pipe used for the removal of the dirt, sections being added as the caisson sinks with its increasing weight. The last section of the cylinder that is put on is always used as the airlock, the other traps remaining open.

When the cribbing has reached to within ten feet of the depth of the mud through which they have to pass, they then commence to build on the cut stone. The object of keeping the crib ten feet below the bottom of the river is to avoid that destructive insect, the teredo.

As soon as the bottom of the river is reached, the men descend into the caisson and proceed to excavate. The pipe used to blow out the dirt is about eight inches in diameter. The dirt is piled up around the mouth of it, and on opening the valve, it disappears up the pipe in a few seconds. This is the only means they have used to remove the dirt and mud, and have sunk the caissons on an average of four feet per day.

Thus the compressed air answers three purposes: first, it supplies the men; second, keeps out the water and keeps the caisson afloat; and third, is utilized to discharge all the dirt.

After sufficient material has been removed from beneath the caissons, the pressure is reduced and the whole mass gradually settles down, guided by the piles and hawsers, after which the operation is repeated until bed-rock is reached.

When clay is encountered, water is forced down and mixed with the clay so it may easily be blown out. But when clay-mud is met with, and the weight of the structure forces itself down into it, a coffer-dam is built around the caisson to assist in keeping it afloat. The success of the whole work depends upon keeping the structure almost afloat in the mud and water, this being accomplished by the air pressure below and the coffer-dam above.

After bed-rock is reached, the openings are planked over and the whole interior of the caisson is filled with concrete; and as they ascend, the iron cylinder is withdrawn and the shaft filled likewise. Four of the piers are carried to a depth of ninety feet, and three to a depth of from seven-five feet to ninety-five feet.

J. S. A.

The "Last Match."

A parody on the "Lost Chord."—Seated one day at the organ, etc.

Returning one night from the opera,
I was weary and ill at ease;
And my fingers wandered idly
Over my bunch of keys.

I knew not what I was doing,
Or what I had in view,
But I struck the keyhole truly,
And the door, it open flew.

I wandered up the staircase,
And groped through to my room;
'T was dark as pitch around me,
A black and horrid gloom.

My heart was throbbing wildly,
For what, I hardly knew;
A piercing pain came over me,
That cut me through and through.

It may be that thoughts of the morrow
Had seized my trembling frame;
That the knowledge of unstudied lessons,
To my fluttering conscience came.

It may be that the opera inspired me
By its grand and thundering strains;
It may be that Damrosch had tired me,
And inflicted those terrible pains.

It may be that in searching my match-box,
I found not a match to be there;
And stumbled and struck on my knee-pan,—
The pain, oh! 't was fearful to bear.


Moonlighting.

(Paper read at a meeting of the class of '85.)

MOONLIGHTING was to the regular to pedo trade of the oil country what "moon shining" is to the liquor trade of Kentucky—a business carried on by a few adventurous men with the aid and sympathy of the majority of the people, though actively fought by the regular dealers, aided by a trained body of spies.

The moonlighter, although subject to heavy penalties if convicted, made money rapidly, and at one time threatened to drive the regular company from the field. His occupation, created by the reaffirming of the Roberts patent in the earlier history of petroleum, kept pace with the increasing industry, and, spasmodically attacked and stamped out in one place, sprung up wit