### PRACTICAL RESULTS OF THE EIGHT HOUR PLAN IN NEW YORK.

The evil results of the eight hour movement of last sum-

mer, which for nearly eleven weeks paralyzed the industries of this city, have during the present winter been severely felt. The exhibit of our Commissioners of Charities and Corrections shows that the number of industrious and unemployed poor craving the benefit of public charities has been unusually large, while such statistics as have been gathered indicate serious losses both to employers and workmen in many branches of trade.

It will be remembered that among the builders the strike first began, and that although a certain proportion of the employers having unfulfilled contracts on hand were coerced into acquiescence with the demands of their operatives, many preferred to incur the penalties of their agreements rather than yield; while others succeeded intemporizing with their hands until after the failure of the movement was assured. It is probable therefore that this trade, being the first affected, suffered with even greater severity, and indeed bore a larger share of the loss, than any other industry involved in the unfortunate struggle. This view we think may be safely based upon a comparison of the records of the building trade for corresponding periods in 1871 and 1872, the tabulated statistics of which we find in a pamphlet signed "Practical Builder" recently received. From May 27th to November 30th in the first mentioned year, 1,333 edifices were erected and alterations made in 310 more. Of these 528 were first class structures of an average cost of \$18,000: 53, factories and workshops averaging \$8,000, and 33, hotels, public buildings, and churches averaging \$200,000 each. The aggregate sum invested in all for the twenty-seven weeks was \$25,672,000. Comparing this with the same months in 1872: of first class edifices but 107, of factories 29, hotels etc., 16 and altogether but 707 buildings and 287 alterations were completed at an aggregate cost of \$12,821,000. Deducting this total for 1872 from the total for 1871, we have a result of \$12.851.000, which indicates the dead loss to city improvements in the twenty-seven weeks.

It cannot be urged that the year would have been a dull one in any event for the trade, as the spring opened with an excellent prospect for a busy fall. During September (the principal month for making contracts), 1871, 108 first class structures were begun: in the same period in 1872, but 9, one twelfth as many, were undertaken. Here then is nearly thirteen millions of dollars forced out of the building trade and into other channels. Estimating labor at one half the cost gives \$6,425,000, as a dead loss, not to capitalists who can save themselves by other investments, but to the working men who have no other support. Almost six and a half millions in twenty-seven weeks-\$39,663 per day-is the sum these men paid for their strike, and if we should add thereto the outside expenses incurred, of which the money borrowed, for support during its continuance, from the vari. ous trade associations in other coies, forms no inconsidera ple portion, we should doubtless arrive at a total far in ex cess of the largest estimates.

We find it stated that at the present time there is but one fifth the amount, of first class work in this city to be carried over into spring, of that done last year, and that to emquantity of labor as they did in 1872, there is not  $4\frac{1}{2}$  hours work per day this season, for each man employed in the building trade.

Let us add that we notice that recent daily journals chronquarters in New York, and is seeking to instil into the minds of our workmen the baleful and communistic principles of its organization. It may be well for the men to consider such facts as those above stated before joining an association productive of no results, save misery to themselves and their families.

## FOUL AIR SIGNAL,

We abound in inventions to warn us of fire and to alarm the household of the approach of a burgler; but there is an insidwithout occasioning great discomfort, thus proving the se- ious foe who enters everywhere, in every apartment of ductive and insidious nature of exhaled air. The same private houses, and riots unmolested in all public places, of across the continent; but the aimless, uncertain, purposeless whose presence we are not warned in time to make good our man will still exist unless, from his youth up, his parents more than a slight feeling of closeness when the percentage escape. We refer to bad air. It is perfectly notorious that exhort him to stand on his own feet, to rely on his own arm, of oxygen was diminished to 17.45. The small proportion 'no public or private buildings are adequately supplied with to think for himself, to follow some one line and make himate quantities of carbonic acid are less easily determined than ventilation, and the consequences are more injurious than we self perfect therein. Then shall a sturdier manhood be ap the larger variations in the amount of oxygen, while the ab- are apt to believe. In default of suitable ventilation, it would parent, a nobler race spring up; and if one seeks assistance sence of the latter is fully as deleterious to health as the pre- be well to have some kind of a signal to warn us of the dan- and casts forth his drag net, he shall find it filled with applisence of the former. Experiment has further shown that an ger, or a contrivance to automatically open a door or window. atmosphere containing 18.8 per cent of oxygen and 2.28 per. The presence of fire damp in mines is made known by the cent of carbonic acid will fail to support the combustion of a explosion of the small volume of air in the Davy safety | the whether a man be a hewer of wood or a drawer of water; candle flame, and yet may be breathed without great discom- lamp. When this explosion takes place in the narrow comfort. According to the instance cited above, a room full of pass of the wire gauze, the miner knows that it is better to people found air, that contained not one half the proportion- retreat until the dangerous gas can be blown out. Unfortuate amount of carbonic acid just given, very oppressive. It is nately the gases of close rooms are not of this explosive charevident that the closeness of the atmosphere was not due to acter; if they were, we should not suffer so much from bad the excess of carbonic acid to nearly so great an extent as to ventilation as we now do, as no one would run the risk of the deficiency in oxygen; and to the accurate determination being blown up for the pleasure of being suffocated. The gas which leaks through stoves and furnaces and arises from imperfect combustion, known as carbonic oxide, can be absorbed in a way to betray its presence by the following ingenious invention: The apparatus consists of a small galvanic battery with a bell attached, and an open test tube containing liquid chloride of palladium. The chloride of bor in buildings where no means are provided for changing palladium is extremely sensitive to the presence of carbonic oxide gas; it absorbs the gas and precipitates metallic palla in removing their children from the schools specified in the dium; the deposition of the metal in the bottom of the tube makes the connection of the galvanic current and at once

The invention is found to work admirably for carbonic oxide gas, and the next thing is to devise a plan for disclosing the presence of carbonic acid gas. It is possible that this could be done by putting in a carefully counterpoised balance some caustic baryta or lime which, by the absorption of the carbonic acid of the air, would sink and cause the current to be closed in a battery and the bell to be rung. The same contrivance could be made to open and close a shutter just as the draft of a stove is regulated by the rise of mercury in a thermometer connected with a battery. It would be a novel experience on any public occasion to have the proceedings interupted by the ringing of bells until equilibrium was restored by proper ventilation. We should all take kindly to the interruption and be thankful for a whiff of pure air. Let us by all means have a palladium ventilating company organized, for the benefit of gasping humanity.

### INVERTEBRATE. MEN.

When a young man, more than ordinarily useless to him. self and friends, had no other occupation, he used to sit down and write a letter to Horace Greeley, pretending that he wanted work, would do anything to get it, and that, if society in general had not turned against him, he would be able to prove himself capable of great things. To beg he was ashamed, and dig he could not, because it made his back ache; so he sat down and emptied all his woes on Mr. Greeley's head, and really felt that he had achieved some distinction if Mr. Greeley replied and told him to go out West. It is needless to say that he never went, although he should have gone, in common with thousands of his congeners who herd in cities, lie in wait for the hapless advertiser, and precipitate themselves, not as individuals but as a horde, upon any one who dares seek assistance in the columns of the daily papers. For, be it known, the young man of the period is as useless as he is ubiquitous. He cannot longer stand on street corners, for that is against the statute, but he can live on his father, his widowed mother, possibly even his schoolteaching sisters, pretending the while that he is always seeking employment, always laboring in the vineyard in one form or another.

This jeremiad against a useless class of non-producers is brought out by the result of three or fourmonths advertising at various periods for a young man to fill a certain post requiring an ordinarily facile pen, a knowledge of simple commercial forms of expression, and familiarity with business routine; yet it will hardly be credited that, out of hundreds who applied and were examined, scarcely ten could be found who gave even a promise of succeeding. Vague, uncertain, indirect, willing to work for anything and at anything, having no especial fitness or adaptation for any particular line, they formed the rank and file of the noble army of incompetents who hew the wood and draw the water for their betters. And yet the advertisement in question was specially worded to exclude this very class! Knowing that there were ten incapables in the world for one expert, it called for an exceptional man, and the very class who rushed in were those who are said to rush in where angels fear to tread.

The question presents itself to every thinking man: Where do all these young men come from? In what school have they acquired their aimless, uncertain, vague ideas of duty, of work, of application, of achievement? What do they expect to do in the race of life before them? Do they mean to be entry clerks all their life long? Do they mean to be book keepers at \$1,000 or \$2,000 a year forever? Will they stand and wait upon the ringing of a bell, and answer some great man's nod and beck? Will they, pending an engagement for even their superfluous ability, continue to wring the hearts of aged parents, hardworking sisters and relatives as poor as they? These are questions hard to answer, but safe to answer in the affirmative. The riddle, never solved, "What shall be done with them" is a serious one. If Satan finds business for idle hands in this city, he must do a thriving trade, judging from the applications received for a clerkship.

It is a sad and solemn question, not to be lightly dismissed on a moment's reflection, a question reaching further than mere technical or professional education. Schools may abound in the land and colleges shoulder each other in a line

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### POISONOUS AIR IN SCHOOLS AND FACTORIES.

The City Sanitary Inspector of New York has recently published a report relative to the bad ventilating arrangements of numerous public schools and manufactories within the corporate limits.

We find it stated that the analysis of samples of air from two factories gave 0.14 to 0.16 of 1 per cent of carbonic acid. In the public schools, the quantity of the deleterious gas varied from 0.09 to 0.35. An examination of the air in one of the class rooms provided with a ventilating flue was made while a window was open, yielding 0.17 of 1 per cent of carbonic acid. The window was then closed, and after a lapse of ten minutes the proportion had increased to 0.32. The trial then became so oppressive to the inmates of the room that it was discontinued, though the opinion is given that, had the experiment continued for an hour, no less than 1.1 per cent of carbonic acid would have accumulated. The magnitude of the above percentage of the deadly gas may be estimated from the fact that Dr. Parkes and other high authorities consider 6 parts of carbonic acid in 10,000 parts of ploy the same number of men and they to average the same air, or 0.06 of 1 per cent, should be the greatest permissible impurity.

Although the above details indicate the deleterious nature of the atmosphere of a crowded and ill ventilated school room to no small extent, they exhibit but a portion of its icle the fact that the International Society has made its head noxious properties. Not only is the air vitiated by carbonic acid, but by effete organic matter, to which is due the close smell of such apartments. The Inspector, it seems to us, omits an important portion of his investigation when he fails to state the percentage of oxygen, as shown in the samples the only object of which is to lead them into further strife, of impure air which were subjected to his analyses. Graham and Liebig show that the mean amount of oxygen in the atmosphere is 20.9 volumes per cent. Dr. Angus Smith considers that air containing a less percentage than 20.7 is very unwholesome, but adds that the average might be reduced far below that found in circumstances of daily life authority in the course of experiment noticed nothing of this deficiency, attention should have been especially directed. The subject of proper ventilation has been so thoroughly discussed of late that it would be useless repetition to again urge its importance. Workmen in badly ventilated factories should take the matter in their own hands and decline to lathe foul and noxious air, while parents would act wisely Inspector's report, until they are satisfied that proper sanitary precautions are taken.

cations that give some cvidence on the face of them of the writer's ability to perform his undertakings. It matters litthere must be such; but it matters greatly whether a man be competent or not for the line he assumes.

### THE KNOWLEDGE OF THE TRUTH.

The ancients had no knowledge of the sciences which at present form the domain of the most important and influential of all human pursuits, namely, the investigation of Nature, the explanation of its phenomena, and the application of the wisdom thus obtained for educational training and practical useful purposes. Their philosophical systems were only imaginary cosmologies, basedon a few hypothetical principles. The great philosophers, often so boastfully referred to by those whose knowledge is exclusively confined to the philological branches: Thales, Pythagoras, Democritus, etc.: produced only speculations concerning Nature; and, notwithstanding that they sometimes hit the truth, their ideas were largely mixed up with metaphysical notions, and they only occarings the bell which will not stop until the current is broken. sionally brought forward conclusions, and these were based