

The population of Schenectady, N. Y., headquarters of the Edison industries, has jumped since 1880 from 13,655 to 47,025. Thus is the theory strengthened that electricity stimulates growth.

Kentucky's highest court has decided that in case of total destruction by fire the full amount of the insurance policy must be paid, regardless of any stipulation in the policy contrary to this rule, and that the actual loss must be paid where the property is damaged to an extent less than the amount of the policy.

When a New Hampshire man was twenty years old, he deposited \$470 in a savings bank at Concord. From time to time he drew \$200 from it, and when he died the other day, at the age of ninety-five, the sum of \$1500 still stood to his credit. Yet he had never added a dollar to the original deposit. Compound interest did it all.

The pages in the House of Representatives at Washington now wear big black buttons on which the word "Page" is printed. Representative Lessler brought about this reform. Before the members came to know him he was several times taken for a page, and rather brusquely told to go on errands. He then insisted on having the pages tagged.

High-mindedness and right-mindedness may profitably be supplemented by "two-mindedness," which has been defined as taking into account what is urged on both sides, and trying to combine the essential parts of the two opposing arguments into one higher truth. Magnanimity, honesty, breadth—a trio of qualities worth possessing, and the last by no means the least.

Lord Cromer, the British Financial Agent in Egypt, informs his Government in an official report that the reason why so many orders for railroad plants are being given to United States firms is because they are executed with extraordinary rapidity. His report is backed by the statements of a number of Egyptian railway officials. Another score for American enterprise and push.

For eight years three Commissioners have been quietly drawing pay at Washington for codifying the Federal statutes. So quietly have they drawn their pay that a Boston man thought it would be a good scheme to codify the Federal statutes, and he has been working away with a large force of clerks under the direction of lawyers. The other day he learned that the Government is supposed to be doing the work, and he is "out" the cost of clerk hire, stationery, office rent and sundries.

A plan is on foot for the establishment of a geographical society of America, something which will unify the growing interest in American geography, and will lead to a better presentation of the subject in our educational institutions. The question how extensive it is desirable the organization should be made is under discussion. The most far-sighted of the plans suggested includes Mexico and Central America, and may also be extended to include even the remotest parts of Latin America, thus fostering a common interest in a great subject in the whole Western world.

So many horses and mules have been shipped from the United States to South Africa that the rise of prices for these animals has been startling. So extensive, indeed, have been the shipments of horses and mules to Cape Town since the beginning of the Transvaal conflict, so great has been the increase in the sums paid for cavalry remounts and draught animals that Western breeders who have already been enriched by generous profits, may be tempted to go far more extensively into the production of horses and mules, with the expectation that the boom may be kept up for several years.

John Graham Brooks, in a lecture on "The Best of Utopias," at Brooklyn, said the supreme question just now is: "What education will give our race the habits of mind, the sanity and strength to use our vast and untamed energies for objects beyond and better than themselves? Two moral and intellectual agencies are already at work in our midst that will more and more lessen our slavery. The first is the rapid rise of the arts and crafts movement, the motive of which is to modify the commercial spirit so that every product that admits of grace and beauty may receive their stamp. The other influence is the bringing of science into the great primary industries of life, into the home and upon the farm."



**G**OOD natured Mary Blake was a domestic in a family at Oak Park, where she had lived more years than she had fingers on both hands, and she was as much an integral force of that family as the head of it, Mr. Munson. The one hope of these good people was that Mary Blake would never either resign or die. One horn of the dilemma would have been as serious to them as the other.

Mary Blake—she was called by her full name to distinguish her from Mary Munson, the daughter of the family—was as much attached to the people she had lived with so many years as it is possible for those who are neither kith nor kin to their employers, and she was perfectly satisfied with her place and position, with no foolish ideas about "culture" or "aspirations" after the unreachable. She was, however, a model domestic, a cook that would put to shame the greatest chef in the country with her well seasoned dishes, an excellent laundress, and when there was sickness a capable nurse. Added to these rare qualities was honesty and a fairly good temper. A little stolid, perhaps, and fond of her own way, which was such a good one that it needed no interference. This was the aggregate of Mary Blake's virtues and the Munsons depended on her to such an extent that it really seemed as if any member of the family could have been spared with less detriment to its running gear.

One morning—in the eleventh year of her reign—Mary Blake came to grief. She went out the back way with a pail in her hand, walked a block or two, on an errand to a neighboring grocery store, and, returning, fell on a piece of defective sidewalk, where she lay helpless, dazed and badly hurt. She was taken to a hospital by order of a physician, where a serious dislocation of the hip was reduced by the surgeons, and she was laid on a white cot in a private ward, where the Munsons visited her every day, and held themselves responsible for all expenses.

It troubled them much to see their faithful domestic suffer, but under their grief lurked the hope that Mary Blake was not permanently injured, but would return to them, and they did everything in their power to make her convalescence a speedy one.

Then a great scheme entered Mr. Munson's head. He feared that they never appreciated the services of this excellent domestic, and he nursed and fondled and matured that scheme until at the end of six weeks Mary Blake walked in upon them. She looked white and limped slightly, but after she had taken off her things and given one look around the kitchen the girl who had supplied her place said she was ready to leave, and the cat retired under the range.

Then Mr. Munson unfolded his scheme. He sent for Mary Blake



when seated at the breakfast table with the family.

"How are you feeling now?" he asked considerably.

"I'm all right, sir," she answered briefly, not being given to many words.

"Oh, no, not all right. You limp a little yet."

"But it don't hurt a bit. I'm as right as I'll ever be."

"That's it, Mary," said Mr. Munson, "you will never again be well; you've received a shock that you will never get over. You will always be lame and feel the effects of the fall."

"If you're meanin' that I can't do my work or earn my wages just say so an' I'll be leavin' at once't," and Mary

Blake gave her little snort of defiance that suggested temper.

"It has cost you," continued Mr. Munson, "all the money you had saved up for hospital expenses and doctor's bills—supposing you had to pay it—and was a loss to us of—let me see—at least \$2 a day."

"An' I worth the likes of that?" asked the "girl," with a look of surprise.

"Oh, those are imaginary figures," said Mr. Munson, who saw he had made a mistake. "Now, Mary, I am a lawyer, and I advise you to sue the town for damages. I will conduct your case, and there will be no trouble in getting a snug sum of money that will keep you in your old age without working. It will be a long time to them, but the money will draw interest, and it's only fair that you should have your rights."

Then Mr. Munson explained that the town owned that particular piece of sidewalk; that it was defective, causing the fall; that he had secured several witnesses who saw her fall, and that his own family would go into court and swear to the large bill of hospital expenses and the value of her services.

It took Mary Blake a long time to get the idea into her head, but once there it took complete possession of her, and the discharged girl had to be recalled to assist in the housework, and the kitchen became a scene of wrangling and discontent. Mary Blake was despotic among her own class of people, and no wonder; she found no one who could carry out her plan of work as it should be done, and with a



lawsuit with the city on her hands she was not expected to do more than keep a supervision of affairs.

Lawyer Munson won the case. His wife and daughters were in the witness box, where the city attorney badgered them until they were frantic with rage. The presiding judge made eyes at pretty Mary Munson, causing her to blush distressfully. Mary Blake was as cool and stolid as if she had spent half her days in courts, answering just as her lawyer instructed her to, and she was accorded half the sum demanded. Mr. Munson had asked for \$3000 and she was given \$1500 in thirty days after the trial was concluded.

The money was paid to Mary Blake herself, as the records show. Mr. Munson wanted it settled in that way, and he never gave her a bill for law services, never imagining for a moment he would have any trouble in getting his pay. But Mary Blake had been awakening to the value of her own services. The Munsons had said under oath that she was worth \$2 a day to them, yet they had never paid her but \$4 a week during her long term of service. She had done a little figuring on her own account, and the result was a counter bill that appalled Mr. Munson by its dimensions, minuteness of detail and summing up. He was caught in a trap of his own construction.

A compromise was effected and Mary Blake at once retired from domestic service, leaving the Munson family to get along as best they might. She went neither in sorrow nor anger, but with a determination that brooked no appeal, leaving Mr. Munson to mourn the hour when he took a legal view of the accident.

One day Mary Munson sought her mother. "There is a lady in the parlor to see you."

"Who is she?" asked Mrs. Munson. Her daughter laughed, but would not tell. Mrs. Munson went into the parlor with a company smile on her face.

"Goodness! Is it possible? Mary Blake!"

Mrs. Munson tried to keep from laughing as she shook hands with her ex-cook. She was rigged out in a cheap silk dress, with many flounces, wore a feather bedecked hat and an imitation seal coat. Her pudgy hands were crowded into white kid gloves, several sizes too small.

"I wouldn't have known you," said Mrs. Munson, "you look so fine."

"Yes'm, an' it's time. Them's the first pair of kid gloves I ever had on, and me workin' an' savin' all them years."

"They built a monument in New Orleans to a woman who never wore a pair of kid gloves," said Mrs. Munson gently.

"I'd a heap rather be here than atop any monument," answered Mary Blake, who had her own ideas of mortuary art. "I'm enjoyin' meself now like other folks, goin' to the theater every night and the parks every Sunday, an' I'm never sollin' me hands with work."

"We've one hope," said Mrs. Mun-

son when her caller had gone, "at the rapid pace she is going now Mary's damage fund won't last a great while, and when it is gone she may get back her common sense and her usefulness. Until then we must worry along with substitutes."—Mrs. M. L. Rayne, in the Chicago Record-Herald.

### INCOMES OF SUCCESSFUL INVENTORS

Large Fortunes Derived From the Invention of Trivialities.

Some of the largest fortunes appear to have been derived from the invention of trivialities and novelties, such as the once popular toy known as "Dancing Jimcrow," which for several years is said to have yielded its patentee an annual income of upward of \$75,000. The sale of another toy—"John Gilpin"—enriched its lucky inventor to the extent of \$100,000 a year as long as it continued to enjoy the unexpected popularity that greeted it when first placed upon the market. Mr. Plipton, the inventor of the roller skate, made \$1,000,000 out of his idea, and the gentleman who first thought of placing a rubber tip at the end of lead pencils made quite \$100,000 a year by means of his simple improvement.

When Harvey Kennedy introduced the shoe lace he made \$2,500,000, and the ordinary umbrella benefited six people by as much as \$10,000,000. The Howard patent for boiling sugar in vacuo proved a lucrative investment for the capitalists who were able to remunerate the inventor on a colossal scale. It is estimated that his income averaged between \$200,000 and \$250,600 per annum.

Sir Josiah Mason, the inventor of the improved steel pen, made an enormous fortune, and on his death English charities benefited by many millions of dollars. The patentee of the pen for shading in different colors derived a yearly income of about \$200,000 from this ingenious contrivance. It is stated that the wooden ball with an elastic attached yielded over \$50,000 a year. Many readers will remember a legal action which took place some years ago, when in the course of the evidence it transpired that the inventor of the metal plates used for protecting the soles and heels of shoes from wear sold 12,000,000 plates in 1879, and in 1887 the number reached a total of 143,000,000, which realized profits of \$1,150,000 for the year.

The lady who invented the modern baby carriage enriched herself to the extent of \$50,000, and a young lady living at Port Elizabeth, South Africa, devised the simple toilet requisite known as the "Mary Anderson" curling iron, from which she derives royalties amounting to \$500 a year. It was the wife of a clergyman who designed an improvement for the corset and made a fortune out of it. The gimlet-pointed screw, the idea of a little girl, brought many millions of dollars to the clever inventor. Miss Knight, a young lady of exceptional talents, was gifted with wonderful mechanical powers, as will be seen by the complicated mechanism of her machine for making paper bags. We are told she refused \$50,000 for it shortly after taking out the patent.—Scientific American.

### Why One Talesman Was Scratched.

In a certain case the Judge ordered the Sheriff to call the roll of thirty-five "good men and true" selected for jury duty. Only twenty-two answered to their names, and the Sheriff looked somewhat inquiringly at the Judge, but the latter was calmly wiping his glasses while he uttered the customary: "Any desiring to be excused from service on this jury will now come forward."

Twenty-two men made a movement forward, and the clerk stopped in his work of noting those who had failed to respond to the summons to look in wonder at the entire venire desiring to escape.

"Well," said the Judge, speaking to a long thin, nervous looking young man, "why do you wish to be excused?"

"If it please your Honor," answered the aforesaid thin individual, "I'd like to be excused on account of illness. I'm suffering from something that might prove embarrassing to the other jurors, and it is certainly embarrassing to me."

"What is the nature of your illness?" asked the Judge.

"Well," said the young man, hesitatingly, "I'd prefer to tell you in private. I'm somewhat delicate about speaking of it in public."

"I cannot hear anything in private," responded the Judge impatiently. "If you want to be excused you must tell me here and now what is the matter with you."

"Well, if I must tell it here—I have the itch."

"The itch?" echoed the Judge, and, turning to the clerk, without marking how apropos his observation was, he said, "Mr. Jones, scratch the juror off."

—St. Louis Globe-Democrat.

### Plague of Housewives; Joy of Botanists

The housekeeper who finds a layer of gray-green mold covering her preserves when she removes the lid from the jar is so far from seeing anything interesting, much less beautiful, in it, that she throws it away in disgust. But if she would examine it with a microscope, as the botanist does, she would find it a mass of fungus plants, with branches of delicate, frost like tracery and as dainty and clean in the midst of decay as are the lilies in a stagnant swamp.

The mold that thus annoys fruit canners is the most common of the species. It grows in the form of a grayish-green mat, which gives off a fine dust consisting of millions of spores that correspond to the seeds of larger plants. The spores sprout in every direction on the surface on which they lie, and a little later the sprouts turn and grow upward.—Philadelphia Record.

### USE OF WASTE MATERIAL

MILLIONS OF DOLLARS DUG OUT OF SCRAP PILES.

Innumerable Cast Off Things Are Rescued From the Garbage Dumps and Made Into Articles of Commercial Value—Little Wasted in the Industrial World.

One of the time-honored jokes at the Chicago Stockyards is that every part of a pig is saved except its squeal. Men in the packing business have added their names to the list of millionaires because they discovered methods for utilizing that which had been thrown away as waste material. Great factories are running the year round in Chicago whose raw material is the cast-off stuff gathered by scavengers and rag men. Men of science are ever at work tearing by-products and waste material to pieces to regroup the elements into new material which has a commercial or industrial value. Little is wasted in the industrial world.

Old iron is worked over into new iron. Linen rags are reincarnated and live as paper. Woolen rags are shredded and made into shoddy. Bones are made into bone black, to clarify sugar syrup. Old rubbers, bits of garden hose, exploded bicycle tires, and cast-offs in which rubber is a part are made over into new rubber. Worn steel rails are re-rolled into lighter sections. Old rusty pipe is drawn down into bright new pipe. The tin cans which are gathered up in alleys and from garbage boxes are melted down and cast into window sash weights and counter weights for bascule bridges.

The blood which runs into the slaughter-house wells is transformed into buttons, and other articles requiring dense bodies and taking high polish, and into fertilizers. Boys and girls collect cigar stubs which are made over into snuff, smoking tobacco and cigarettes. Rags and old carpets are cut into strips and woven into handsome rugs. The list of old cast off things that are rescued from ash piles and garbage dumps to be born again can be extended for columns, and the list would never cease growing, for every day some new use for some wasted product is discovered.

There was a time when tons of blood, fresh from slaughtered cattle, flowed unheeded through the sewers under the stockyards. To-day this blood is saved, put through several processes and comes out as a fertilizer in the form of cakes, which are sent to sugar refineries to assist in clarifying the sweet liquor. Some of the handsomest buttons worn on new dresses once ran as warm blood through the veins of fat steers.

Heat and hydraulic pressure are the agents which separate the water from the albumen in the red fluid, and prepare the dried blood for the pulverizing process which fits it for use as a fertilizer. After being boiled down, pressed, crushed and ground to a powder, the dried blood is mixed with potash and phosphoric acid and sent out as a complete fertilizer.

Many years ago in England a wool famine confronted the weavers. A bright man with a curycomb took advantage of the situation and started the "shoddy" business. He bought up old blankets, flannel and old woolen clothing. This old material was cut and torn into small pieces, and then stripped into shreds with curycombs. This process resolved the woolen fabric into something akin to its original elements, wool fibers, and the man with the curycomb mixed this new raw material with wools and made a cheap, serviceable cloth. The shears and curycombs of the original shoddy man have long since passed from use, for expensive and intricate machinery now is required to make shoddy.

There is shoddy and shoddy. A man who makes shoddy said there are more than forty different grades and qualities of the commodity, and that many kinds of wool cloth in which shoddy is a constituent element are not cheap, inferior fabrics, but are more serviceable and the better for the shoddy.

Shoddy is a useful product of waste material. It is never used alone, but in combination with new wools. The woolen rags from which shoddy is made are first thoroughly dusted by machinery before they are sorted. Any cotton which may be in the rags is got rid of by dipping the rags in a boiling mixture of sulphuric acid.

Long experience has demonstrated the exact proportion of the acid required to eat out the cotton fibers without destroying the wool. The effect of dipping the rags into the water and acid is to rot the cotton so that the woolen part of the fabric falls to pieces easily. After being dried, the rags are run through a machine that removes every bit of dust, leaving the pure, clean wool. The woolen rags and cloth are dyed, and then run through a machine whose thousands of steel pins not only shred the rags, but split the threads so that the rags which enter the machine leave it in the form of wool fibers.

The wool is put through a carding machine, which thoroughly combs out the woolen particles, mixes them and turns them out in the form of long fluffy rolls, which are packed in bales ready to be shipped to the woolen mills, where the shoddy is mixed with new wool.

While woolen rags are sent to the shoddy mills, linen rags naturally start from the ragman's storeroom to the paper mill. There they are mechanically cleaned and then dully sorted by girls and women, who throw out every rag that is not linen. The selected rags are cut into bits by a machine and then boiled in lime water to remove the colors, after which they

are ground to a pulp and become the "half stock" of the paper-makers. This pulp is bleached, and after passing through a machine called a "beater," which completes the pulping process, it is sent to the paper machine to be made into fine linen paper.

The "old iron" which forms half the burden of the ragman's song is the basis of a business whose output is valued annually in millions of dollars.

Every piece of old iron, wrought or cast, rusty or clean, can be utilized. The old cast iron is sent to foundries and puddling furnaces, the old wrought iron, bars, sheets and plates, is sent to the rolling mills. Cast iron sent to foundries is remelted with pig iron, and begins a new life of usefulness under new forms and shapes. The wrought iron goes to the scrap piles in rolling mill yards. There it is sorted and cut to convenient lengths, then made up into "box" piles or fag-gets, heated to a white heat in furnaces and run through the rolls, which first weld the pieces of iron into a solid billet and then reduce the billets to bars.

A profitable business has been found in the redrawing of old iron pipe and boiler tubes. Most of this waste material is thickly covered with rust when it arrives at the factory, and the rust is removed by the simple process of heating the old pipe to a cherry red and plunging it into water. The sudden contraction loosens the rust scales and the pipe is sent to the heating furnace clean and bright. A good welding heat prepares the pipe for the redrawing process. This consists in pulling the white hot pipe through a die, which not only reduces its diameter but makes it solid. It is heated again and drawn through a smaller die, and the process is continued until the pipe is down to the required diameter. Then the new pipe is straightened and is ready for the market.

Steel rails which have been hammered and flattened by the huge drivers of locomotives are heated and rolled through the finishing passes of a rail mill. This process, of course, reduces the size of the rail, but it renews the life of the rail at comparatively slight expense. Old steel rails and the saved off ends of new steel rails are made into bars, harrow teeth, plow beams, tire, spring steel and other forms and shapes used by makers of agricultural implements, wagons and carriages.

The rails are cut by huge power shears into convenient lengths and heated in a furnace. For making plow beams the pieces of rail are passed through rolls, which reshape the head and flange to the required shape. If it is desired to make bars the pieces of rail first pass through the slitting rolls, which slit the rail into three pieces—the head, web and flange. The head is worked down into squares, rounds and other forms of bars; the web is rolled down to harrow tooth steel, baby carriage spring steel, light rounds and spoke steel; the flange is rolled into flats and spring steel. Thousands of tons of old Bessemer steel rail have been transformed into merchant steel and agricultural shapes.

In the copper district of Montana, scrap iron, a waste material, and the water, which might be called waste material, from a copper mine, are brought together to save the copper, which is carried off in the water. Some years ago some iron tools were left for a time in the stream of water which flowed from one of the large copper mines. A miner passing saw that the iron had disappeared and that copper had taken its place.

Being a clever man, he made some experiments, and soon satisfied himself that there was a fortune in the water which had been running away unheeded ever since the mine was opened. He bought scrap iron and tin cans and placed them in tanks into which he ran the water from the mine, and in time the iron, by chemical action, "caught" the copper which was afterward refined.

Railroad companies, large manufacturers and the "captains of industry" are ever on the lookout for ways and methods to turn waste material into useful by-products. Fortunes are hidden in garbage boxes and millions of dollars are waiting to be dug out of the scrap piles.—Malcolm McDowell, in Chicago Record-Herald.

### Argument From Precedent.

Lincoln was once arguing a case against an opponent who tried to convince the jury that precedent is superior to law, and that custom makes things legal in all cases. Lincoln's reply, given in Miss Ida Tarbell's life of the great war President, was one of his many effective analogies in the form of a story.

Lincoln told the jury that he would argue the case in the same way as his opponent, and began:

"Old Squire Bagly, from Menard, came into my office one day and said: 'Lincoln, I want your advice as a lawyer. Has a man what's been elected justice of the peace a right to issue a marriage license?'

"I told him not; whereupon the old squire threw himself back in his chair very indignantly and said:

"'Lincoln, I thought you was a lawyer. Now, Bob Thomas and me had a bet on this thing, and we agreed to let you decide; but if this is your opinion, I don't want it, for I know a thunderin' sight better. I've been a squire eight years, and have done it all the time.'

Germany's colonies are five times as big as herself, those of France eighteen times and Britain's ninety-seven times bigger than herself.

Scotland has 146 parishes without paupers, poor-rates, or public houses.