

Council met in adjourned session with President Barnard in the chair. The roll being called the following members answered to their names: Messrs. Carey, Hall, H. T. Miller, J. H. Miller, Ryan, and Weaver. Present 6, absent 1.

The following communication from the Mayor was read:

Alliance, Ohio, Feb. 7th, 1920.

To The Hon. Council,
Alliance, Ohio.

Dear Sirs:

In compliance to amendment Sec. 4404 of the General Code of Ohio, I hereby appoint a Board of Health as follows:

- Clay Rockhill term five years.
- T. J. McCredie term four years.
- C. L. Archer term three years.
- W. J. Marshall term two years.
- A. D. Wallace term one year.

Subject to your confirmation.

Yours respectfully,

C. S. Westover, Mayor.

Communication from Mayor appointing Board of Health

Appointments of Mayor are confirmed

Weaver moved, seconded by H. T. Miller that the appointments of the Mayor as members of the Board of Health be confirmed. Motion was agreed to.

Mayor's bond presented for Council's approval. Bond approved.

The Mayor presented his bond in the sum of \$2500.00 signed by the American Guaranty Company for Council's approval. On motion of H. T. Miller, seconded by J. H. Miller, the bond was approved.

Rules of Council read.

Upon request of the President the rules of the Council were read by the City Auditor and each member of Council presented with a copy thereof.

Mr. John Hammond addresses Council.

Mr. Hall introduced Mr. John Hammond of the Morgan Engineering Company who addressed Council as follows; on the gas proposition:

To the Council and Citizens of the City of Alliance,

Gentlemen:

Believing that a majority of the citizens of this city do not thoroughly understand the situation confronting the Council in regard to the question of gas supply, the writer wishes to take this opportunity to explain one very important point, which to his knowledge has not heretofore been sufficiently emphasized.

Before proceeding further the writer wishes to state that this is not an argument either for or against a municipally owned plant for the manufacture of some form of Artificial gas. It is merely a statement of a few well known facts in regard to the heating values of different gases, and their prices in terms of these heating values, in the hope that their expression in a non-technical way will promote a better understanding of the problem among the general public.

After talking with a number of citizens on this subject, and having read the various articles concerning it which have appeared from time to time in THE ALLIANCE REVIEW, the conclusion is reached that a majority of the people interested have been unintentionally confused by statements which referred to the prices of the different gases in terms of so many cents per one thousand cubic feet without any reference whatsoever to their relative heating values. If all gases contained the same amount of heat per cubic foot this would be a fair comparison, but since they differ widely in this respect, any comparison of their prices measured by volume alone is apt to be very misleading to the lay mind.

The calorific power, or heat value of a gas is measured by a heat unit called the British Thermal Unit. It is an arbitrary measure of heat just as the quart is an arbitrary measure of the volume of liquids, and is the amount of heat necessary to raise the temperature of one pound of pure water one degree, between 62 and 63 degrees Fahrenheit. We can now proceed to forget it and it will hereafter be referred to only as a heat unit, which may be thought of as a quart or a pint if it will make it any easier as it will be used for purposes of comparison only and its exact value is therefore of little importance.

Four types of fuel gases are generally used for heating and illuminating purposes, and they are given below together with the number of heat units they contain per cubic foot:

	Number of heat units in on cubic foot
Natural gas	1110
Coal Gas	735
Water Gas	322

Producer Gas, Anthracite,	137
Producer Gas, Bituminous,	157

These figures are the average analyses of the natural gases of Pennsylvania, Ohio, and West Virginia, and of the various artificial gases as manufactured by the most approved methods throughout the United States.

Using Natural Gas as a basis of comparison, it will be seen that the various artificial gases compare in heat units with Natural gas in the percentages here given:

Natural Gas	100%
Coal Gas	66.8%
Water Gas	29.2%
Producer Gas, Anthracite,	12.4%
Producer Gas, Bituminous,	14.1%

It is hardly possible that producer gas would be considered as a source of gas supply for Alliance at the present time, as its economical use depends upon its manufacture in by-product ovens, and this leaves us to the consideration of natural gas and the so called coal gas and water. The very highest figures given for the number of heat units in coal gas by any authority, is as stated above, 735 B. T. U. per cubic foot, or, approximately two-thirds the number contained in one cubic foot of natural gas. This means that if it takes ten cubic feet of natural gas to broil a steak, it would take fifteen feet of coal gas. We are now paying 55¢ per thousand for natural gas. Coal gas would have to sell at 37¢ per thousand to equal it in value since it is only two-thirds as efficient, and the price of coal gas at the present time varies from \$1.15 to \$1.50 per thousand feet, for coal gas, and we never will get it at that price, we could still pay \$1.50 for natural gas and get the same amount of heat. A meal can be cooked, or a house heated with natural gas at the price of \$1.50 per thousand feet at exactly the same cost that these things can be done using coal gas at \$1.00 per thousand feet. If we consider water gas, which can be sold at a price of about 45 cents per thousand feet, - note that it contains only 29% of the heat units natural gas and that we would have to use at least three times as much of it in cubic feet as we would natural gas. In other words we would have to pay three times 45 cents or \$1.35 to get the same heat that we are now getting for 55 cents, the price of 1000 feet of natural gas.

It would appear then that we must go a little further than the price of a thousand cubic feet of gas before attempting to decide its actual cost. All gas is of course sold by the cubic foot, but how many cubic feet we use will depend upon the number of heat units it contains in each cubic foot.

The cost of the different gases in terms of cubic feet and the cost in terms of heat units are compared in the following table:

	Cost per 1000 Cu. Ft.	Heat Units Per 1000 Cu. Ft.	Cost per 1,000,000 heat units
Natural	\$ 0.55	1,000,000	\$ 0.50
Coal Gas	1.25	735,000	1.70
Water Gas	0.45	322,000	1.39
Prod. A.	0.15	137,000	1.09
Prod. B.	0.15	157,000	0.95

It will be seen from the above that natural gas is far the cheapest fuel, and that the producer gases are next. Coal gas is the most expensive of all, but is the gas used by most cities, for the reason that conditions are not usually favorable to the manufacture of producer gases by the by-product method, and to the fact that it requires the manufacture of such large volumes of these gases to supply a city, due to their extremely low heating power.

To explain -

The wide differences existing in the heating or calorific powers of various gases, would necessitate a rather technical discussion and require some knowledge of Thermodynamics. It will be sufficient to state that these differences are caused by a variation in the amounts of the basic gases of which all gases are composed, each basic gas having a different but constant heat value.

In conclusion, then, whatever the system of gas making we may be asked to try, let us not only consider its price per thousand feet, but its number of heat units per thousand feet, so that we can figure its actual cost. Otherwise, we may discover that we have been presented with the proverbial "pig in the poke" in the form of a gas plant which will sell us gas at a very low rate per thousand feet, and several times as many thousand feet as we are using now. Think it over.

Respectfully,

MONDAY EVENING February 9th, 1920 (Continued)

Finance committee submits report. The Finance Committee submitted their report recommending the passage of the following ordinances: Ordinance 18-C, and 19-C.

Weaver
H. T. Miller
Hall

The report of the committee was agreed to.

The Water Committee submitted Ordinance 21-C and recommended its passage.

Water committee submits report

Lower
Weaver
Hall

The report of the Committee was agreed to.

The Committee on assessments submitted Ordinance 20-C and 14-C and recommended their passage.

Assessment committee submits report.

Weaver
Hall
J. H. Miller

The report of the committee was agreed to.

Ordinance No. 10-C

Passage of Ordinance No. 10-C

Mr. Carey: An Ordinance to accept the plat of John B. Crowl by replatting of lots 2785 and 2786 was read the third time. The question being on the passage of the Ordinance, the ays and nays were taken and resulted yeas 6, nays 0. Those who voted in the affirmative were Messrs: Carey, Hall, H. T. Miller, J. H. Miller, Ryan, and Weaver. So the ordinance was passed.

Ordinance No. 16-C

Passage of ordinance No. 16-C

Mr. Weaver: An ordinance to levy special assessments for the improvement of Waugh Street between the east line of Liberty Avenue to the east line of Morgan Avenue by grading, draining, curbing, paving, and constructing sanitary and storm sewers was read the second time. Weaver moved, seconded by H. T. Miller that the statutory rules requiring ordinances and resolutions to be read on three different days be suspended and Ordinance No. 16-C be read the third time. The question being on the suspension of the rules, the yeas and nays were taken and resulted yeas 6, nays 0. Those who voted in the affirmative were Messrs. Carey, Hall, H. T. Miller, J. H. Miller, Ryan, and Weaver. So the rules were suspended and the ordinance read the third time. The question being on the passage of the ordinance, the yeas and nays were taken and resulted yeas 6, nays 0. Those who voted in the affirmative were Messrs: Carey, Hall, H. T. Miller, J. H. Miller, Ryan, and Weaver. So the ordinance was passed.

Resolution No. 14-C

Passage of ordinance No. 14-C

Mr. Weaver: Whereas Ordinance No. 132-B passed September 8th, 1919, levying special assessments for the improvement of S. Linden Avenue between Broadway and Grant Sts. by repaving was read the second time. H. T. Miller moved, seconded by Weaver that the statutory rules requiring ordinances and resolutions to be read on three different days be suspended and Ordinance No. 14-C be read the third time. The question being on the suspension of the rules, the yeas and nays were taken and resulted yeas 6, nays 0. Those who voted in the affirmative were Messrs: Carey, Hall, H. T. Miller, J. H. Miller, Ryan, and Weaver. So the rules were suspended and the ordinance read the third time. The question being on the passage of the ordinance, the yeas and nays were taken and resulted yeas 6, nays 0. Those who voted in the affirmative were Messrs. Carey, Hall, H. T. Miller, J. H. Miller, Ryan, and Weaver. So the ordinance was passed.

Ordinance No. 20-C

Passage of ordinance No. 20-C

Mr. Weaver: An ordinance to levy special assessments for the construction of water and sewer connections on W. Columbia St. between Lincoln and Rockhill was read the second time. H. T. Miller, moved seconded by Weaver that the statutory rules requiring ordinances and resolutions to be read on three different days be suspended and ordinance No. 20-C be read the third time. The question being on the suspension of the rules, the yeas and nays were taken and resulted yeas 6, nays 0. Those who voted in the affirmative were Messrs: Carey, Hall, H. T. Miller, J. H. Miller, Ryan, and Weaver. So the rules were suspended and the ordinance read the third time. The question being on the passage of the ordinance, the yeas and nays were taken and resulted yeas 6, nays 0. Those who voted in the affirmative were Messrs. Carey, Hall, H. T. Miller, J. H. Miller, Ryan, and Weaver. So the ordinance was passed.

Ordinance No. 15-C

Passage of Ord. No. 15-C.

Mr. Weaver: An ordinance to levy special assessments for the improvement of W. 23rd St. by constructing sanitary sewer No. 113-A was read the second time. H. T. Miller moved seconded by Weaver that the statutory rules requiring ordinances and resolutions to be read on three different days be suspended and ordinance No. 15-C be read the third time. The question being on the suspension of the rules, the yeas and nays were taken and resulted yeas 6, nays 0. Those who voted in the affirmative were Messrs: Carey, Hall, H. T. Miller, J. H. Miller, Ryan, and Weaver. So the rules were suspended and the ordinance read the third time. The question being on the passage of the ordinance the yeas and nays were taken and resulted yeas 6, nays 0. Those who voted in the affirmative were Messrs: Carey, Hall, H. T. Miller, J. H. Miller, Ryan, and Weaver. So the ordinance was passed.

The following ordinances and resolutions were introduced:

Resolution No. 24-C

Resolution No. 24-C

Mr. Ryan: To employ Mr. Harold Hogan to serve street improvement notices was read the first time and referred to the streets and alleys committee for immediate action.

Ordinance No. 22-C

Ordinance No. 22-C

Mr. Weaver: To provide for the issuing of bonds of the City of Alliance, Ohio, in the sum of \$233.33 for the purpose of extending the time of payment which from its limits of taxation the said City of Alliance is unable to pay at maturity, was read the first time and referred to the Finance Committee for immediate action.

Ordinance No. 23-C

Ordinance No. 23-C

Mr. H. T. Miller: An ordinance to establish a grade on E. Summit from Union Avenue to Arch Avenue was read the first time and referred to the committee on grades.

On motion of Weaver, seconded by Hall, Council referred back to the fourth order of business, reports of standing committees.

The Finance Committee submitted their report recommending the passage of Ordinance 22-C.

Finance Committee submits report.

Weaver
H. T. Miller
Hall

The report of the committee was agreed to.

The streets and alleys committee submitted Ordinance 24-C and recommended its passage.

Streets and alleys committee submits report.

M. Ryan
J. H. Miller
H. T. Miller

The report of the committee was agreed to.

Ordinance 24-C

Passage of Ord. No. 24-C

H. T. Miller moved, seconded by Weaver that the statutory rules requiring ordinances and resolutions to be read on three different days be suspended and Ordinance No. 24-C be read the second and third time. The question being on the suspension of the rules, the yeas and nays were taken and resulted yeas 6, nays 0. Those who voted in the affirmative were Messrs: Carey, Hall, J. H. Miller, H. T. Miller, Ryan, and Weaver. So the rules were suspended and the ordinance read the second and third time. The question being on the passage of the ordinance, the yeas and nays were taken and resulted yeas 6, nays 0. Those who voted in the affirmative were Messrs: Carey, Hall, J. H. Miller, H. T. Miller, Ryan, and Weaver. So the ordinance was passed.

Ordinance 22-C

Passage of Ord. No. 22-C

H. T. Miller moved, seconded by Weaver, that the statutory rules requiring ordinances and resolutions to be read on three different days be suspended and Ordinance No. 22-C be read the second and third time. The question being on the suspension of the rules the yeas and nays were taken and resulted yeas 6, nays 0. Those who voted in the affirmative were Messrs: Carey, Hall, J. H. Miller, H. T. Miller, Ryan, and Weaver. So the rules were suspended and the ordinance read the second and third time. The question being on the passage of the ordinance, the yeas and nays were taken and resulted yeas 6, nays 0. Those who voted in the affirmative were Messrs: Carey, Hall, J. H. Miller, H. T. Miller, Ryan, and Weaver. So the ordinance was passed.

Council addressed on Gas question.

Mayor Westover and C. L. Archer and others addressed Council on the Gas question.

On motion of J. H. Miller, Council adjourned.

ATTEST:

Chas. Silver
City Auditor

Chas. E. Barnard
President of Council

Communion Gas C read order

Petit A. G. Co. r Council

Sewer submit port

Com. submit

Com. and a report

Council a com of th whole ders 154-B

Ordin No. 2