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Premium System for the Payment of Wages

H. F. Searle

The Premium System for the Payment of Wages.

By H. F. Searle, C. P. A.

Although the premium method of wage payment is rapidly gaining ground in the United States, it is nevertheless surprising how imperfectly it is understood by many manufacturers as well as accountants.

The object of this article is to illustrate some of the best known methods, and by commenting upon them, to draw attention to the advantages or disadvantages of each, to the end that an employer or accountant contemplating the installation of the premium system in a shop, may obtain a fairly thorough knowledge of various methods in use, and so be in a position to decide which plan will best meet the requirements of his particular case. The article has principally to do with the methods used in calculating the premium but at the end a simple system will be illustrated and explained which, although designed specifically for a machine shop, is readily adaptable to almost any kind of manufacturing business.

A brief description of the general principles involved, for the benefit of those who may still be unfamiliar with this method of remunerating labor, is probably all that will be necessary for the purposes of this article, before starting in to comment upon specific systems.

Under the premium system the workman receives his regular hourly rate of wages no matter how long he takes to perform an operation, but if he succeeds in accomplishing the work in less than a specified "Standard Time," he receives in addition to his wages a premium, or bonus, based upon the time saved.

EVOLUTION OF THE PREMIUM SYSTEM.

Mr. F. W. Taylor, some twenty-five years ago, was the first to go about the gathering of statistics and the classification of data in respect to shop operations, in a scientific manner. From this data he was able to determine the best and most economical methods to use, and to formulate instructions which tended greatly to increase the efficiency of the workmen and tools. In brief, his method was to determine by means of his data the time in which an operation should be done, the best methods and tools to employ to enable it to be done, and then to see that it was done in the manner and time established. His method placed the responsibility of increasing the efficiency of the workmen almost entirely upon the management, although a higher rate of pay, or piece rate, was allowed for high efficiency. Practically all the premium methods of remunerating labor are the outgrowth of Mr. Taylor's ideas.

In 1891, in a paper read before the American Society of Mechanical Engineers, Mr. F. A. Halsey described a premium system devised by him, of which all later systems are merely modifications. Under this system a Standard Time is established for an operation and any saving is divided in some proportion between the employer and employee.

Mr. James Rowan, of Messrs. David Rowan & Sons, Glasgow, Scotland, in a paper read before the Mechanical Section of the International Engineering Congress, held at Glasgow in 1901, advocated a system of payment upon a sliding scale basis. This plan allows the workman as a bonus the same proportion of his regular wages as the time saved bears to the time allowed, or Standard Time.

One of the most novel systems is the so-called "Sante Fe, or Emerson, System," in use on the Sante Fe Railroad. Mr. Emerson sets a Standard Time in which an operation *ought to be done*, which he calls 100% efficiency, and for which 20% bonus is paid. The workman receives a small bonus beginning with 66 2/3% efficiency, and a high and rapidly increasing premium beyond efficiency.

These systems, as well as others, will be illustrated and more fully described further on.

The Premium System for the Payment of Wages.

DAY WORK, PIECE WORK AND PREMIUM PLANS COMPARED.

Day wages is the most expensive and least satisfactory method of remunerating labor, because there is little or no incentive for a workman to do his best, and shops using this method are almost without exception operating on a very low percentage of efficiency. The piece work plan has also proved unsatisfactory. Under this system the workman receives all the direct saving, the only benefit accruing to the employer being the lower expense burden per unit of output. By constant repetition of the same work, operatives are in many instances able to reduce the time to such an extent, and their wages become so exorbitant, that the piece rates are cut, which is sure to cause dissatisfaction and often demoralization. Employees soon become aware of this and confine their output within limits which they consider safe. Under the premium system, the saving being divided between the employer and employee, there is less temptation to cut rates, and if sufficient care has been exercised in establishing the Standard Times, there should be no occasion for altering them, unless in the event of some radical change in tools or method of manufacture.

An argument frequently advanced against both the piece work and premium plans is that they tend to lower the quality of the work. This is obviously true, but may be overcome by a rigid system of inspection involving penalties for inferior workmanship.

ADVANTAGES OF THE PREMIUM SYSTEM.

Factory operatives are apt to get into a rut. They become accustomed to doing their work in a certain way and in a certain time, and in the absence of any incentive, become mere adjuncts of the machines they operate. Of course, they are not alone in this respect—even bookkeepers have been known to suffer from the same sort of "sleeping sickness." Given, however, a sufficiently attractive inducement to exercise their latent intelligence, it is surprising what they can accomplish in the way of devising ingenious methods to shorten the time of operations. Instances are common in which the minimum time for an operation under the old methods has been reduced one-half, two-thirds, and even more. Superintendents and foremen, who, of course, should share

in the benefits due to the saving of time—as will be explained further on—naturally will use their best efforts towards increasing the efficiency of the workmen and machinery, and in fact the premium system acts as a healthful stimulant to the entire shop organization. "Wages go up and costs go down."

It is scarcely necessary to say that extreme care should be exercised in establishing Standard Time, but the inducement must be sufficiently great to tempt the workmen to try for it. Once fixed, it should only be revised in case of a change in the method of manufacture, such as in the event of the installation of an improved tool, or the increase in efficiency of the old tool due to a change in power, speed, or other reason outside of the efforts of the workman himself. Of course, there are exceptions to all rules, and under exceptional circumstances a Standard Time may be reduced in safety, if at the same time the workman's regular rate of wages be increased so that he can make as much as he did before. In case he is later replaced, or other workmen are hired for the same operation, the regular rate of wages paid would again prevail, and thus the matter will adjust itself, usually without any friction.

In establishing a Standard Time for the performance of an operation, a record of the time actually taken by various workmen during a certain period should be kept; but to rely upon this information alone would be insufficient and dangerous unless it be supplemented by careful observation and experiment. By "observation" is meant the systematic watching of the workmen at their tasks, for the purpose of forming an opinion as to what extent they are using their best efforts, and by "experiment," the employing of an expert workman on that particular operation in order to ascertain in what period of time he can perform the operation with all conditions favorable and using the best of tools. With these data at hand it should not be difficult to fix a Standard Time which will be fair to both parties concerned.

In addition to the saving in labor consequent upon the lessening of time for the performance of an operation, the reduction in the factory expense burden apportionable to it should not be overlooked. This is shown in the following example in which the workman is assumed to receive as a premium one-third of the time saved, his regular rate of wages being 30 cents an hour and the Standard Time 10 hours.

N° Hours Worked	Earnings at Reg. Rate	Burden at 20c Per Hour	Premium Earned	Cost	Earnings Per Hour	Per Cent. Saved
10	$3.00	$2.00	...	$5.00	$0.30	....
9	2.70	1.80	$0.10	4.60	.311	8%
8	2.40	1.60	.20	4.20	.325	16%
7	2.10	1.40	.30	3.80	.343	24%
6	1.80	1.20	.40	3.40	.366	32%
5	1.50	1.00	.50	3.00	.40	40%

Thus if a workman succeeds in saving half the time—which, by the way, is not at all unusual—he increases his wages 10 cents an hour (33 1/3%) and the operation, which originally cost $5.00 with the burden added, now costs $3.00, or a saving of $1.00 in labor and $1.00 in factory burden.

VARIOUS PREMIUM METHODS.

A number of different premium plans will now be illustrated, and the good or bad features of each commented upon:

HALSEY METHOD (A).
Workman to receive one-half of time saved.
Standard Time—10 Hours.

Hours Worked	Regular Rate	Earnings at Reg. Rate	½ Time Saved	Premium Earned	Total Earnings	Earnings Per Hour
10	.....	$3.00	....	.....	$3.00	$0.30
9	$0.30	2.70	½ hr.	$0.15	2.85	.316
8	.30	2.40	1 "	.30	2.70	.337
7	.30	2.10	1½ "	.45	2.55	.364
6	.30	1.80	2 "	.60	2.40	.40
5	.30	1.50	2½ "	.75	2.25	.45
4	.30	1.20	3 "	.90	2.10	.525
3	.30	.90	3½ "	1.05	1.95	.65
2	.30	.60	4 "	1.20	1.80	.90
1	.30	.30	4½ "	1.35	1.65	1.65

This method is all right up to the point where a workman succeeds in cutting the time in half, beyond which his hourly rate of pay increases rapidly and his wages become so high that the employer is tempted to cut the Standard Time established, which is pretty certain to result disastrously. Instances have occurred in which a workman has succeeded in cutting such a slice from the Standard Time, and his wages have thereby increased so enormously, that he has been able to employ a helper, thus delivering some work in zero time. He may also work on his own time, before or after hours, or in some lines of manufacture, he may take work home and thus deliver it in zero time so far as the shop is concerned.

For the reason, therefore, that it may render it possible for an

operative to earn excessive wages, the above plan is not recommended in its entirety.

No. 2.
HALSEY METHOD (B).
Workman to receive one-third of time saved.
Standard Time—10 Hours.

Hours Worked	Regular Rate	Earnings at Reg. Rate	⅓ Time Saved	Premium Earned	Total Earnings	Earnings Per Hour
10	$0.30	$3.00	....	.....	$3.00	$0.30
9	.30	2.70	⅓ hr.	$0.10	2.80	.311
8	.30	2.40	⅔ "	.20	2.60	.325
7	.30	2.10	1 "	.30	2.40	.343
6	.30	1.80	1⅓ "	.40	2.20	.366
5	.30	1.50	1⅔ "	.50	2.00	.40
4	.30	1.20	2 "	.60	1.80	.45
3	.30	.90	2⅓ "	.70	1.60	.533
2	.30	.60	2⅔ "	.80	1.40	.70
1	.30	.30	3 "	.90	1.20	1.20

This method is good up to the point where a workman is able to save two-thirds of the time, after which his hourly rate and wages become excessive. It is, therefore, open to criticism for the same reason advanced against plan No. 1, although to a lesser degree.

No. 3.
ROWAN METHOD.
Workman to receive same per cent. of regular time as time saved bears to time allowed.
Standard Time—10 Hours.

Hours Worked	Regular Rate	Earnings At Reg. Rate	Time Saved	% of Time Saved To Time Allowed	Premium on Basis of Same % of Reg. Time	Total Earnings	Earnings Per Hour
10	$0.30	$3.00	....	....	.....	$3.00	$0.30
9	.30	2.70	1 hr.	10%	$0.27	2.97	.33
8	.30	2.40	2 "	20%	.48	2.88	.36
7	.30	2.10	3 "	30%	.63	2.73	.39
6	.30	1.80	4 "	40%	.72	2.52	.42
5	.30	1.50	5 "	50%	.75	2.25	.45
4	.30	1.20	6 "	60%	.72	1.92	.48
3	.30	.90	7 "	70%	.63	1.53	.51
2	.30	.60	8 "	80%	.48	1.08	.54
1	.30	.30	9 "	90%	.27	.57	.57

This plan is objectionable for the reason that it permits a workman to earn too large a premium in the beginning; that is, for a small saving of time. It will be seen that his wages would increase 10% for every hour saved, so that if he succeeds in saving two hours his wages would increase by 20%; a saving of three hours would result in an increase of 30%, and so on.

The above method is a desirable one from the employer's point of view when the saving is large, and it will be noted that under this plan a workman could never succeed in more than doubling his wages. Up to a saving of half the time it is in favor of the workman; beyond that point it favors the employer.

No. 4.
CARDULLO METHOD.

Establishing a Maximum Rate which a workman cannot exceed no matter how much time he saves. In this example the Maximum Rate is fixed at 50 cents per hour. By fixing the maximum at double the minimum (60 cents in this case), it is exactly the same as the Rowan Method.

Standard Time—10 Hours.

Hours Worked	Regular Rate	Earnings at Reg. Rate	Time Saved	Premium Earned	Total Earnings	Earnings Per Hour
10	$0.30	$3.00	.....	.....	$3.00	$0.30
9	.30	2.70	1 hr.	$0.18	2.88	.32
8	.30	2.40	2 "	.32	2.72	.34
7	.30	2.10	3 "	.42	2.52	.36
6	.30	1.80	4 "	.48	2.28	.38
5	.30	1.50	5 "	.50	2.00	.40
4	.30	1.20	6 "	.48	1.68	.42
3	.30	.90	7 "	.42	1.32	.44
2	.30	.60	8 "	.32	.92	.46
1	.30	.30	9 "	.18	.48	.48

This method the writer does not favor for the same reason advanced against the Rowan plan—unless the maximum rate is fixed very low—it permits an excessive premium to be earned in the beginning. Another objectionable feature is that the method of calculating is too complicated for the ordinary workman readily to understand. For instance, Mr. Cardullo's formula for calculating the rate to be paid for a saving of two hours, when the minmum rate is 30 cents and the maximum 50 cents (as above) is as follows:

$$30 \times \left\{ \frac{2}{1 + 1.5 \times 10} \right\} = 34$$

A simpler way, seemingly, would be to divide the difference between the maximum and minimum rates (20 cents) by the Standard Time (10 hours), which gives 2 cents as the increase in rate for every hour saved.

As stated above, if the maximum time is fixed at double the minimum, there is no difference between this and the Rowan method. If fixed at less than double, the inducement would seem

to be insufficient for a large saving of time, and if fixed at double, or more, it admits of too high a rate of wages for a small saving of time.

No. 5.
SANTA FE, OR EMERSON, METHOD.

A Standard Time is set in which the work *ought* to be done. If done in Standard Time the workman is rated at 100% efficiency. Premium begins at 66 2/3% efficiency and increases gradually until Standard Time, or 100% efficiency, is reached, at which point the premium allowed is 20% of wages. Thereafter it increases at the rate of 1% for every 1% increase in efficiency.

Standard Time—6 Hours 40 Minutes.

Hours Worked	Regular Rate	Earnings at Reg. Rate	Efficiency Per Cent.	Premium Earned	Total Earnings	Earnings Per Hour
10	$0.30	$3.00	67%	. . . . .	$3.00	$0.30
9	.30	2.70	74%	$0.03	2.73	.303
8	.30	2.40	83%	.12	2.52	.315
7	.30	2.10	95%	.31	2.41	.344
6	.30	1.80	111%	.56	2.36	.393
5	.30	1.50	133%	.80	2.30	.46
4	.30	1.20	167%	1.04	2.24	.56
3	.30	.90	222%	1.28	2.18	.726
2	.30	.60	333%	1.52	2.12	1.06
1	.30	.30	667%	1.76	2.06	2.06

This system, in use on the Santa Fe Railroad, requires a rather elaborate premium department, and extreme care is necessary in the fixing of Standard Time. A small and gradually increasing premium is paid, beginning with 66 2/3% efficiency, until Standard Time, or 100% efficiency, is reached, after which the premium increases very rapidly.

Under this system an efficiency record is kept for each workman, and he is not paid a premium on individual jobs, but upon his average efficiency for all jobs upon which he has been employed during the month.

The above method would seem to be altogether too elaborate and complicated for an ordinary workman to comprehend. It is also faulty, in the writer's opinion, for the reason that it permits the earning of far too large a premium for work accomplished in less than Standard Time.

No. 6.
S. & N. METHOD (A).
(A combination of the Halsey and Rowan Plans.)

Workman to receive one-half of time saved until saving

reaches 50%, and thereafter the same per cent. of regular time as time saved bears to time allowed.

Standard Time—10 Hours.

Hours Worked	Regular Rate	Earnings at Reg. Rate	Premium Allowance	Premium Earned	Total Earnings	Earnings Per Hour
10	$0.30	$3.00	....	.....	$3.00	$0.30
9	.30	2.70	½ hr.	$0.15	2.85	.316
8	.30	2.40	1 "	.30	2.70	.337
7	.30	2.10	1½ "	.45	2.55	.364
6	.30	1.80	2 "	.60	2.40	.40
5	.30	1.50	2½ "	.75	2.25	.45
4	.30	1.20	60%	.72	1.92	.48
3	.30	.90	70%	.63	1.53	.51
2	.30	.60	80%	.48	1.08	.54
1	.30	.30	90%	.27	.57	.57

This combination of the Halsey and Rowan methods is favored by the writer for the reason that the good features of each are retained, while the bad features are eliminated. Under this plan the workman may be allowed one-half the saving, or any percentage of it which may be decided upon. On the basis of one-half the saving—as above—the Halsey plan is followed up to a saving of one-half the time, from which point the Rowan method is used. If allowed one-third the saving, the plan changes when a two-thirds saving has been effected, as illustrated under the following schedule—No. 7.

No. 7.
S. & N. METHOD (B).
(A combination of the Halsey and Rowan Plans.)

Workmen to receive one-third of time saved until saving reaches 66 2/3%, and thereafter the same per cent. of regular time as time saved bears to time allowed.

Standard Time—10 Hours.

Hours Worked	Regular Rate	Earnings at Reg. Rate	Premium Allowance	Premium Earned	Total Earnings	Earnings Per Hour
10	$0.30	$3.00	....	.....	$3.00	$0.30
9	.30	2.70	⅓ hr.	$0.10	2.80	.311
8	.30	2.40	⅔ "	.20	2.60	.325
7	.30	2.10	1 "	.30	2.40	.343
6	.30	1.80	1⅓ "	.40	2.20	.366
5	.30	1.50	1⅔ "	.50	2.00	.40
4	.30	1.20	2 "	.60	1.80	.45
3	.30	.90	70%	.63	1.53	.51
2	.30	.60	80%	.48	1.08	.54
1	.30	.30	90%	.27	.57	.57

Superintendents and Foremen.

Obviously, it is good policy to allow the superintendent and foremen to share in the increased earnings due to the saving of time. An equitable method is that which allows the superintendent as a bonus a proportion of his salary in the same ratio that the total saving in the entire shop bears to the total pay-roll Likewise each foreman should receive a bonus calculated in the same manner based upon the percentage that the saving in his department bears to the total pay-roll of that department.

This would seem to be a fair arrangement and is an incentive to the superintendent and foremen to assist in making the premium system a success, and to accelerate the work in the various departments in every way possible.

In order that comparison may easily be made of the results produced by the several plans illustrated herein, a "Summary of Various Premium Methods" is here given, which will be found of interest.

A Simple Premium System.

A set of forms for a premium system will now be reproduced and explained. This system, although designed primarily for a machine shop, can easily be adapted to almost any line of manufacture, and, of course, may be elaborated to any extent desired.

Form No. 1. Workman's Daily Time Card.

This is gotten up in coupon form so that the sections may be separated and sorted to different order numbers or operations. The time of starting is shown by a stroke of the pencil through the figures indicating the hour and minute in the upper half of a section, and the time of finishing is shown in the same manner in the lower half. It is immaterial whether the time is taken by a time-keeper or filled in by the workman himself. If by the latter, the card is turned over to the foreman at the end of the day's work for his approval, which he indicates by a punch in the column headed "R. Work," if the workman is employed on regular day work, or in the column headed "P. Work" if he is on premium time. The card then goes to the cost or time-keeping department. This is an excellent form of time card for general use, whether a premium system is in operation or not.

Form No. 1. WORKMAN'S DAILY TIME CARD. Size 4″ x 7½″—Perforated.

No.

NAME .... DATE .... 191 DEPT.

Order No.	Part or Symbol and Operation	Time Started and Finished			Hours	Rate	Amount	Foreman's Punch	
		Start	Hr. 6-7-8-9-10-11-12-1-2-3-4-5-6					R. Work	P. Work
			Min. 6-12-18-24-30-36-42-48-54						
		Finish	Hr. 6-7-8-9-10-11-12-1-2-3-4-5-6						
			Min. 6-12-18-24-30-36-42-48-54						

No.

NAME .... DATE .... 191 DEPT.

Order No.	Part or Symbol and Operation	Time Started and Finished			Hours	Rate	Amount	Foreman's Punch	
		Start	Hr. 6-7-8-9-10-11-12-1-2-3-4-5-6					R. Work	P. Work
			Min. 6-12-18-24-30-36-42-48-54						
		Finish	Hr. 6-7-8-9-10-11-12-1-2-3-4-5-6						
			Min. 6-12-18-24-30-36-42-48-54						

No.

NAME .... DATE .... 191 DEPT.

Order No.	Part or Symbol and Operation	Time Started and Finished			Hours	Rate	Amount	Foreman's Punch	
		Start	Hr. 6-7-8-9-10-11-12-1-2-3-4-5-6					R. Work	P. Work
			Min. 6-12-18-24-30-36-42-48-54						
		Finish	Hr. 6-7-8-9-10-11-12-1-2-3-4-5-6						
			Min. 6-12-18-24-30-36-42-48-54						

USE A SEPARATE SECTION FOR EACH ORDER AND FOR OVERTIME

SUMMARY OF VARIOUS PREMIUM METHODS.

Hours	Day Wages — Reg. Rate	Day Wages — Earnings at Reg. Rate	No. 1 Halsey Method (A) — Prem. Earned	No. 1 — Total Earnings	No. 1 — Earnings Per Hour	No. 2 Halsey Method (B) — Prem. Earned	No. 2 — Total Earnings	No. 2 — Earnings Per Hour	No. 3 Rowan Method — Prem. Earned	No. 3 — Total Earnings	No. 3 — Earnings Per Hour	No. 4 Cardullo Method — Prem. Earned	No. 4 — Total Earnings	No. 4 — Earnings Per Hour	No. 5 Santa Fe or Emerson Method — Prem. Earned	No. 5 — Total Earnings	No. 5 — Earnings Per Hour	No. 6 S. & N. Method (A) — Prem. Earned	No. 6 — Total Earnings	No. 6 — Earnings Per Hour	No. 7 S. & N. Method (B) — Prem. Earned	No. 7 — Total Earnings	No. 7 — Earnings Per Hour
10	.30	$3.00		$3.00	.30		$3.00	.30		$3.00	.30		$3.00	.30		$3.00	.30		$3.00	.30		$3.00	.30
9	.30	2.70	.15	2.85	.316	.10	2.80	.311	.27	2.97	.33	.18	2.88	.32	.03	2.73	.303	.15	2.85	.316	.10	2.80	.311
8	.30	2.40	.30	2.70	.337	.20	2.60	.325	.48	2.88	.36	.32	2.72	.34	.12	2.52	.315	.30	2.70	.337	.20	2.60	.325
7	.30	2.10	.45	2.55	.364	.30	2.40	.343	.63	2.73	.39	.42	2.52	.36	.31	2.41	.344	.45	2.55	.364	.30	2.40	.343
6	.30	1.80	.60	2.40	.40	.40	2.20	.366	.72	2.52	.42	.48	2.28	.38	.56	2.36	.393	.60	2.40	.40	.40	2.20	.366
5	.30	1.50	.75	2.25	.45	.50	2.00	.40	.75	2.25	.45	.50	2.00	.40	.80	2.30	.46	.75	2.25	.45	.50	2.00	.40
4	.30	1.20	.90	2.10	.525	.60	1.80	.45	.72	1.92	.48	.48	1.68	.42	1.04	2.24	.56	.72	1.92	.48	.60	1.80	.45
3	.30	.90	1.05	1.95	.65	.70	1.60	.533	.63	1.53	.51	.42	1.32	.44	1.28	2.18	.726	.63	1.53	.51	.63	1.53	.51
2	.30	.60	1.20	1.80	.90	.80	1.40	.70	.48	1.08	.54	.32	.92	.46	1.52	2.12	1.06	.48	1.08	.54	.48	1.08	.54
1	.30	.30	1.35	1.65	1.65	.90	1.20	1.20	.27	.57	.57	.18	.48	.48	1.76	2.06	2.06	.27	.57	.57	.27	.57	.57

FORM No. 2.

OPERATION RECORD

Name of Part _____ Mach. No. _____

Machine _____ Symbol _____ No. _____ Weight _____

Operation _____ Operation No. _____

On Machine No. _____ Dept. _____ Stand. Time _____ Date Est. _____

Remarks _____

Date	Order No.	Workman	No.	Rate	No. Pcs.	Time Required	Unit Time	Remarks

Form No. 2.

Size 5″ x 8″.

This card is for use in the collecting of information respecting the time required for the performance of any particular operation, for the purpose of establishing a Standard. It may be used prior to the installation of a premium system or subsequently thereto, whenever it is desired to obtain such a record.

Form No. 3.

Size 5″ x 8″.

This card is designed to contain a list of all the operations on a specific article, or part, with the Standard Time established for each. Every operation is numbered and they should follow on the card in the same order that they naturally occur during the progress of the article through the shop. As soon as a Standard Time for a certain operation has been established by means of the Operation Record, Form No. 2, it should be entered in its proper place on the Master Card, which provides a convenient and quick reference for the Standard Time established for any operation. In case the same operation is performed on several machines of different design, or varying rates of speed, it will be necessary to establish a Standard Time for each. The operation should bear the same index number no matter what machine is used, so that on the Master Card there might be, for instance, two or more entries under Operation No. 2, covering the several machines on which the operation may be performed. The Operation No. is, of course, qualified by the Machine No., as, for example—Operation No. 2 on Machine No. 15; Operation No. 2 on Machine No. 16; etc.

FORM No. 3.

MASTER CARD

Name of Part _____ Mach. No. _____

Machine _____ Symbol _____ No. _____ Weight _____

Remarks _____

Op. No.	Operation	Dept.	On Mach. No.	Stand. Time	Remarks

FORM No. 4.

WORKMAN'S
PREMIUM TIME CARD

Order No.

_____

Workman's No. _____ Name_____

Part or Symbol_____ · _____

_____

Operation_____

_____

Operation No. _____ Dept. _____

On Mach. No._____ No. Pcs. _____Weight _____

Date		Time From To		Hours	Pcs.	√	Foreman

	Hours	Pcs.	
Total (Forward to Another Card Yes No)			
Penalty for Inferior Work			
Total Time as Adjusted			
Standard Time			
Time Lost			
Time Saved			
Premium Allowance			
Rate			
Amount Earned			

Time on this Ticket must agree with that on Regular Daily Time Card.

Work Inspected and Approved_____

Form No. 4.

4″ x 7½″.

These cards should be padded at the top and made up in sets of original and duplicate for use with carbon paper—original of fairly thin paper and duplicate of card stock. When a workman is about to start on a premium job, the card is filled out as indicated thereon and the duplicate given to him, which, of course, contains the Standard Time allowed for the operation. On the original, retained by the cost or time-keeping department, the time is entered daily from the regular daily time cards—Form No. 1. The workman fills in his time on the duplicate and has it approved by the foreman who punches in the space provided. As soon as the job is completed and the work is inspected and approved, the card goes to the time-keeping department where it is compared with the original and is then entered on the Workman's Premium Record, Form No. 5.

Form No. 5.

Size 5″ x 8″.

Postings to this card are made from Form No. 4 and constitute a valuable record of the efficiency of each workman. At the end of a pay period the column headed "Premium Amount" should be ruled off and the total premium earnings for the period extended in the column to the right headed "Pay Period Totals," from which it is transferred to the payroll. Entries of all premium earnings on the payroll should be made in red ink and if paid in currency it is a good idea to enclose the premium earnings in a separate envelope.

A separate card should be kept for each department; that is, if a workman happens to be employed during a period in two

Form No 5.

WORKMAN'S PREMIUM RECORD

No._____ Name_____ Dept.

Date Finished	Order No.	Op. No.	On Mach. No.	Standard Time	Time Taken	Time Lost	Time Saved	Premium Allowance	Rate	Amount Premium	Pay Period Totals	√

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departments, two Premium Record cards should be kept for him. This is in order that the amount of premiums earned and the total saving in each department may be easily ascertained.

The forms reproduced herein illustrate those required for a very simple system. Others of a subsidiary, or auxiliary, character may be added from time to time, or changes may be made to meet individual requirements. A good cost-system already in use is naturally a very material aid in the installation of a premium system, and renders the work much easier of accomplishment.