FUNNY FRAGMENTS.

WAGES THAT HAVE NOT COME DOWN.—A clergyman recently aroused his sleepy audience by asserting, in the most positive manner, that, notwithstanding the hard times, the wages of sin have not been cut down one iota.

THE village is flooded with spurious silver coins. We asked a witty Irishman if he had any idea where they came from. "Yes, sir, they come from some fellow's base-mint, and the buyer passes them to the seller again."

"CAPTAIN, please give me a light," said a volunteer the other day. "Certainly; but if we were regulars such a liberty would not be allowable." "Is that so?" said the private; but if we were regulars, you wouldn't be captain, perhaps."

HUSBAND: "If I were to lose you I would never be such a fool as to marry again." Wife: "If I were to lose you I would marry again directly." Husband: "Then my death would be regretted by at least one person." Wife: "By whom?" Husband: "My successor!"

EXAMPLE AND PRECEPT.—(Mrs. Drinkwater's lady friends had come up to the vicarage to take a cup of tea and to talk over the subject of social reform. Mrs. D. was speaking fluently about the drinking habits of the villagers, when auntie directed Mrs. D.'s attention to the front garden, where Master D., aged nine, was turning summersaults in the snow). Mrs. D., rushing excitedly to the window: "Nurse girl! what is that dear boy doing out there in the snow without his shoes and stockings?" Nurse: "Please, ma'am, he says he wants to catch a proper cold and cough; then he'll be like auntie, and have a jolly 'ot glass of whisky before he goes to bed, ma'am."—*Fun.*

THE Hon. Samuel Houston, when a Senator from Texas, once in a speech in the Senate, related an anecdote of a Washington justice who, having heard the plaintiff's statement of a case referred to him for adjustment, proceeded at once to give judgment. "Stop, squire," said the defendant, "you have not heard my side yet. Hear me before you decide!" "That is not necessary," said the austere judge; "in fact I find it positively improper to do so. You see I have been in this fix before," he went on, "and I don't like it. When I hear one side I am certain how I ought to decide; but when I hear both sides I am puzzled," and he decided accordingly for the plaintiff.

ARTIFICIAL MARBLE PRODUCED BY STEAM HEAT AND PRESSURE.—A process has been invented by Miss Hosmer, the sculptress, for making artificial marble which differs from previous processes in the fact that limestone in the solid state is employed as the base instead of a mixture of plaster and cement. The limestone is worked by any suitable means to the desired form, and is then placed in a boiler furnished with a safety-valve and manometer, so that the pressure therein may be noted and controlled as may be required. The boiler is filled with pure water at the ordinary temperature, care being taken that there is no mineral deposit introduced with the water, and that the water completely covers the objects placed within the boiler. The boiler is then hermetically sealed, and fire applied, and the water allowed to boil until the manometer indicates 75 pounds of atmospheric pressure if the objects are small, and 90 or 100 pounds of pressure if the objects are large. When the heat reaches the above-mentioned point the water is allowed to cool until the pressure indicated by the manometer returns to zero. The water is then taken out of the boiler either by means of a pump or a syphon, and the objects are removed from the boiler preparatory to being placed in the alum or colored bath, various recipes being given for different colors.

FRESH AND STALE BREAD.

The celebrated French chemist, M. Boussingault, has recently investigated the nature of the change which bread undergoes when it becomes stale. Up to the present time this has not been well understood.

A circular loaf, 12 inches in diameter and six inches thick, was taken from an oven heated to 240° Reaumer, and a thermometer immediately forced three inches into it. The thermometer indicated 78° R. (207.5 F.) The loaf was then taken to a room at a temperature of 15° R. (66° F.), and was found to weigh seven and a half pounds. In 12 hours the temperature of the loaf sank to 19° R. (73° F.), in 24 hours to 15° (66° F.), and in 36 hours to 14° (63.5° F.). In the first 48 hours it lost only two ounces in weight. After six days the loaf was again put in the oven, and when the thermometer indicated that its temperature had risen to 55°R. (156° F.), it was cut, and was found to be as fresh, and to possess the same qualities, as if it had been taken out of the oven for the first time; but it had now lost 12 ounces in weight. Experiments were also made on slices of the loaf with similar results, proving that new bread differs from old, not by containing a larger proportion of water, but by a peculiar molecular condition. This commences and continues to change during cooling, but by again heating the bread to a certain temperature it is restored to its original state. It is this mechanical state which makes new bread less digestible than old. The former is so soft, elastic, and glutinous in all its parts that ordinary mastication fails to reduce it to a sufficiently divided condition. It forms itself into hard balls, which are almost unaffected by the gastric juice. These balls often remain in the stomach, and, like foreign bodies, irritate and discommode it, inducing all sorts of unpleasant feelings.

SOMETHING CURIOUS ABOUT EXPLOSIVES.—A remarkable accident happened not long ago to M. Zede at the Normal school in Paris. He was studying the properties of a composition formed of equal parts of gun-cotton and nitrate of ammonia. This was inflamed in a bronze tube of six millimeters internal diameter, and expanded without detonation. Thirty experiments had been made, and M. Zede then reduced the size of the tube to five millimeters. When he tried the experiment anew under these conditions a frightful explosion occurred. The tube was shattered into 60 pieces, some of which passed through the roof of the laboratory and penetrated about four centimeters into a brick wall. The operator had one of his legs broken. This accident is engaging the attention of the French Commission des Poudres et Salpetres. M. Sainte-Claire Deville, in the Academy, pointed out that the fact belonged to a category including already several others, and he recalled an observation by Prof. Abel. About 0.2 grains of chloride of nitrogen is placed in a watch-glass, and exploded with a piece of phosphorus; the noise is tremendous, but the explosion has little or no shattering effect. Now repeat the same experiment, after having breathed on the chloride so as to deposit a thin envelope of moisture, which cannot be more than a thousandth of a millimeter thick. In this case the explosion is less noisy, but the effects are quite different. Not only is the glass pulverized, but the table supporting it is perforated.—*Boston Journal of Chemistry.*

TO MAKE IRON TAKE A BRIGHT POLISH LIKE STEEL.—Pulverize and dissolve the following articles in one quart of hot water: Blue vitriol, one ounce; borax, one ounce; prussiate of potash, one ounce; charcoal, one ounce; salt, one half-pint; then add one gallon linseed oil. Mix well, bring your iron or steel to the proper heat and cool in the solution. It is said the manufacturers of the Judson governor paid $100 for this recipe, the object being to case-harden iron so that it would take a bright polish like steel.

TRIBUTE TO AMERICAN EXPLORERS.

The following tribute to American explorers is from the pen of Prof. T. C. Archer, Director of the Museum of Science and Art, Edinburg, and Centennial Commissioner from Great Britain:

There is nothing in the history of the human race more remarkable than the rapidity with which the wilds of Western America have been explored and added to the domains of civilized man. Midle-aged men can remember the first great rush to the Californian gold diggings, and the export from this country of iron houses for the shelter of the miners where now a splendid and populous city exists, and is the resort of travelers from all parts of the world; whilst in a marvelously small space of time the great State of which that city is the capital, has become one of the most fertile and wealthy in the great Republic, and is now connected with the eastern shores of the continent by 2,000 miles of railway. The spirit of enterprise, no doubt, has had much to do with this wonderful progress; but the far-sighted and liberal spirit of the United States Government has made the task comparatively easy. The careful but energetic surveys, both geographical and geological, which have been working for years past, have made the best routes known, and, in fact, have opened up the heart of the country, and made the most distant and the most desert parts accessible. Fortunately for the Government and the country, men of the greatest fitness for the task were selected, and the great extent of the work they have done proves their industry, as well as the nature of it shows their great abilities. The Atlas of Colorado and portions of adjacent territory, is one of the most masterly works in chartography which any country has produced, and its compact arrangement will make it a welcome addition to every library. It consists of 20 double folio sheets, of which two are filled with cleverly outlined panoramic views of the country surveyed, and two others give the sections of the same geologically colored. Twelve are devoted to the six divisions into which Colorado is divided, one-half of them giving the topographical and the other half the geological features of the country. There is, in addition, a map showing the triangulation of the country, another showing the natural drainage, an economic map indicating the agricultural, pasture and forest lands, and the locality of coal-bearing and metalliferous strata. Of the execution of these maps it is impossible to speak too highly. They have been produced by the talented and indefatigable chief of the surveys, Prof. F. V. Hayden, and are a part of a series of the reports and transactions of the Survey Department, some of which we hope to draw attention to from time to time, as they can generally be consulted in public libraries, to which the United States Government extends its liberality.

JAPANESE MAGIC MIRRORS.—The so-called magic mirrors, with which the Japanese metal-workers have hitherto succeeded in puzzling our *savants*, have been generally supposed to owe their strange property of reflecting images that were quite invisible upon their brilliantly polished surfaces, to corresponding inequalities in the density of the surface, produced by some means during cooling or by stamping. Professors Ayrton and Petty, who have lately studied their peculiarities, offer another explanation. They affirm that the effects above noticed are produced by reason of very slight irregularities in curvature of the polished surfaces, these irregularities being such that the thicker parts, corresponding with the raised patterns on the back, are flatter than the remaining convex surface, by which difference there would be less dispersion of light from the thick than from the thin portions of the surface. As, unless we are greatly mistaken, we remember to have seen such mirrors with apparently perfectly plane surfaces, the above explanation would appear to be less satisfactory than the older one.