INDUSTRY AND MECHANICS

HANDY RULER FOR PAINTERS

Of Much Assistance in Keeping Straight Line While Working on Edge of Wood.

One of the most difficult parts of the house painter's work is to paint the edge of woodwork abutting wall paper, windowpane or floor. Heretofore they have had to work carefully

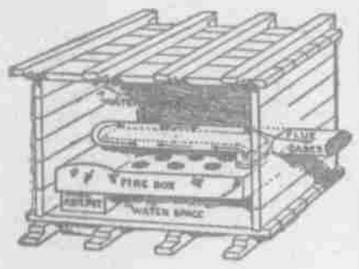
Ruler for Painters.

along the edge and fill in later. A New York man has invented a device which he calls the painter's time-saver, and which is in reality a ruler to guide the brush and prevent the smearing of anything over the line to be followed. The device is a piece of metal with a wide, straight edge and legs at the other end. The elevation affords room to hold it in the hand. The ruling edge is held along the edge of window sash or door jamb and the workman can paint along it rapidly without fear of consequences. The implement must be pressed down tight, so no paint works its way beneath. For people who like to do their own painting one of these rulers is almost indispensable.

USE WOODEN STEAM BOILERS

Assertion Seems Incredible, Yet They Were Made and Used as Recent as 1817 on Boat.

Steam boilers made of wood! It sounds incredible, and yet such boilers were formerly made and used. Even as recently as 1817, a steamboat plying between Norwich and New



Wooden Steam Boiler.

London, Conn., was equipped with wooden boilers, and the reason that they burst under "extreme" pressure was attributed principally to the fact that they had no "condensers, safety valves, or balance wheels." From 1801 to 1804 there was a wooden boiler in service at the Center Square water works, Philadelphia. A partial view of this boiler is shown herewith. The ash pit, fire box and flues were made of iron, but the inclosing box, in which the water was contained and the steam generated, was of wood. The steam pressure used was very little above that of the atmosphere, but the difficulty of preventing leaks even with this small pressure led to the early abandonment of wood as material for steam boilers.

Ticket Printing Machine.

Railway ticket printing machines are shortly to be installed at a Birmingham (Eng.) station. The booking clerk, when requiring to issue a ticket to any station, takes a blank card, places it in a slot in the sliding carriage, and moves it along until the pointer is opposite the alphabetically arranged name of the required station. He then depresses a handle, and the ticket drops out, printed with the names of the issuing and destination stations, price, date, consecutive number, class, etc., while an automatic register of the operation is made at the same time.

Coating With Metal.

A new method of coating various substances with metals, the invention of a Swiss engineer, consists in reducing molten tin, zinc, copper, lead, aluminum, or other metal or alloy to a state of pulverization by pressure of an inert gas—nitrogen or hydrogen—and in that state driving it against the surface to be covered from a flexible tube with a tip like that of a large vaporizer for liquids.

Paper Mills in India.

Paper mills in India have not been very profitable, as the raw material has to be brought from long distances and the cost of freights eat up the profits. India's import of paper and pasteboard in 1910 fiscal year was of the value of $3,284,900. Bamboo for paper making there is suggested.

POOL AND BILLIARD TABLE

Frame Is Adjustable to Different Dimensions and Has Provision for Side Pockets.

A Pennsylvania man has invented a combination pool and billiard table that is nothing less than startling in its mutability. The same article can be used not only for bothpool and billiards, but it can be used on floor or table and, finally, can be folded up and stood in a closet when not wanted. All these things are made possible by the fact that the bed of the table is a single strip of heavy rubber that when stretched taut along the bottom of the frame provides a firm, level surface. The frame is adjustable to different dimensions and has corner pieces that are inserted for billiards and removed for pool, when pockets are adjusted at the corners. There is also provision for side pockets. Furthermore, the cue is adjustable to different lengths. This table can be used in the house or out of doors, on land or on water, and when not in use can be stood up out of the way. For floor playing a ball attachment is fastened to the end of the cue.

COMBINED CROWBAR-TRUCK

Used in Sets of Three for Moving Heavy Loads About—Quite Useful in Factories.

A combination crowbar and truck has been invented for moving heavy articles about in workshops, factories and warehouses. While the articles can be used separately, they are usually employed in sets of three, as they thus preserve a better balance for the load and expedite its handling. At the end of a long, strong handle are two stout iron rollers, covered with an iron casing, with a spike set near the tip. This spike prevents the

Crowbar Also Truck.

load from slipping, and yet is to short to do any damage. The truck-crowbars are inserted under the object to be moved and by bearing down on the handles the load is lifted clear of the floor and can be wheeled to any point desired. Articles weighing three or four tons can be trundled about on these trucks as easily as an ordinary packing case. Even in shops equipped with traveling cranes these implements will be useful.

Dirty Windows Exclude Light.

A German professor has ascertained that in industrial cities windows which have not been washed for ten days exclude from 35 to 48 per cent. of the light. If not washed for four weeks, they may exclude as much as 80 per cent. of the light.

INDUSTRIAL AND MECHANICAL NOTES

Buenos Aires is the largest hide and wool market in the world.

Ninety-seven American manufacturers have agencies in Madrid.

Tokio, Japan, intends to spend nearly $16,000,000 on drainage works.

Stoves burning alcohol are being introduced into Canada by Germans.

Sandstone will absorb a gallon or more of water to the cubic foot of rock.

A large Hamburg restaurant is housed in a building of compressed paper.

A file may be kept from filling up with lead by applying a coat of thin oil just before filing.

At a recent gem exhibition in London there were shown blue, pink and aquamarine diamonds.

Sheet aluminum makes better vise jaws for handling soft metals than either brass of copper.

So-called burglar proof glass, made in France, withstands revolver bullets and blows from a mallet.

Approximately one-third of the world's supply of copra now is being produced in the Philippines.

Lime was one of the earliest materials used to improve the soil, being mentioned by Plato and Pliny.

For the first times in the history of the industry in that state Ohio mined more than 30,000,000 tons of coal last year.

In a stone arch bridge recently built in France molten zinc was used to bind the stones together instead of cement.

Light but strong waterproof paper that successfully imitates leather and rubber is made in Japan from vegetable fibers.

London requires taximeters to be connected to the front wheels of taxicabs because the rear wheels do the most slipping.

In the Night Watches

By MABEL C. ENGLAND

Mr. Jimmy Lanning stepped out of his friend's studio and called back a jovial goodnight to the group of choice spirits there congregated and turned homeward. It was midnight when he reached his house and as he carefully inserted the key in the lock he breathed a hopeful prayer that this time his wife of a year had not waited up for him. Of late he had formed an unregenerate habit of spending two or three evenings a week away from home, though Ina never reproached him, and invariably met him with the cheerful smile.

As he entered the darkened hallway he heaved a sigh of thankfulness. All was still. For the first time in their year together there was no soft little rush from the den upstairs, no dimpled face thrust over the banister to greet him. Yet such is the inconsistency of man that once an oddly neglected feeling seized him. The knowledge that Ina could have at last grown so indifferent as to go peacefully to bed and to sleep while he was still straying happily in the outer darkness of the night came to him with something of a shock.

He opened the bedroom door softly. The bed had not been disturbed. He passed into the dressing room. On the bureau lay a note. He seized it in something of a panic.

"I have gone out," he read. "I may be late. Don't wait up."

"The deuce!" he muttered, even as he breathed a gusty sigh of relief. At any rate it wasn't a tragedy—or a scandal. But what the dickens—Gone where?

At that moment the hall door closed sharply. Light footsteps mounted the stairs. A moment later Ina swept into the room, neck and shoulders gleaming in her prettiest gown, eyes sparkling, cheeks flushed like a rose.

"Where have you been?" demanded Ina's lord.

"Out amusing myself," returned Ina flippantly. She came over and kissed him. "Poor boy," she cooed, "have you been waiting long? I told you to go to bed."

"I want to know where you've been," persisted Jimmy doggedly.

"Do I ever ask where you've been?"

"No, but that's different."

"Yes, that's different," mimicked Ina.

Jimmy sat still, morosely regarding her.

"I haven't done anything to bring discredit to the sacred name of Lanning," she informed him, "if that's what you're afraid of. But I'm not going to sit around here like a silly dummy while you go off and have fun. I'm going to have some myself."

In the days that followed curiosity and suspicion tortured Jimmy. The thing happened twice again in the next week, but never could he force from Ina the latest inkling of where she had been.

The third time he found the explanatory note on his dressing table he turned and went swiftly downstairs again, determined to watch for her return and discover what he could, but just as he he turned the corner of the stairway Ina closed the hall door. He thought that she looked distinctly startled and somewhat confused. He strode to the door and threw it open. No one was in sight.

"Where have you been?" he demanded, angrily, "and with whom? I insist on knowing."

"Really? Well, if you must know where I am in the evenings, Jimmy dear, you'd better stay at home and find out."

Stay at home and find out. That gave him an idea. To tell the truth his convivial evenings abroad were beginning to lose their zest now that his subconsciousness was robbed of the peaceful picture of his wife sitting at home in dreamy adoration, eagerly waiting his return. He was apt to grow morose and depart early. For Jimmy loved his wife sincerely in his man's way. Relations began to grow strained between him and Ina.

A few nights later he announced that some of his old classmates were having a reunion and that he would be late getting back, kissed Ina, tramped down the stairs and banged the hall door. A moment later he slipped into the darkened reception room on the right, drew a chair to the window facing the street and sat down.

"Low down trick to spy on her," he muttered, "but, by Jove! I've got to know where she goes."

The minutes passed. Nine o'clock came—ten—ten-thirty. No sound came from upstairs.

"Confound it!" muttered Jimmy. "Got fooled that time. Well, she won't go out this late. Might as well go to sleep till midnight and then let on I just got back."

He threw himself on a couch and promptly slept.

In the meantime Ina, lounging comfortably in an easy chair upstairs, perused her novel till the clock struck eleven. Then she rose, slipped into her dressing room and commenced an elaborate evening toilet. About a quarter to twelve, fully arrayed, she drew a graceful evening wrap about her, slipped softly down the back stairs, then down another flight to the basement, drew a comfortable wooden rocker to one of the windows, which, as in so many New York houses, were on a level with the street, ensconced himself with a good view of the entrance, and waited.

"To think," she giggled, "that he has never once suspected. And it's waking him up with a vengeance."

It was half-past one when Mr. Lanning awoke. He crept to the window and examined his watch by the light of a street lamp.

"Holy smoke!" he muttered, "she'll be all up in the air. Let's hope to goodness she's asleep!" He crept softly into the hall, still more softly up the stairs, turned the handle of the bedroom door and slipped in. All was silent, the bed undisturbed, and on his dressing table he saw the note.

Dismay gripped him. Then she had gone out after all! What a fool he had been to go to sleep. And where could she be at this hour? He opened the window and leaned far out. No sign of life anywhere. He paced up and down in a fury, leaned from the window at about every fourth turn. His mind was chaos. Visions of accidents haunted him. All sorts of impossible explanations surged through his brain. The minutes passed. Two o'clock came—two-thirty. He mopped the perspiration from his face. Jove! If this was what it meant to wait for people the Lord forgive him for the many times he had made Ina do it.

At three o'clock he strode down the stairs, a delirious determination to find her dominating every other emotion. To his amazement the hall door stood wide open. On the top step was Ina, her back to him gazing wildly up and down the street. As he stepped out she turned with a little shriek and threw her arms around his neck.

"Oh, Jimmy, Jimmy," she sobbed, "where have you been? I've been waiting for you for hours!"

"Waiting!" he gasped, "I've been waiting for you. Where—"

"You didn't come in. I was watching. I never took my eyes off the door for a minute. You didn't come in!" she persisted. "How did—"

"I didn't go out," he interrupted. "I wanted to find out—Ina, come inside. I nearly went crazy upstairs, waiting."

The door shut, Ina sunk down on a chair.

"You—you were watching upstairs," she giggled hysterically, "and I was watching in the basement, and—"

"The basement!" exclaimed Jimmy, blankly.

"Yes, that's where I went every night. Then when I heard you come in I stole up, banged the door and—"

Jimmy had her in his arms.

"You blessed little schemer!" he whispered, kissing her frantically in his relief, "I'll never leave you alone again a minute, now that I know what it feels like."

TRAIT OF AN IRISHMAN

Man Wouldn't Leave the Home Where He Was Born Because He Loved It.

The love of the Irishman for his home is one of his well-known traits, and in "Ireland Yesterday and Today," Mr. Hugh Sutherland gives a pleasant and yet pathetic instance of that devotion. He was traveling in the west of Ireland, and was rather astonished to find the third-class compartments crowded with sturdy-looking men. At a junction station a broad-shouldered, bearded man cheerfully enlightened him as to the reason why so many were traveling.

"Sure, sir, we've all been over in England workin'," he said. "I've been away since April myself, and there's 20 good pounds in me pocket this blessed minute to pay the rent an' buy a bit of bacon an' that for the winter."

"But what do you go to England for? Why not stay on your own farm and work that?"

"God save you, sir, an' do you think we go to England because we like it? Is it likely we'd leave our own farms if so be we'd get food an' clothes an' rent by stayin'? Bad luck to it, we go because we have to, to get the money we need."

"Then why not go to England altogether?"

The big man turned and looked over the desolate country. The winter dusk was falling swiftly, and the outlines of the hills were indistinct, but we could still see the empty land and feel its rugged unkindness. Yet the man's voice was very tender as he spoke.

"Twenty miles on," he said, "there's a bit of a cabin and a bit of land. In that cabin I was born and on that land my father worked. Is it like, now, that I'd leave it to live in England or anywhere else? It's a rough place at the best, and not all the muscles I've got can dig a living out of it. But, God be good to me, I love it, sir."—Youth's Companion.

Gourmet's Idea.

The French statesman, M. Monis, is the proprietor of a brandy of which he is very proud. The story goes that once when King Edward and the late General Galliffet were dining together, Monis brandy was served, and King Edward drank his portion off at one gulp. Galliffet, connoisseur, stared. "Sire," he exclaimed, "you have committed a crime!" King Edward laughed. "Why?" he asked. "Brandy like that," was the reply, "should be savored. You should lift it gently, pass it under your nose, enjoy the aroma, and then put it back on the table." "And after that?" the king said. "After that, sire, talk about it."

CARE OF LEATHER FURNITURE

Mixture of Vinegar, Whites of Eggs and Turpentine Makes Good Cleaning Compound.

The cleaning of leather upholstered furniture is a question that concerns almost every housewife, for those who do not possess one or more pieces of the padded leather kind have at least the leather seated diners, that require refurbishing three or four times a year.

In preparing to clean such a piece it is best to have the necessary materials at hand, so that the work can be finished at once and without risk of injuring the furniture, as there would be a liability if the different operations of the work were not done in rapid sequence.

Procure three large size cheesecloths, a basinful of tepid or nearly warm water, to which has been added a little vinegar, say a tablespoonful, and a mixture of the whites of two eggs and a half pint of turpentine. The mixture is best made by first beating the eggs to a froth and placing it in a bottle before the turpentine, and then before each application it is well shaken in the bottle.

Large pieces of leather furniture are gone over in sections, first with the cheesecloth, which has been dipped in the warm water to which has been added the vinegar, and then after being carefully wiped with a dry cheesecloth, it is polished with a cheesecloth or chamois lightly saturated with the egg white and turpentine mixture, after this the article is carefully wiped dry with other cloths.

Seats of the dining chairs can be done one at a time with ease.

Any leather covered article, such as seat pads and even go-carts, not leaving out the dull calf or gunmetal shoe, can be renovated after a fashion by the same process, and shiny leather thus treated will admit of a polish more readily than before it is applied.

USE OF RICE AS VEGETABLE

Flavor May Be Constantly Varied by Cooking Cereal in Essence of Vegetables.

Wash the rice thoroughly, rubbing the grains between the hands and using many waters, until all starchiness disappears. Then let the rice soak in cold water for at least 15 minutes—longer if possible. Cut three or four large carrots in long, thin strips, as for soup, and boil them in one quart of water until it is reduced to a pint. Then throw away the carrots and use the water, which will contain their essence, to cook the rice. Melt one tablespoonful butter in a double cooker, placing it, for the time being, directly over the fire, and let the rice fry in it for a few minutes until it shows a tendency to brown, stirring constantly. Then add the water in which the carrots were cooked, one teaspoonful of curry powder, and salt and cayenne pepper to suit the taste. Place the rice cooker in its proper vessel and let it cook until all the liquid is absorbed and the rice is well done. Test the rice by pressing a grain of it between the thumb and finger. If it crushes readily, it is sufficiently cooked.

The essence of any vegetable, secured in the same way as that of the carrots described in this recipe, may be used for cooking rice as a vegetable, and thus the flavor may be constantly varied.

ANTI-DRIP STRAINER

A tea or coffee strainer that will not drip has been invented by a Wisconsin man. The device consists of a small metal cup with a spout that, normally, is somewhat higher than that of the coffee or tea pot.

The cup is attached to the pot by a strong wire clamp. Inside of the cup and shaped to fit it is the strainer proper of fine wire mesh. The device is attached to the pot by means of a strong wire clamp and when the coffee or tea is poured the drippings fall into the cup of the strainer.—Popular Mechanics.

Cocoa Cake.

Cream one-half cup butter and one cup sugar, add beaten yolks of two eggs and beat well; mix one and one-half cups flour, one and one-half teaspoons baking powder and two teaspoons of cocoa thoroughly. Beat whites of eggs stiff, measure one-half cup milk and then add a little milk and flour mixture alternately to the egg mixture. Lastly add whites of eggs and one teaspoon vanilla. Bake in shallow pan about 20 minutes and frost with the following:

Plain Cocoa Frosting.—Mix one-half teaspoon cocoa with one cup powdered sugar, add one tablespoon lemon juice and one tablespoon boiling water, or enough to mix the sugar into a paste. That settles to a level the moment you stop stirring. Spread at once on hot cake.

The Use of the Broom.

Few people handle a broom properly, although accustomed to its use every day of their lives. Always draw your broom by leaning it forward, because this allows the dirt to be moved along more gently and will not raise much dust. Most sweepers thrust the broom ahead of them in a sort of digging way, with the handle toward the sweeper. This breaks the broom, wears out the carpet, flirts up dust and makes the sweeping much more laborious.

GREAT TEMPTATION.

Aunt Dinah—Ephrum, dat ole Cunnel Leigh is got some of de fines', mos' lubly young turkeys I eber sot my blessed eyes on. Dat am a fac'!

Uncle Ephraim—Yaas, honey, dis chile knows it. An' I on'y got 'ligion two weeks ago! An' jes' two days befo' Thanksgibbin! Dinah, I'se mighty 'fraid I's goin' to be a backslider, shuah as yousah bohn!

Grandfather's Fault.

Father—Why, when I was your age I didn't have as much money in a month as you spend in a day.

Son—Well, pa, don't scold me about it. Why don't you go for grandfather?—Silent Partner.

A SPOON SHAKER.
Straight From Coffeedom.

Coffee can marshall a good squadron of enemies and some very hard ones to overcome. A lady in Florida writes:

"I have always been very fond of good coffee, and for years drank it at least three times a day. At last, however, I found that it was injuring me.

"I became bilious, subject to frequent and violent headaches, and so very nervous, that I could not lift a spoon to my mouth without spilling a part of its contents.

"My heart got 'rickety' and beat so fast and so hard that I could scarcely breathe, while my skin got thick and dingy, with yellow blotches on my face, caused by the condition of my liver and blood.

"I made up my mind that all these afflictions came from the coffee, and I determined to experiment and see.

"So I quit coffee and got a package of Postum which furnished my b[illegible] morning beverage. After a little [illegible] I was rewarded by a complete [illegible] tion of my health in every [illegible]

"I do not suffer from bil[illegible] more, my headaches ha[illegible] my nerves are as s[illegible] desired, my heart [illegible] my complexion [illegible] fully—the bl[illegible] and it is [illegible] again." Battl[illegible]

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