure and his companion from the *Investigator*. The last named vessel had entered the Arctic regions from Behring's Straits, but had become beset in the ice, and her company had deserted her and were traveling over the ice in hope of escape to the eastward when they met a portion of Captain Austin's crew. Hence McClure and his companions may be said to be the only persons who ever went through the northwest passage.

Use Good Language.

We advise all young people to acquire in early life the habit of using good language, both in speaking and writing, and also to abandon the use of slang words and phrases. The longer they live the more difficult the acquisition of good language will be; and if the golden age of youth, the proper time for the acquisition of language, be passed in abuse, the unfortunate victim of neglected education is very probably doomed to talk slang for life. Money is not necessary to procure this education. Every person Las it in his power. He has to use the language which he reads instead of the slang which he hears; to form taste from the best speakers and poets of the country; to treasure up choice phrases in his memory, and habituate himself to their use, avoiding at the same time that pedantic precision and bombast which show rather the weakness of wasted ambition than the polish of an educated mind.

Nature's Remedy.

People who, without knowing that they were applying nature's remedy, have drawn in their breath hard when they have cut a finger or barked a shin on a coal scuttle, will be pleased to learn that they have employed respiratory analgesia in its simplest form. If any man will draw breath deeply and quickly for the space of three minutes or less, he will thereby lose acute sensibility to pain, so that he can endure a minor surgical operation without inconvenience. Eminent surgeons have found the process of great advantage when used alone, not only, but when anaesthetics are also employed, in which latter case the quantity of the drug to be used is greatly diminished.

AGRICULTURAL.

THE CHRYSANTHEMUM.—Unlike many other beautiful plants, the chrysanthemum is very easily cultivated; suckers slipped from the parent stool in April or May, before they become inconveniently long, strike freely when planted in pots or under a hand glass in the open border; or two or three inches of the extremity of a shoot, taken off at this time and planted in a small pot in light, rich earth, and placed in a cold, close frame, or even in the open air, will put forth roots. By shifting it into a pot of larger size, filled with very rich soil, and pinching off the extreme point as soon as it begins to grow, beautiful, low, well-furnished and fine flowering plants will be obtained. They require abundance of water, and if this is once neglected, the lower leaves fall off, and the plant loses much of its beauty. Liquid manure may be applied once a week. Hand-some dwarf plants may be procured as follows: In August, take a sucker, it matters not how long, and having put some rich compost into a small pot over a piece of broken tile, spread the roots of the sucker on it and coil the stem around the inside of the pot, so that only a couple of inches of the extremity shall appear above the earth in the center. The same result may be obtained by layering the extremity of the shoots into small pots; they soon take root and may be separated from the parent plant.

FALL CHEESE.—It is often remarked by cheese dealers from abroad that the quantity of fine fall American cheese is comparatively small. This is accounted for by the fact that so many factories resort to skimming, for as soon as the hot season is over, and patrons can send their milk in good condition, the spirit of greed prompts skimming, and the reputation of the factory is spoiled at the very time when there is a chance to enhance it. The September and October cheese are those which are required to carry over for spring use, and when these are rich and solid, there is a good chance to get an order for them from abroad for next season. But skimming prevents this. Moreover, makers seldom fully realize the effect of skimming. It alters the condition of the milk which they have to work, retarding the desired change, and this, in connection with the colder weather, delays the development of acid. The maker tires of "waiting and watching," so the curd is dipped too soon, and the result is poor, open textured cheese. Full cream October milk, properly made into cheese and well cured, should be the very finest of the season, such as would be rich, mellow and fine flavored in April or May. Makers must see to it that the cold, clammy October make is superseded by a solid, firm, rich, well-cured cheese. Patrons will assuredly find it to their interest to send only pure, sweet, full milk to the factories.—Robert McAdam.

GARDEN CULTURE OF CRANBERRIES.—Prepare the ground by deep plowing or spading, and enrich it well in the usual way, or with a compost of two parts swamp muck and one part wood ashes. Bone dust is an excellent application—say, one pound to the square yard. In April, May or June, or in October and November, set the plants four inches apart, in rows six inches asunder, in beds four feet wide. Two square rods will yield four or five bushels, and require 2000 plants. The vines will soon cover the ground and require no renewal, as the plant is a perennial shrub. The cranberry is one of the best plants for garden edgings, or for broad belts or borders for the principal walks. It is easily trimmed and kept in order, and is always attractive in bloom or in fruit, and, being an evergreen, in winter. For edgings, plant six inches apart in double rows four inches asunder. For belts and borders, which may be one-half to two feet wide, plant as above directed for bed. As soon as it is known how easily every family may grow its own cranberries, the cultivation of this wholesome fruit will be introduced in every garden. It is in eating from September to June.

REMEDY FOR ROUP.—To cure the roup, when a bird is attacked with the characteristic cough of the malady, or has tenacious mucus about the beak, with difficulty of breathing, I place it in a wicker coop in a quiet shed, and put before it a drinking fountain containing about a gill of water, with which I have mixed one drop of solution of aconite, third potency—may be had of any homoeopathic physician. In every instance during three years this treatment has had an effect almost marvelous, for, upon visiting the patient an hour or two afterwards, I have found that the symptoms have vanished. The attack for a day or two is liable to return, yet each time in a lighter form; but continuing the application has in no instance with us failed completely to remove the ailment in about forty-eight hours. In case the disease should have made so much progress before it is observed, that the sufferer is unable to drink, it will be necessary to give the dose. This is easily accomplished by pouring into the throat about a teaspoonful of water every hour.

A calf will draw milk in three minutes, and the nearer a milker can come to that time the better. A slow milker makes a cow impatient, and often causes her to hold up her milk. The "strippings" are the richest part, and if a cow is milked quietly as well as quickly there will be more as well as richer milk because of these "strippings."

A Holstein cow at Elgin gave 12,610½ pounds of milk from the 12th of May, 1873, to the 9th of March, 1879—293 days. The largest amount in any one day was 71½ pounds; the most in any one week, 470½ pounds. The milk was weighed as soon as drawn from the cow.

A man at Madison lost a cow the other day from the effects of eating oleander buds. Persons in cutting this shrub, the oleander, should be very careful not to throw the cuttings into the streets or alleys, for they are sure death to the cow or horse that eats them.

Horn is colored by boiling it in infusions of colors. Imitations of tortoise shell are made by applying hot a solution of persulfate, quicklime, litharge and dragon's blood. This is laid in streaks and blotches to imitate the shell, and the second application gives the darker spots.

Queer Contents of Letter Boxes.

A Boston paper says that the carriers who collect the mail from street boxes sometimes find queer deposits therein. Loose silver coins and loose postage stamps are among the principal discoveries, while a carrier the other day brought in a bank-book containing 885 in bills, which he had taken from a lamp post box. The most remarkable instance of absentmindedness in this direction was the case, not long since, of a young man who daily carries two leather bags—one for mail and one for money, etc. He deliberately, in a fit of abstraction, walked up to a box in the Boston post-office, and emptied the contents of one bag, containing several bank books and bills and checks amounting to thousands of dollars, in the mail box, and did not discover his blunder until he went into the bank and handed the receiving teller a bunch of letters. That young man's face, it is said, grew so pale as to frighten every one who saw him rushing through the streets, eyes distended and heart thumping loudly in his wretched bosom. He was made a happier and a wiser man on receiving at the business office the bank books and money, in place of which he gladly tendered his bundle of mail matter.

Remarkable Incident.

A circumstance of somewhat remarkable character, says the Petersburg (Va.) *Index-Appel* of May 27th, is reported to have occurred Sunday during the baptizing at the basin. Among the 54 candidates who received the ordinance at the hands of their pastor, Rev. Henry Williams, Jr., was a colored man named Burwell Lancaster, a deaf-mute since infancy. When he was raised from the water, after immersion, according to the testimony of those who stood around him, he suddenly recovered his voice, and, in clear and distinct tones, cried out: "Thank God! Thank God!" To those who had never heard him speak a word, and who had regarded him as dumb, these words of thanks came with startling effect, and among many of the colored people, taken in connection with the occasion, the circumstance is regarded as akin to a miracle. The occurrence created a great deal of comment. What is equally as remarkable, is the fact that the man, after uttering these words, returned again to his mute condition, and has been unable since to say anything further.

Spring Perils.

The first sunshine of spring is deceitful, and the draughts of air pernicious. One needs to be as carefully swathed in flannel during the spring thaw as under the permeating influence of an autumn freeze. Changes of temperature are insidious as they are sudden at this season, and it behooves people with lungs susceptible to atmospheric alternations to be most careful indoors and out; to wear garments appropriate for all seasons, never trusting to chance. A heedless person may throw upon overtaxed shoulders a burden grievous to be borne by inattention to things which only a perpetual consciousness of facts could spare them. I know an estimable lady who, after three years of constant care on the part of friends, terminated her frail life by a willful determination to take a sleigh ride of a few blocks. Her lungs despite the muffling in rich fur, could not resist the influx of strong air; congestion ensued, and the home was broken. Life is too brief and too precious for such experiments; it is a God-given treasure, which no one but a coward and an idiot will recklessly risk or throw away. Hence, it behooves us to make the most of the immunities of art science which tend to prolong, to preserve or embellish it, to garnish the temple in which the Creator has put His soul to dwell, as to render it acceptable here or hereafter.—Newark Advertiser.

A SILVER COMMISSION WANTED.—The New York *World* hopes we have a silver commission: What should be done at once by the Government at Washington as soon as Congress adjourns, is to appoint a new diplomatic commission to negotiate respecting silver coinage with the great powers of Europe, and to invite European co-operation. The commission should be so composed as to command respect and confidence in Berlin, Paris and London, which is as much as to say that it should fairly represent all portions of the country and all serious opinions on the subject, and the interests in the country. Its members should be men competent and willing to take up the coinage question and examine it anew and from the bottom. They should be men capable of orally discussing the subject in the language of European diplomacy, and men who appreciate what international diplomacy means. A commission made up by Evans, and comprising such eminent citizens as Fish, Seymour, Adams and Belmont from the Eastern States, and representative men of equal standing from the Western and Southern States, could not fail to do much towards bringing about an understanding between Washington, London, Berlin and Paris. A little of the industry and good sense shown in the Alabama negotiations would accomplish all that is needed about silver. Such negotiations would be much more useful for silver than any amount of declamation to approving or disapproving audiences in Ohio, under the hot sun of July or August, about the "dollar of our daddies."

A NEW FIRE CISTERN.—A new fire cistern, by Mr. R. T. Snowden, city engineer, was lately tested at the corner of Thirtieth and Magazine streets, Louisville, Ky., and proved to be entirely satisfactory. This cistern is different from any fire cistern ever used before. It is constructed to hold three hundred barrels of water; the body of the cistern instead of being perpendicular is horizontal, lying parallel with the course of the street, cylindrical in form, the walls being of brick and cement, thirteen inches in diameter, with the crown twenty-four inches below the surface of the street, the outlets being near the ends. The idea of this plan of cistern is to obtain more than one outlet, which is impossible in those now in use, so that a great number of engines can be operated from one receptacle. Another advantage claimed for it is that the cistern, from the nature of its construction, cannot be crushed in from the street above. Everyone who saw the test were much pleased, and were ready to acknowledge the superiority of this cistern over those now in use. It is likely that they will be extensively adopted in the future.

Chloride of zinc is an admirable disinfectant for foul liquid (one part in 200 of water). This is used by order in the German navy for bilge water.