

educational topic of the present day. In the continued story of "Lemmel Baker," Mr. Howells keeps up the interest unflagged as befits one of the best of the present day novelists. Among the short stories "A Soldier of the Empire," by T. N. Page, will be found first-class reading. The good things in this number are so plentiful that space forbids us saying more than that they are all well worth reading, and no class of reader can fail to find something suited to his individual taste.

The illustrations are as usual executed in the highest style of the wood engraver's art and contain some very admirable portraits of celebrated men, amongst whom are "Bjornstjerne Bjornson" Sweden's great statesman, and Rosecrans and Jackson, generals of the late civil war.

The editor of the *Century* makes the important announcement that in the November number of that magazine, they will commence the publication of the authorized "life of Abraham Lincoln," by John G. Nicolay and John Hay who were the great war President's private Secretaries. Lincoln is not only one of the grandest figures in America, but in the world's history, and these papers will therefore be of the greatest possible interest to thinking men the world over.

WORKSHOP NOTES.

GOLD TINGE ON SILVER.—A bright gold tinge may be given to silver by steeping it for a suitable length of time in a weak solution of sulphuric acid and water, strongly impregnated with iron rust.

TO SEPARATE GOLD FROM SILVER.—The alloy is to be melted and poured from a height into a vessel of cold water, to which a rotary motion is imparted, or else it is to be poured through a broom. By this means the metal is reduced to a fine granular condition. The metallic substance is then treated with nitric acid, and gently heated. Nitrate of silver is produced, which can be produced by any of the ordinary methods; while metallic gold remains as black sediment, which must be washed and melted.

MOUNTING THE DIAL.—The pin holes in the dial feet should be drilled with a very small drill, in such a direction that the pins will not come in the way of anything and will be easily gotten at; they should not be drilled below the surface of the plate, but broached until the pin touches it. If the hole should be a little below the surface, it is better to lengthen the copper foot by squeezing it with a pair of blunt nippers until it is above the plate, than to leave it in such a position that no pin can stop it.

RECOVERING GOLD FROM EXHAUSTED COLORING BATHS.—The collected old coloring baths are poured into a sufficiently large pot, an optional quantity of nitro muriatic acid is added, and the pot is placed over the fire, during which time the fluid is stirred with a wooden stick. It is taken from the fire after a while, diluted largely with rain water, and filtered through coarse paper. The gold is recovered from the altered solution with a solution of proto-sulphate of iron (green vitriol), which is stored in air-tight bottles, then freshened with hot water, and finally smelted with borax and a little saltpeter.

SIMPLE TEST BY THE SPECIFIC GRAVITY.—The goldsmith, after having smelted his bench scrapings, sweepings, etc., and reduced it into a button, desires to roughly estimate the percentage of the precious metals contained in it. This can be done approximately as follows: A certain quantity of it is taken and drawn out into a wire, which is to be exactly of the same length as one from fine silver; of course, both must have been drawn through the same hole, silver being nearly one-half lighter than gold, it is natural that the one of fine silver must be lighter, and the increased weight of the wire under test corresponds to the gold contained in it.

DUST PIPES.—Dust pipes are indispensable in a key watch, and when properly screwed on the plate and fitted to the case are expensive. This part of the watch is frequently treated with utter disregard, and we lately saw a very bad case of dust pipe of the set-hand square of a three-quarter plate watch. It was so constructed that if it was made to touch the case it would press upon the center pinion and stop the watch or make it go irregularly; to avoid this, the center parts are left with sufficient end shake to defeat the purpose for which it is designed. A solid top offers advantages in respect to dust, and perfects the key winding watch to an important degree.

THE BARREL ARBOR.—If the pivots of the barrel arbor are of the proper shape (which they generally now are in the best movements, and certainly ought to be), the pivots and holes will only require smoothing, and the barrel freeing on the arbor. Instead of adopting the usual course of turning away the bosses in the barrel and cover to reduce the rubbing surfaces, a deep hollow should be turned and a shoulder formed on each side of the arbor of a sufficient width, and the bosses should be left on the brass as large as possible. It has not been the practice to snail the barrel arbors of fusee watches as there was no trouble with the adjustment of the mainspring. English springs being tapered and generally filed thin at the eye, but the arbors should be snailed (and they probably will be now by the movement makers), and the hook should not project beyond the thickness of the spring.

WISE AND OTHERWISE.

Two bad little boys of Tarentum
First borrowed some pins, and then bent 'em
When their pa took a seat,
They both beat a retreat,
As likewise did the fellow who lent 'em.

A COUNTRY doctor announces that he has changed his residence to the neighborhood of the churchyard, which he hopes may prove a convenience to his numerous patients.

"WHAT is the reason," said an Irishman to another, "that you and your wife are always disagreeing?" "Because," replied Pat, "we are both of one mind—she wants to be master, and so do I."

We are not obliged to believe everything we hear. Stanley was told at Karagwe of a strange people "who had long ears descending to their feet; one ear formed a mat to sleep on, the other served to cover them from the cold, like a dressed hide."

AN indifferent actor was playing in *Othello* at the Dune lin Theatre. When he came to the passage, "O that men should put an enemy in their mouths to steal away their brains!" a stentorian voice roared from the gallery. "All right, old man, drink away, you're safe."

A Connecticut man claims to have a cat that eats cucumbers. May be all cats do, and that's the music that we hear from the back fences. Instead of being the outpouring of joyful cat hearts, is the wail of the unrequited cucumber down in the deep recesses of the cat. Come to think of it, it looks reasonable.

"YOUNG Philosopher" would like to inquire what a "safety" match is, and why so called. A safety match is one in which the young man owns a span of horses, a three-storey house, and a seal ring, while the young lady's father is the possessor of sixty thousand dollars in government bonds, and a whole square of brick blocks.

SYMPATHY always indicates a certain refinement of nature, but it is sometimes curiously misplaced. The Siamese twins were on exhibition, and among the spectators was an Irishman who had an original way of looking at things. He told a friend who was standing at his side that the most fortunate thing in the world was that they were brothers, because if they had been strangers to each other they would never have been able to get on together.

THERE is a fearfully romantic story going the rounds of the papers to the effect that a young man who was packing eggs wrote on one of them a request that the purchaser would correspond with him and that the incident led to matrimony. This is all in accordance with natural law, however. We have been told that an egg is full of "meet" and the couple met eggsactly as one would eggspect. The only fear we have in connection with the transaction is that the husband was hen-pecked.

THE following conversation was recently overheard, not very far from where we write it.

"I understand you failed in business, Mr. Fraudenburg?"

"Yes, I was unfortunate in a private speculation, but that is not the worst. I was grossly deceived."

"Yes; how so?"

"In my assignee. He's a scoundrel. He wormed his way into my confidence and made me pay ninety-six cents on the dollar! Did you ever hear of such an outrage?"