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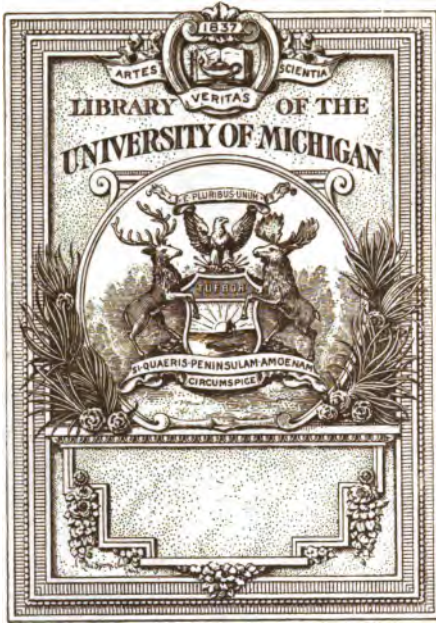
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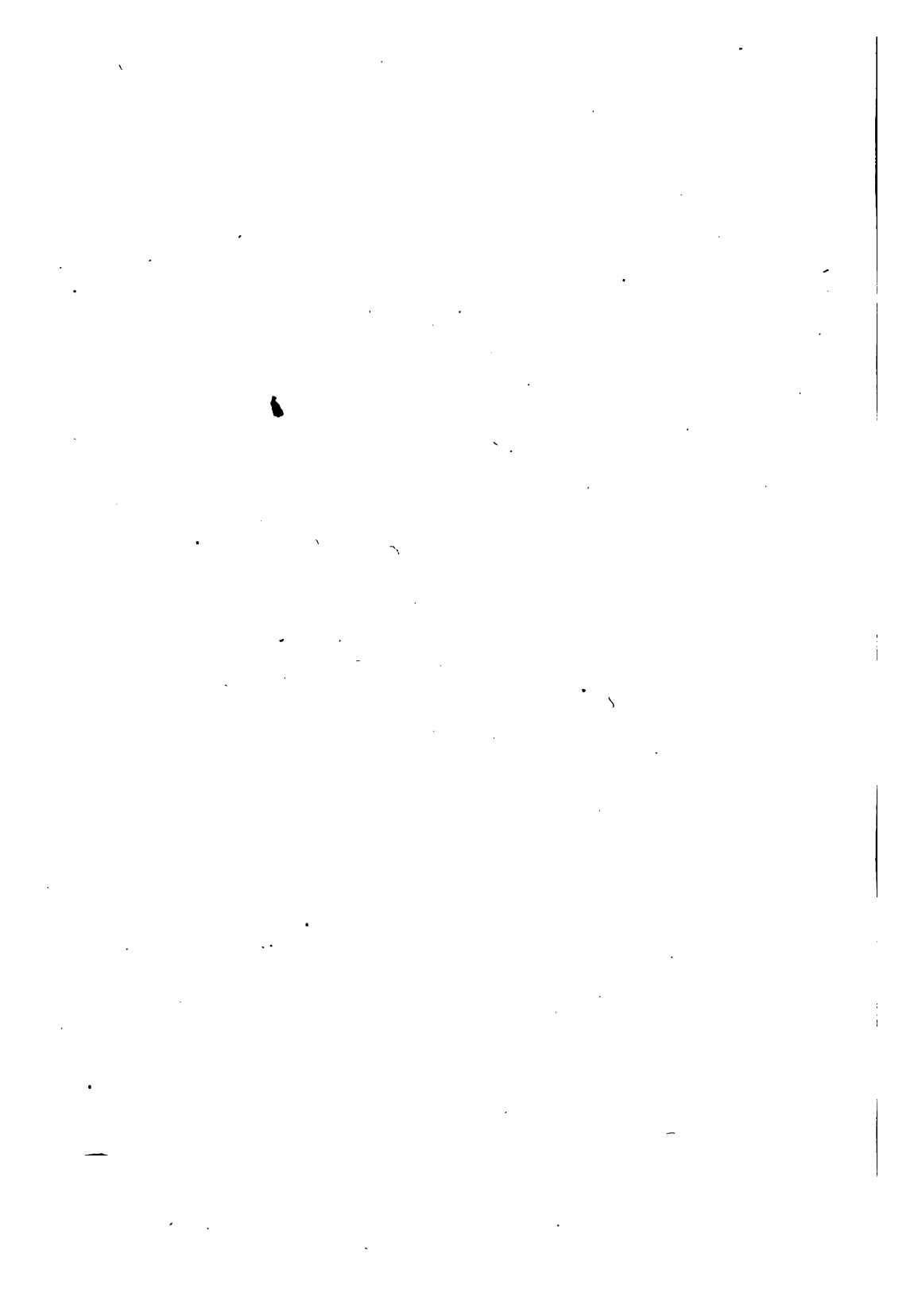
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National cash register co., Dayton, O.

ASKING FOR

130-

Suggestions from Employes

AT

NATIONAL CASH REGISTER COMPANY

DAYTON, OHIO, U. S. A.



An Exhibit of What the System Is and What It Has Accomplished

Compiled by

ALFRED A. THOMAS, SECRETARY

JANUARY, 1904



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The Suggestion System and What It Has Accomplished.

The National Cash Register Company, at Dayton, Ohio, was incorporated in December, 1884. It is the creation of its President, Mr. John H. Patterson, assisted by his brother, Mr. Frank J. Patterson, who died in July, 1901.

This Company introduced, both at home and abroad, the cash register, until it has put 375,000 of them into use. These have been invented, manufactured and sold direct to users in every civilized city in the world. The Company now knows that its machines are "needed and can be sold wherever cash is handled." The Company's factory at Dayton employs more than 3,000 workmen; and its selling force comprises perhaps half as many more who are at work in all countries where its registers are used. During each of the years covered by the exhibit below, the Company has invested half a million dollars in the extension of its factory plant and in the increase of its facilities for improved and economical output. The rooms of its factory and offices are opened to free inspection by the public every day. About 40,000 people annually have for several years availed themselves of this invitation. Many of these have come from mere curiosity, but many of them have been intelligent visitors from all parts of this and other countries. Some of these latter have asserted that the methods and system at work are original; and if successful, promise a new era in factory work. They are pronounced to be a genuine and novel method of co-operative labor. One of the methods which has contributed to this Company's best results has been its practice of asking for suggestions from any employe for bettering and cheapening the work that he and others do. These, it will be noted, are made by the subordinate to his superior, and are welcomed when they apply to anything the Company has undertaken to do. This publication now made is for free distribution to anyone who asks for it; and is intended to be an exhibit of what this practice of asking for suggestions is at the National Cash Register factory, and what it has accomplished.

HOW ASKING FOR SUGGESTIONS BEGAN.

President Patterson, in telling how this practice began at the factory, once said:

“A weigh-master who used to be with me in the coal business was working over here in the factory cleaning castings, and in a talk with him one day I asked him why he was working in that position, and why he didn't bring himself to the attention of his foreman and earn promotion through suggesting some changes. I asked him if there were no things over there which he could see should be changed, and he said ‘Lots of them,’ but he said, ‘There's no use in my making any suggestions, for the foreman would only take all the credit for them, and would think I was trying to get his job.’ I thought to myself, ‘There's sense in what this workman says,’ and I decided then and there to try to get some plan whereby these suggestions could be brought directly to the attention of the management.

SUPERINTENDENT WANTED CREDIT FOR ALL.

“An old superintendent came to me one day and said, ‘I have a new invention,’ and he showed it to me — a good improvement. I said: ‘I am much obliged to you. Did it take much of your time?’ He said, ‘Oh, no; I worked on it at home at night.’ And about six months afterward we found that he wasn't the inventor of the scheme at all; that one of the employes had invented it, and the superintendent had taken all the credit. And shortly after that we put around these little boxes and tried to get people to put in suggestions. Everyone thought it was a fool idea, and C—— came to me one day and said: ‘You are on the wrong track; you don't want this suggestion business. What you need is a man with a tall hat and a long coat to sit up in the front office and tell what to do. You want a man who knows and who can boss.’ And I said, ‘There's one objection to that,’ and he asked what it was, and I said: ‘The trouble with that scheme is that this superintendent would have a lot of friends, and naturally he would want his friends to have the good jobs, and the first thing you knew you would be fired in order to give a friend of the superintendent a job.’ I just told him that because I knew very well that C—— wanted the job himself, and that was his way of asking for it.

“WALK HUMBLY.”

“I have always remembered a sermon I once heard on the text, ‘Do justly, love mercy, and walk humbly.’ Somehow I never could forget the impression it made; and I have thought one of my greatest troubles here used to be to get our superiors to ‘walk humbly’ in their general treatment of subordinates. To ‘walk humbly’ to me means for them not to arrogate to themselves, but to ask for and get from each subordinate at work any intelligent suggestions or direction he can contribute to bettering the methods. I don't claim that we have had trouble lately in this direction, but it gave endless and provoking difficulty at first to induce our foremen to really walk humbly enough and listen to these suggestions.”

The following statement of August Peters was written *several years ago*, but it is good to have a mechanic tell in his own way:

HOW THE SYSTEM OF SUGGESTIONS WORKS.

“My name is August Peters. I have been working at the N. C. R. factory steady for the last six years. I am working in the Brass Cabinet Department. I am a metal pattern-maker. My work has been finishing detail lids after they have been soldered, and I have been put on different jobs like that. I have been working in the brass room here under Mr. George Grove, foreman. I belong to the union—the Adjusters and Assemblers, No. 29.

“The Company in its printed papers, and Mr. Patterson in his talks to us, offered prizes for suggestions. The foreman told us about them and all try to make some good suggestions—every man about his own work—something that would show how it could be done better and cheaper; and we might go out of our line and make any suggestion to the Company’s good, or any complaint on the work. I made this suggestion, ‘Discontinue filing detail lid-ends before soldering.’ My orders on work required that I file the detail lid-ends after soldering. I found out by experience that just as much work had to be done on those that were filed as those that were not filed. I said nothing at first, but tested and tried this to be sure about it. This filing before soldering I found was a useless expense. I sent my suggestion in writing to the Factory Committee. They gave me a receipt that they had received it in the office. A man in the union made a complaint against me that I took the job away from him. He did this work of filing before soldering, and he complained to the union that I made this suggestion. The union referred it to the business agent. The union chewed the rag with me and treated me pretty rough because I made the suggestion. They asked me what I did it for. I told them I did it just as other men made suggestions to show how the work could be better done and money and time saved.”

SUGGESTION SYSTEM.

CASH PAID OUT IN FIVE YEARS FOR SUGGESTIONS AND PRIZES.

The Treasurer reports that during the past five years the Company has paid out for suggestions and prizes as follows:

PURPOSE	1899	1900	1901	1902	1903	Total
For Factory Suggestions.....	\$1,255 00	\$1,305 00	\$1,380 00	\$690 00	\$4,551 00	\$9,181 00
Sales Agents' Prizes	2,420 00	1,770 00	1,765 00	3,905 83	5,192 60	15,053 43
Landscape Gardening Suggestions.....		205 00	227 00	98 00		530 00
Boys' Garden Prizes.....		44 75	36 00	82 68	45 00	158 43
Apprentices in Tool Room...			15 00			15 00
To Clerks for Suggestions About Use of Machines..	100 00					100 00
Poster Prizes.....	18 00	75 00		50 00		143 00
Monitor Board Records.....	738 92	347 85				1,086 77
Special Factory Prizes.....		25 00	100 00	25 00		150 00
Prizes Allowed Foreign Suggestions.....				111 99	86 69	198 68
Sundries.....				112 00	4 00	116 00
Foreign Agents' Prizes.....					4,030 92	4,030 92
Tool Room Prizes.....					30 00	30 00
Agents' School.....					364 27	364 27
Cabinet Design Prizes, Not for Employes.....					450 00	450 00
Total,	\$4,531 92	\$3,772 60	\$3,523 00	\$5,025 50	\$14,754 48	\$31,607 50

It will be noted that much of the foregoing is prizes paid to agents and others for *work*. The following will be an exhibit of what has been paid or done by the Company for suggestions alone, and what this has brought about. You will understand the above schedule shows that there has been paid by the Company in five years, for suggestions alone, the sum of \$10,152.68.

SUGGESTION SYSTEM USED WITH OUR SELLING FORCE.

To say that the National Company works under a unique system of its own, of co-operation, is certainly true of its large selling force. These men are gathered together in little groups each week; and, at longer and frequent intervals into district and general conventions. The main purpose of such conventions is to ask and get good suggestions and criticisms about the work the men themselves do, and about the orders they have received or should have received. These suggestions are called for, and when given are approved or disapproved by the vote of all present. If so approved, such suggestions are then at once, and in the presence of all, written on blackboards which are set aside and hung in a room afterwards for preservation and reference. We show a photograph of one of these conventions showing the suggestions so obtained and recorded.

WHEN BEGAN IN THE FACTORY AND OFFICE FORCE.

The establishment of the suggestion system in the factory, and among the large office force of the Company, however, came later, and was more difficult, and what is now exhibited is intended to relate to this alone.

No sufficient record has been kept of asking for and rewarding suggestions in the factory and office force, which began about ten years ago.

Mr. J. M. Switzer, secretary of the Factory Committee, says:

“The general use of suggestions had long been at work in the selling force, but it was not introduced into the factory until 1894. The superintendent at that time left; and President Patterson moved his desk into the middle of our factory, in among the machinists. He worked there perhaps two months, and out of what he did then was organized the No. 5 Factory Committee. Mr. Bickford, now chairman of the Factory Committee, and Mr. Cleal, now in the Inventions Department, were members of this original committee of five. It developed into what has since been and is yet the Factory Committee, which has management of all manufacturing departments. It now has eight members.

PRIZES FIRST OFFERED IN 1895.

“Prizes by the President were first offered in the factory for good suggestions in 1895. That year the first prize, \$30, was awarded to Mr. J. C. Mundy, Final Inspection Department. His suggestion led to what is called the stub-printer, and perhaps was among the most valuable we ever received. The second prize, \$25, was awarded to Mr. William Murphy, No. 79 Assembling Department, for certain improvements on check-printing mechanism.

“In 1897 the first prize of \$100 was awarded to Mr. William Murphy, of the No. 79 Assembling Department, for improving a check-printer; second prize



District Manager's and Agents' Convention in Session at the Factory.

to Mr. C. G. Merkley, of the Assembling Department, \$75, for suggestion for consolidating different sizes of back rods and tie bars on the No. 35 machine, and thus avoid carrying so much stock."

From this date on, our exhibit is made up of quotations from the regular pamphlet publication of the Company, known as "The N. C. R."; but the working of the system will be shown best by first exhibiting a few special cases. These will be statements of men and women — factory employes. They were reluctant to talk about themselves, but when interrogated by the Secretary, they made the following statements which he took down as near as might be in the words of each person.

GEORGE S. GREEN.



G. S. Green.

"My name is George S. Green. I came from Michigan to Dayton. I was in athletics and was bicycling. I was here about six months and married one of the young women who had worked in the Advertising Department. She was so high in her praises of the methods at the 'Cash' that I made application here for employment.

"They put me in the Experimental Department, Window Display, at \$11.83 per week. I had been getting more money than that, but went to work here because of what I thought it meant for me.

"While in this work I made perhaps fifteen or twenty suggestions. I think half of them were adopted. I worked there perhaps five months, then was transferred to the No. 35 Assembling Department, where I worked about a year. While there I made about the same number of suggestions, fifteen or twenty; perhaps half of these were adopted. I received two prizes, one first, \$50, and one fifth prize, \$20.

"I next went into the Repair School at the factory and took a course as mechanical inspector. I got such a position with this National Company at Philadelphia. As an assembler I got \$15 a week on day work, and on piece work from \$18 to \$20. As mechanical inspector I got \$18 a week and then \$20.

"After a year and a half in this job I showed I could sell machines, and went to Atlantic City as a combination man — that is, repairman and salesman. At this I made \$30 a week.

"After eight months at this work I went to Syracuse as a cash register salesman at \$30 per week, plus ten per cent. It averaged me about \$60 per week. Then I took the agency I have now, at Erie, Pa.

"I draw \$75 a week now, and if I make my quota, ought to average \$100 a week.

"I am twenty-six years of age. When I came to the 'Cash' I was afraid to tell my age because I was only nineteen.

"I think the best thing about the Suggestion System is that it makes a man known."

IRWIN W. SMITH.

"My name is Irwin W. Smith. I have worked fourteen years at this National Cash Register Factory in Dayton. During that time I have made to

SUGGESTION SYSTEM.

the Company about twenty suggestions each year. I would say that about seven of my suggestions each year have been adopted. The Company has awarded me two first prizes, two seconds, and, altogether, thirteen prizes for suggestions.

"I began work as an apprentice machinist in Pennsylvania; got \$13 per month the first year and was to get \$15 per month the second year, and pay my own board. I then worked at Springfield for St. John's Sewing Machine Company, in the Adjusting and Testing Department; then, with a number of Springfield boys, came to Dayton. I liked things about the 'Cash' and came here to better my conditions.

"I began inspecting Detail Adders at 20 cents an hour; then assembling 79's at \$2.25 per day, and then afterwards at \$2.50 per day; then into the Inspection Department at \$2.50 per day. I was job boss of the No. 79 Inspection Department; then I was stock tracer. As job boss I got 30 cents an hour; then was made stock tracer at 30 cents, which was afterwards raised to 32½ cents. Then I was promoted to be second assistant in the Inspection Department at \$3.25, which was afterwards raised to \$3.50 per day. That is my present position."

WALTER W. HECKMAN.

"My name is Walter W. Heckman. I have worked here for twelve years. Leaving the Dayton District School when thirteen years old, I was cash boy at Rike's; then came here as a messenger boy at \$3 per week; then was assigned to the Order Filing Department; then to the Mailing Department. During this time I studied stenography at a night school; then was appointed stenographer for Mr. Lauver, who was chief clerk in the Assistant Secretary's office at that time. I started as stenographer at \$10 per week, and ended that work at \$15 per week. Then I was made consignment clerk and general correspondent in the Order Department, where I am now.

"I have made perhaps thirty suggestions, of which perhaps ten have been adopted. I received in the first part of the year 1903 a fourth prize of \$50 covering a trip west. My suggestion which won the prize was: 'Designate No. 35 principle machines without tape in the price list by '½' following the size number.' This saved referring to No. 35 principle registers with character printer, as, for example, 'No. 35½.' My suggestion led on to further improvement in like kind, by showing the addition of ¼ and ¾ to the numbers, which shortened the writing and work to be done. This saves work in the sales agents' records, in the Order Department, Treasurer's Department, Factory Departments; and, in fact, for everyone having to make reference to these machines."

MISS ROSA STUCKEY'S FINE SUGGESTION.

Statement by Miss Mary Haas, Forewoman of Her Department, January, 1904.

"One time the 'Cash' working women — the girls of our literary club — entertained two little clubs which were beginning in our way in other Dayton factories. Among them appeared Miss Rosa Stuckey, then working in the Gem City Shirt Factory. She made a talk to us about what they were trying to do, which impressed us well. She liked things at our factory, and my sister, Miss Ella Haas, in charge of the Bindery Department here, gave her the chance to begin with us and employed her.



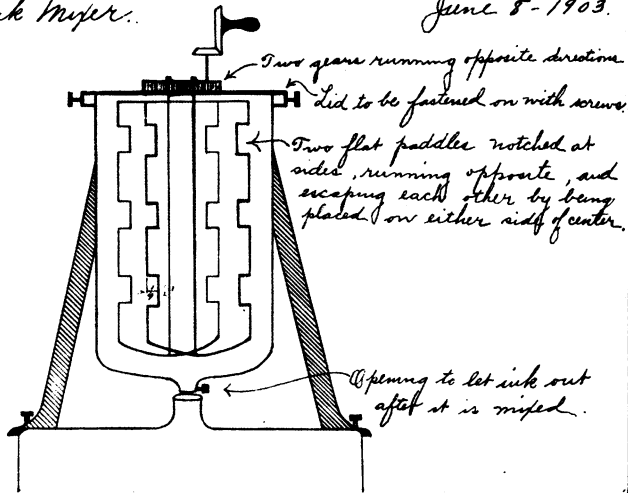
Indicator Department.

Form 018 5-20-03 100 P. 115

VERBAL ORDERS DON'T GO.

Ink Mixer.

June 8 - 1903.



P. Rosa Stuckey.

Reproduction of original sketch of ink mixer machine suggested by Miss Rosa Stuckey.

“In that day we used to send out for little things to eat, and Miss Stuckey would take the basket and go out to buy them just before noon. As she passed me in distributing these things, she attracted my attention, because of her retiring manner and bright intelligence. Soon someone was wanted as a sub-head in the Indicator Department and I recommended Miss Stuckey. She took her new place, and her duties were to take charge of our ink (which we were just experimenting with) and dip the indicators into it to enamel them. It was a new way of enameling our indicators, which would do away with putting on different coats which required ten more days to dry. She had charge of straining the ink through bolting-cloth bags. The process was very troublesome, and was subject to breaks and delays; and required the entire day. It injured the hands of the worker and enlarged the joints; indeed, Miss Stuckey shows yet how she suffered in this way.

“After a few months she made a suggestion whereby this difficult work that took all day could be done in half a day. What she suggested was an ink straining machine. She told us that she got the first idea of this from the wine press. She gave to Mr. Cleal, supervisor of our department, a little sketch of the machine. This was in the rough and Mr. Cleal improved upon it, but the idea and the suggestion came wholly from Miss Stuckey.

SECOND SUGGESTION — INK MIXER.

“About six months afterwards Miss Stuckey made another valuable suggestion for an ink mixer. This appeared to me to be new and striking, and we carried it at once to Mr. Cleal. She talked to me about it, so I know that it is original with her.”

MISS ROSA STUCKEY'S STATEMENT ABOUT HER SUGGESTION.



“I quit the district school in Dayton when I was fourteen years old and went to work at Rike's, learning dress-making. I went from there to Reynolds's Book Bindery; and afterwards, when Reynolds moved, worked six months for the Lander Printing Company in Dayton. From there I went to work in the Gem City Shirt Factory in Dayton, making overalls. We working girls formed what was called 'The Alert Club'; and because we had that club we got an invitation to the 'Woman's Century Club' meeting at the Cash Register Company. I was president of the Alert Club and made a little talk when we were entertained here. I liked things at the 'Cash' and put in an application for a place. I began in the Bindery at the 'Cash,' doing folding at \$5 per week. I was promoted and transferred to the Indicator Department where I received 13 cents an hour, instead of 8 cents, which I had been getting. I first took charge of the varnish work; but when the ink work began, Miss Mary Haas put me at that, as the work was new. At that time the indicators had to have five coats, one of ink, one of lead, and three coats of varnish—which latter, only, was done in the Indicator Department. Mr. Cleal brought in the plan of putting one coat of printer's ink on the indicators, instead of the five coats of different substances that had to be put on before. I strained the ink for them every morning, and it took nearly all day to do it.

The ink is very heavy; and in straining it through the bolting-cloth, it would often break the bag, and the process was slow and unsatisfactory. I made and filed a suggestion for a machine to do this work. For this I got a seventh prize which gave me fifty dollars, and a ten days' trip to Chicago on the Company's time. I thought the thing out. I may have read about other things like it, but I cannot think that I ever saw a machine like this. But I have heard, or read, that wine is made by a machine, which holds the pulp, etc., of the grape and throws the juice out. Also, maybe, in machinery oil is pressed from the shavings in something this way. I made a sketch which I put in, and my statement about the suggestion is with the Company. The machine was made, set up, and has been in use about a year, and works successfully."

Mr. J. P. Cleal, a member of the Factory Committee, says:

"Paints and inks used on indicators have been strained the old way by men ever since the Cash Register Company has been in business, and none of them ever seemed to think of an improved method of doing this work. They even did not have the frame which is shown in the photograph of the old way, but instead, one man held the bag and another fellow poured the ink into it, pushing what he could out with a paddle, then squeezed the rest out by hand.

"The frame shown in the old way was gotten up by Miss Stuckey, and of course, did away with the necessity of somebody holding the bag, but that, not answering as well as she thought it ought, she got up a sketch for the new centrifugal machine, which we afterwards built and which is shown in the photograph—'New Way.'"

WILL B. NEWMAN.

"My name is Will B. Newman. I have been employed here for fifteen years. On leaving school at Piqua, Ohio, I began as supply clerk in the Final Inspection Department at \$1 per day. I continued in that department until Mr. Houk, going off for World's Fair work, I was made foreman in 1892. I am now in that department as assistant. During this time I have made perhaps one hundred and fifty suggestions, many of which have been adopted. I have won a first prize, which was a trip east to New York, Boston, etc. In the first six months of 1903 seven of my suggestions were adopted. One of these is called, 'Improved Key-Arrangement and Instructions Slip for the No. 79 Principle Register.' This slip did away with a number of loose slips which the sales agents would send in attached to the orders, and which contained minor information. These would at times get detached and lost, producing confusion. My suggestion combined all on one blank, which saves mistakes, delays and confusions."

NAT S. CLUNET.

"I have been at work in this Company's factory for ten years. I was graduated at the University of Virginia and had made my profession civil engineering. I came here by chance (because I liked Mr. Thruston Houk) and went to work in the Final Inspection Department as assistant at 15 cents an hour. I was shortly afterward offered very much larger pay in my profession elsewhere, but I determined to stay here. When the Suggestion System was

SUGGESTION SYSTEM.

inaugurated, I took advantage of it and was fortunate enough to be one on the first list of prize-winners. Since then I have made, in regular course, from one hundred and seventy-five to two hundred suggestions. I continued making them until promoted to be foreman, when I was barred from competing. I have made them, of course, since, but not for competition. I think that thirty-five to forty of my suggestions have been adopted. I have received, I think, six prizes. I was transferred into the Second-Hand Department with an advance of pay; later, was made assistant foreman in the Final Inspection Department. Then was made foreman of the Inspection Department. This place I still hold. I was on the General Factory Committee when it was enlarged.

"It has been some pride to me that until very recently the Inspection Department has been in the lead, and we still stand quite high in the number of suggestions sent in and approved. In our department we have the blackboards which the President directed, and on them are marked the 'Duties of a Foreman.' On our boards the first item is, 'Get a Fair Day's Work for a Fair Day's Pay'; and the second one is, 'Encourage Suggestions.' We have kept, surely, both interest and rivalry in this department, and hardly a day passes without one or two men being seen writing at the suggestion registers."

HOWARD BRENTLINGER.

"My name is Howard Brentlinger. I have worked with the Cash Register Company for nearly fourteen years. From a farm in this county I went to the Lebanon Normal School and shortly after leaving there began at the 'Cash' in the Treasurer's Department. I came here through an 'ad' in the newspaper, asking for a bookkeeper. I began at \$8 per week. My first work was making out drafts and notes; then handling refused settlement papers; then in keeping the transfer record in the Treasurer's Department; then in handling general correspondence—past-due matters—in the Treasury; and I have been so engaged this year.

"I have always put in suggestions and perhaps have put in two hundred since I have been here. I would say that a little more than ten per cent. of these have been adopted. I have received perhaps twelve prizes. During the first half of the year 1903 four of my suggestions were adopted, for one of which I received the prize of \$60, which included a trip to Philadelphia, Atlantic City, New York, Washington, etc. This suggestion was:

"That all sales agents and Company offices be encouraged to adopt the uniform system of keeping the records of customers' accounts, which I devised for the Treasurer's Department. This system was adopted by nearly all of the Company offices and by some of the sales agents. It made the inspection of these accounts by the District Manager, or Traveling Auditor, easier, because they were uniform. It gave more information by having the accounts classified according to agents, as well as according to condition of accounts."

CHARLOTTE GEERING.

"My name is Charlotte Geering. I have worked here for nine years. I was first employed in checking names from the agencies of the directories—making up the probable purchaser list; and was afterwards transferred to a number of different departments. I am now sub-assistant in the Typewriting

Department. I have charge of the agents' list. Last winter I had charge of forty-two girls, but the number varies and is now smaller. In 1903 I made four suggestions which were adopted:

- (1) " 'Let the United States Monthly Postal Guide be used by the girls who work on the daily revision of the Hustler list.' The use of this monthly guide gave us the addresses not heretofore furnished.
- (2) " 'Insert in The N. C. R. an article calling the agents' attention to the importance of sending in street addresses with the names of probable purchasers, in all cities having directories.'
- (3) " 'Order Dun's book for use in the Typewriting Department to come unbound, in sections.' This saved probably half a day's time, and cost us no more."

EMMA WEIDNER.

Suggestion Was, "Print the Lettering on No. 79 Principle Flashes." Published in The N. C. R., April 15, 1900.

Statement by Miss Mary Haas, forewoman of Miss Weidner's department, January 29, 1904.

"The indicators were always made of metal, as they are now. They were painted. They have always been dipped and made white; then the numbers that went on them, representing the amount sold, were printed black figures, which were painted on. They were not really printed figures, but were cut out of black paper. The Company makes many thousands of these indicators. During the year 1903 we printed 950,000.

"In early days our business, of course, was very small compared with today. But I remember when in those days we had twenty-five girls working on what I call this 'letter job' with the indicators. Later on the flash was put in use. The flash is a red bar, or screen, and runs across all the indicators on the No. 79 principle register; and touching a proper key throws it up. These letters we used to paste on the flash by hand, and then varnish them. It was very slow and expensive work.

"In 1890 Miss Emma Weidner, who then was bronzing the shanks of the indicators, made her suggestion — 'Print the lettering on the No. 79 principle flashes.' This was done as an experiment and worked out all right, and quickly led to the printing of the lettering for other machines. It may be possible that the flashes for No. 35 and detail-adder machines were printed first — it was a larger letter.

"Mr. Cleal got the idea here, and his statement will show what the Company did and what resulted, but it all grew out of Miss Emma Weidner's suggestion."

Mr. J. P. Cleal, Supervisor Inventions Department No. 2, on January 29, 1904, says:

"This pasting the numbers, or letters, on the indicators was always the method and supposed to be necessary. It was troublesome and costly work. I suppose if we followed that method now, it would take fifty girls continually at work upon the job. It is all done now with eight presses, and perhaps four or

six of these, with as many women operating them, do all the work. It was Miss Emma Weidner's suggestion which brought about the improvement. Her suggestion was sent to me. I got an old press and experimented. Vice-President F. J. Patterson thought it was useless to try it; for he said that he knew a lithographer who had spent eight thousand dollars in trying to do substantially the same thing. But the work on the first little press was enough to make me report it a success, and that gave Miss Weidner her prize. My experiments and efforts went on with the help of everybody whom I could get at it here, with the results which I have stated.

"I never recall a suggestion made at the factory which led finally to more substantial results. It saved endless trouble on the outside, for these pasted figures would come off; and it has saved room and great cost on the inside of the factory in the Indicator Department. The old indicators, moreover, would discolor; now they do not."

GEORGE GARDNER.



"My name is George Gardner. I have worked at the 'Cash' for fifteen years. I came here as a blacksmith and am now foreman of the Blacksmithing Department. We worked in simple and rough ways at first, but now have a finely equipped shop for the purpose, and work some fourteen men.

"I have sent in probably over two hundred suggestions since I have been here. A large number of them have been adopted, but I have not the record nor the number in my mind. My suggestions, if adopted, were put into use without my having any prize until six months ago, when our Company adopted the rule of giving prizes to foremen for best suggestions. Under this, I was awarded a first quarterly prize of \$75. This, I understand, was given to me

because my suggestions saved more money for the Company than those coming from any one man in any department. Among them were:

- (1) "Some plated pieces were sent to me to be hardened; and in putting these into the cyanide solution, I found that they were not affected by it. I then filed a portion of the plating off and found, that by putting them again into the solution, the parts which were not covered by plating were hardened by this cyanide solution. The idea then came to me to suggest that 'Where any part of the pieces was to be hardened, and it was desirable that the balance of the part should remain soft, the whole part be plated before it was machined. Then, after the machining operation, if the part were put into the hardening solution, only the parts which had been machined and which it was desired to harden, would be affected. I suggested further that this might be applied widely to parts of the registers which require hardening in part.

SUGGESTION SYSTEM.

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“ I claim that a man, by using this process, can do very much more work than he formerly could in a day. This process, successfully at work, has cut down the help in my department about one-third. I had four men before at work at this; now I have two.

- (2) “ I suggest that the No. 172 counter guide rolls be made from screw stock, or soft steel, instead of making them of Howe-Brown tool steel. These rolls can be carbonized and hardened, and save about ten cents per pound on the stock.’
- (3) “ I suggest that the Stock Department do not carry plugs for No. 4 case-hardening furnace in stock, but let me make them in my department. Ten of these are used in a year, costing \$3 each. I can make a better plug for 25 cents and it will last much longer. This saves about \$28 per year on plugs.’
- (4) “ I suggest that all special counter retaining-pawls be made from bright punching steel, carbonized and hardened, instead of being made of special hardware steel, as at present.’
- (5) “ I suggest that the counter disconnecting plungers be made from soft steel, carbonized and hardened, instead of making them of expensive drill rod. I think the soft steel will make a better plunger and cheaper, as we could harden them all over. The steel plungers are hardened one at a time.’
“ I should like to give this a trial, as it will save about 70 cents per thousand in hardening.’ ”

“ Not included in the above, I have made the following suggestion under date of December 18, 1903, which came in later than the above, and which the Committee has not yet passed upon:

- (6) “ At present our packing cases are made by hand in the Box Shop. The nails are driven with hammer, one at a time. I suggest that an adjustable form be made to take in all sizes except the multiple-drawer cases, and do this work on the nailing machine, something as per sketch sent herewith.

“ In explanation, I state that it takes one man ten hours to make two hundred packing cases, driving one nail at a time. This device drives twelve at a time. Everybody, including the manufacturers of the box machine, said this could not be done. I felt sure that it could, and the Committee has the drawings.’ ”

From “The N. C. R.” publications by the Company from month to month, and year to year, the pages following are taken:

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SUGGESTIONS ADOPTED JANUARY 1.

The Company wishes to thank the employes named below, whose suggestions have been adopted since the last issue of The N. C. R. It recognizes the fact that its success is dependent upon the efforts of all, and the constant improvement in the character of the registers and the work done, as well as the reduction in the cost of manufacture, is due very largely to these suggestions of employes.

(Here follows in the official record a list of eighteen suggestions which were adopted. For brevity we now print only the following):

- Charles Johnson, Bench Department.** Discontinue slotting No. 79 handle stud-feather screws.
- Charles Parker, Press Department.** Use wooden plugs in autographic paper rolls.
- John Fogle, Lock and Drill Department.** Change gauge for No. 79 special-counter turn-back wheels.
- J. K. Mayse, No. 35 Assembling Department.** Repair walk on K Street.
- J. C. Carroll, Cabinet Inspection Department.** Omit color buffing before plating No. 79 check paper roll-caps and electro roll-caps.
- Robert M. Lee, Experimental Department No. 4.** Flash light script sign.

SUGGESTIONS ADOPTED JANUARY 15.

Sixteen suggestions are adopted; and among them:

- J. C. Carroll, Inspector.** Discontinue scratch-brushing the desk autographic top combination-plunger plate covers and hoods.
- John J. Evans, No. 35 Assembling Department.** Shorter counter-rocking springs.
- C. A. F. Keller, Doorkeeper.** Place incandescent lights in the main entrance lobby.
- August Peters, Brass Room.** New-style indicator glass springs.
- E. Markwick, Tool Room.** Punch and abandon milling keys for the No. 79 clock base lock.
- A. B. Holston, No. 35 Assembling Department.** Place in Machinery Hall boards showing parts to be prepared daily and the shipments of registers.

SUGGESTIONS ADOPTED FEBRUARY 1.

Twenty-four suggestions are adopted; and among them:

- E. J. Laughlin, Screwmaking Department.** Grind all screw-iron before placing in stock-room so as to remove burrs.

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- J. H. Miller, Inspection Department.** Punching the large holes in the key-arrester pawls.
- H. V. Hendrickson, Brass Room.** Place curtains on the east windows of the bath-room in Machinery Hall.
- C. H. Barton, Final Inspection Department.** Red shilling key checks on No. 79 principle English registers.
- John Snyder, Brass Room.** Make two operations in one on detail cabinet side.
- A. L. Budenthal, No. 35 Assembling Department.** Omit velvet from inside of No. 35 principle upper cabinet front.

Eighteen suggestions adopted February 15; among them:

- Joseph Nauman, Adjusting and Testing Department.** Revolving wood bases for traveling cases.
- Frank Miller, Inspection Department.** Place window display books in the library.
- Fred Huber, Brass Room.** Make No. 1½ guards same width as the Nos. 2 and 3, and cut out center guard special on punch.
- Theodore Bacher, No. 79 Assembling Department.** Add stock to strengthen the plunger link boss on segment.
- A. F. Leiter, Inspection Department.** New cheap detail side plate.
- Charles E. Shroyer, Stock Supply Department.** Place small strips of galvanized iron on the doors of the stock-rooms where trucks are backed up against them.

Nineteen suggestions adopted March 1; among them:

- A. Walker, Screwmaking Department.** Number stock-boxes.
- H. W. Fricke, Milling Department.** Saving one operation in the manufacturing of No. 79 counter turn-to-zero wrenches.
- Theodore Bacher, No. 79 Assembling Department.** Casting slots for release keys in lower cabinet fronts.
- B. Weaver, Cabinet Inspection Room.** Make three instead of four inches wide the detail-adding and No. 33 order cards.
- H. N. Haas, No. 35 Assembling Department.** Improved segment locking-pawl spring.

SUGGESTIONS ADOPTED MARCH 15.

Twenty-eight suggestions are adopted, and among them the following:

- H. Young, No. 35 Assembling Department.** Arrangement for operating the detail strip on the No. 35 tape-printer without unlocking the hood.
- B. B. Frazell, Drill Department.** Omit in Screw Department the burring of the No. 226 receiving-roll friction.
- J. C. Carroll, Inspector.** Detail and No. 33 side frames be stripped where polished; suggestion that the flat surface on No. 79 detail driving-arm pitman be stripped similar to the long and short hood-holders, leaving the ends and sides plain.

SUGGESTION SYSTEM

- H. Nelson, No. 35 Assembling Department.** Put key-weight on the " ½ pence " key in No. 50 register, to prevent key from carrying down when slow registration is made.
- C. E. Shroyer, Stockkeeper.** Do not plate the ¼ x 3-16 round-head screws used in combination indicator rods.
- Charles Grobet, Mechanical Inspector, New York.** Make No. 79 principle registers so that the counters can be made to line up at zero more readily.

SUGGESTIONS ADOPTED APRIL 1.

Nineteen suggestions adopted: among them:

- C. H. Cushman, No. 33 Assembling Department.** Stamp word 'Zero' on guard opposite instead of on the counter turn-to-zero knob.
- Andrew Roth, Carpentry Department.** Make table to be used in connection with sand-blasting bill-weights.
- John Tapper, No. 79 Assembling Department.** Raise the cement walk at south-east corner of east lawn, so that water will not assemble there.
- A. W. Marshall, Order Department.** Abandon bases for No. 79 principle pin-files, and fasten pins directly to register tops. This was also suggested by George Schwarz, of the Adjusting and Testing Department, November 22, 1897.
- Charles Schmieding, Bindery.** Pad-holders for small color pads to be made from red buckram covering strawboard.
- Fred Hand, Tool Room.** Make all irregular formed cutter blanks of machine steel instead of tool steel.

The Company wishes to thank the employes for the suggestions which they have made and which have been adopted during the past four months. It appreciates the value of these suggestions and recognizes the fact that its success depends largely upon the efforts of its employes.

The Company also thanks the employes who submitted suggestions which, while not found practical for immediate adoption, will be preserved for future reference.

During the four months of 1898 there were received from employes 402 suggestions, of which 171 were adopted and 28 are now being investigated.

SEMI-ANNUAL PRIZE DISTRIBUTION.

The semi-annual distribution of prizes for suggestions was held on the evening of July 11 in the grove of the old Patterson homestead. The grounds were handsomely illuminated and decorated, and more than three thousand people were present. Invitations had been issued to all the employes for themselves and families. There were fifteen hundred employes, but nearly four thousand persons were gathered together, including a large number of special guests seated on the stage. There was dancing at the close of the exercises and fireworks. At 8 o'clock Mr. John H. Patterson, followed by a number of officers of the Company, the twenty prize-winners and two young men who had completed their apprenticeship, ascended the stage.

President Patterson, among other things, said :

“ This audience differs from the ones which a short time ago met in the little building containing two rooms in an alley in this city. Then we had meetings every day; and it was easy, because there were only three persons in the office department, and only about twelve in the entire organization outside of that. Yet there we learned the principles which have carried this present organization to its present success; we learned to appreciate each other's difficulties and how to sympathize with one another. At these meetings suggestions and complaints often were made more emphatic than polite. But our Company grew, and in place of these meetings where we could answer back and get good suggestions, we adopted the suggestion box.

SUBSTANTIAL INCREASE IN THE NUMBER OF PRIZES.

“ Now there are three classes of people among us — those who have not given any suggestions, those who have given suggestions, and those who have won prizes through suggestions. Probably many of you think that those who won no prizes received no benefit, but you are certainly very much mistaken. With those who have made no suggestions I sympathize, because to some of them it seemed almost an impossibility; they had not the advantages that others had; and then many others were discouraged by the fact that only twenty in fourteen hundred receive prizes every six months. For the benefit of such I want to say that next year we will enlarge the boundaries, increasing the amount \$100 and offering fifty prizes instead of twenty. That ought to give you much more hope.

GREATLY BENEFITED BY STRIVING.

“ But if you do not win prizes, you will be very greatly benefited by the exertion of striving. If the arm remains quiet and passive for a certain length of time, it loses its power. If that part of the brain which invents, or which imagines new surroundings, remains dormant long enough, it loses its power; therefore, we say, stimulate the brain. This is a school in which we want all of you to take part.



Partial view of the audience, showing President Patterson and prize-winners on the platform.

EMPLOYEES BENEFITED BY SUGGESTIONS.

“To those who have made suggestions and have won no prize there is the double advantage of striving and receiving some recognition. I will illustrate this by a little circumstance. Some time ago a young woman came to me and said, ‘My husband expects to be discharged, because they are going to lay off a certain number of men in his department.’ Knowing the family, I said, ‘I am very sorry indeed, but that is beyond me; you will have to go to the proper authority.’ She said, ‘Well, I brought some papers along; I thought probably they might interest you — might have some influence,’ and she brought out five letters of acknowledgment from this Company to her husband, thanking him for five good suggestions.

THE STRONGEST KIND OF A RECOMMENDATION.

“I said: ‘That makes a difference; take that to the committee and I don’t think you will have much trouble in having your husband retained in the factory. But,’ I said, ‘When you are through with those letters please give them to me, because you won’t want them.’ She answered: ‘I couldn’t do that, because if from any cause my husband should go away to some other place, these letters would be the strongest kind of a recommendation.’ And so they would.

“Now there is still a third class — the people who have won prizes. They not only have an acknowledgment for their good suggestions, but in addition, they have a certificate or diploma.

“Now I think that all of you will join me in thanking those twenty people for what they have done during the last year. It is true they benefited themselves; it is true that the mental power acquired during their effort to earn these prizes is beyond money value; but at the same time they have benefited



The National Cash Register Company

Dayton, O. U. S. A. July 12 1898

*This certifies that M. A. Powell has been awarded
one of the Prizes for suggestions submitted between
January first and June thirtieth 1898 inclusive*

Henry Thoburn, Jr. Secretary
John H. Peterson President
O. K. Keiser Chairman
Henry Committee
W. H. Peterson Vice President



Photograph of the audience taken during the evening.

every person connected with our institution. More than that, every one who helps this institution substantially will help in time nearly every laboring man and laboring woman in the world.

\$100 FOR ONE SUGGESTION.

"Now in order that some of you might know why a prize is issued, I want to show you something that I hold here in my hand. Here is a key — a very small thing, but we make a great many of them. This is an old-fashioned key. It has a pin through it here, and then another one put through the side and riveted. Mr. Pursell won the \$100 prize because he found out that by putting that pin through in a certain way, making it very tight, he could avoid boring that hole, inserting the rivet, cutting it off and filing it, thus saving all that trouble and expense. This is the old key, and this is the new one. Now I wish I could go over all of them, but we only want to show you a sample of what good suggestions are."

LIST OF THE NAMES OF THE TWENTY PRIZE-WINNERS AND EXPLANATIONS OF THE SUGGESTIONS FOR IMPROVEMENT.

At the close of Mr. Patterson's remarks Mr. J. M. Switzer, secretary of the Factory Committee, read the names of the winners and told what each had done, after which President Patterson handed to the happy recipient his certificate with a little chamois bag containing his gold prize. Each winner was greeted with applause. The names of the successful contestants are as follows:

First Prize, \$100, Mr. M. H. Pursell, chief clerk in the Clearance House. Mr. Pursell suggested that it is unnecessary to rivet fast the pins in No. 79 principle keys, making a driving fit.

Second Prize, \$75, Mr. Harry Nelson, inspector, No. 35 Assembling Department. Mr. Nelson suggested an improvement in the construction of the new No. 35 tape-printer lining pawl and spring. He also suggested other improvements.

Third Prize, \$60, Mr. William Murphy, No. 79 Assembling Department. Mr. Murphy invented the four-wheel special counter that is used on the No. 79 principle registers to count the number of times the regular counter is turned to zero.

Fourth Prize, \$50, Mr. C. T. Johnson, draughtsman, Tool Designing Department. Mr. Johnson submitted a practical idea for punching and forming the special-counter carrying pawls, instead of milling them from solid bars.

Fifth Prize, \$40, Mr. C. H. Barton, Adjusting and Testing Department. Mr. Barton suggested that the new No. 35 tape-printer detail supply roll stud be made with shoulder. In addition to this, he submitted a large number of other suggestions of value.

SUGGESTION SYSTEM.

Sixth Prize, \$30, Mr. John Kalt, Milling Department. Mr. Kalt suggested that No. 79 principle right and left locking-cam patterns be changed so that one milling operation on each casting could be abandoned. He also suggested that the No. 79 principle counter-frames be milled instead of ground.

Seventh Prize, \$20, Mr. Theodore Bacher, No. 79 Assembling Department. Mr. Bacher suggested that instead of making the No. 79 drawer-plunger pitman from a brass casting, it be made from a steel punching, which is considerably cheaper. He also submitted two or three other suggestions of considerable importance.

Eighth Prize, \$20, Mr. Charles Schmieding, Bindery. Mr. Schmieding suggested the use of a bellows filing case to take the place of our present "B" filing case. He also suggested the use of strawboard covered with red buckram for pad-holders, making in addition two or three other suggestions of importance.

Ninth Prize, \$15, Mr. Peter Keil, Tool Room. Mr. Keil suggested a practical way to construct No. 79 principle registers so that the consecutive numbering device would count only when checks are ejected.



Winners of prizes for six months ending July 1, 1898.

Tenth Prize, \$15, Miss Minnie Eidman, Bindery. Miss Eidman suggested the use of a set of gauges in connection with the perforating machine, which makes it necessary to place a sheet under the die but once, even though it require two or three perforations.

Eleventh Prize, \$10, Mr. E. L. Fenwick, Supply Department. Mr. Fenwick suggested that the small pasteboard clock-boxes be delivered to the Supply Department instead of to the scrap-pile, for use by that department. He also suggested that the boxes used to pack posters, etc., be returned to the Box Department for further use.

Twelfth Prize, \$10, Mr. J. Stauffer, Drilling Department. Mr. Stauffer suggested that the three brass gears used in the new tape-printer could be punched cheaper than they could be milled.

- Thirteenth Prize, \$10, Mr. S. B. Albert, Adjusting and Testing Department.**
Mr. Albert suggested that an ordinary wire drawer-stop be used instead of the punched sheet metal drawer-stop. The wire stop is not only cheaper, but its use also avoids complaints that small coins drop through the cash-drawer where the slot is provided for the old-style drawer-stop.
- Fourteenth Prize, \$10, Mr. C. E. Shroyer, stockkeeper, Detail and No. 35 Department.** Mr. Shroyer suggested a method of using a lot of one thousand key-coupler adjusting blocks that had been ordered scrapped. He also made a number of other suggestions of considerable importance.
- Fifteenth Prize, \$10, Mr. J. C. Carroll, Cabinet Inspection Room.** Mr. Carroll suggested a cheaper method of finishing No. 35 principle guards, desk auto-graphic combination lock hoods and other parts.
- Sixteenth Prize, \$5, Mr. C. H. Chappel, stockkeeper, Adjusting and Testing Department.** Mr. Chappel suggested a method of carrying in stock one kind of screws for the regular drawer side-wheel and for the fleur-de-lis side-wheel, instead of two kinds. He also submitted several other suggestions of importance.
- Seventeenth Prize, \$5, Mr. H. N. Haas, No. 35 Assembling Department.**
Mr. Haas suggested the use of a more satisfactory spring for the segment locking-pawls in the No. 35 principle registers. He also submitted two or three other suggestions of value.
- Eighteenth Prize, \$5, Miss Margaret Better, Lock and Drill Department.**
Miss Better suggested the use of a gauge for convenience in assembling the special counter wheels in the frames.
- Nineteenth Prize, \$5, Mr. Henry Horn, Bench Department.** Mr. Horn suggested that the profiling fixture for No. 35 principle revolution racks could be changed to make it possible to profile two racks at one time. He also suggested that certain patterns could be changed to make it possible to cheapen the cost of profiling.
- Twentieth Prize, \$5, Mr. Harry Young, No. 35 Assembling Department.**
Mr. Young suggested that a hole be provided in the new No. 35 principle tape-printer hood through which the detail-strip could be turned forward at the will of the user.

SUGGESTION SYSTEM.

<p>FIRST PRIZE \$100. M. H. PORCELL. Clearance House. Improved in No. 79 Key. </p>	<p>SECOND PRIZE \$75. HARRY NELSON. No. 35 Assembling Dept. Improved Tape Printer Long Post. </p>	<p>THIRD PRIZE \$60. WILLIAM MURPHY. No. 79 Assembling Dept. Improved Counter to Shoe When No. 78 Reaps Counter is Turned in Lark. </p>	<p>FOURTH PRIZE \$50. C. T. JOHNSON. Tool Designing Dept. Punched Special Counter Cutting Press </p>
<p>FIFTH PRIZE \$40. C. H. BARTON. Adjusting and Testing Dept. Improved Tape Printer Detail Supply Roll Stand. </p>	<p>SIXTH PRIZE \$30. JOHN KALT. Milling Dept. Cheaper Method of Manufacturing No. 79 Locking Cams and Decoder Frames. </p>	<p>SEVENTH PRIZE \$20. THEODORE BACHER. No. 79 Assembling Dept. Punched No. 78 Drawer Plunger Pin. </p>	<p>EIGHTH PRIZE \$20. CHARLES SCHWEDING. Bindery Revised Fly Case </p>
<p>NINTH PRIZE \$15. PETER KEN. Tool Room. Improved No. 78 Concave Bunkering Device. </p>	<p>TENTH PRIZE \$15. MISS MIRNIE EIDMAN. Bindery. Improved Sanges for Perfuming Machine. </p>	<p>ELEVENTH PRIZE \$10. R. L. FENWICK. Supply Dept. Use Clock Beams Instead of Scrapping Them. </p>	<p>TWELFTH PRIZE \$10. J. STAUFFER. Drill Dept. Punched Tape Printer Gear </p>
<p>THIRTEENTH PRIZE \$10. S. H. ALBERT. Adjusting and Testing Dept. Improved Drawn Stop. </p>	<p>FOURTEENTH PRIZE \$10. C. E. SHROYER. Stock Keeper. Use Key Coupler Adjusting Blocks Instead of Scrapping Them. </p>	<p>FIFTEENTH PRIZE \$10. J. C. CARROLL. Inspection Dept. Cheaper Finishing of No. 25 Guards, etc. </p>	<p>SIXTEENTH PRIZE \$5. G. H. CHAPPEL. Stock Keeper. Consolidation of Screw Stock. </p>
<p>SEVENTEENTH PRIZE \$5. R. H. HAAS. No. 35 Assembling Dept. Improved Segment Locking Feed Spring. </p>	<p>EIGHTEENTH PRIZE \$5. MISS MARGARET BETTER. Lock and Drill Dept. Sanges for Assembling Special Counters. </p>	<p>NINETEENTH PRIZE \$5. HENRY HORN. Bench Dept. Profile Two No. 26 Revolution Bands of New Tool. </p>	<p>TWENTIETH PRIZE \$5. HARRY YOUNG. No. 35 Assembling Dept. Provides for Turning Forward No. 26 Detail Stop. </p>

A photograph of the twenty prize suggestions.

LIST OF NAMES OF EMPLOYES WHOSE SUGGESTIONS WERE CONSIDERED WORTHY OF ESPECIAL MENTION.

Many good suggestions have been received during the past half year, the total number being 550, of which 240 were adopted. Those whose suggestions deserve especial mention, though not quite reaching a prize, are:

Harry Gamble, Tool Room.
Fred Baker, No. 35 Assembling Department.
Charles Bisch, Brass Room.
W. F. Baldwin, Brass Room.
N. S. Clunet, Final Inspection Department.
Charles Geisler, Detail Assembling Department.
George S. Green, No. 35 Assembling Department.
Fred Huber, Brass Room.
E. Kearns, No. 35 Assembling Department.
W. A. Heinrich, Press Department.
W. R. LeSur, Stockkeeper.
J. W. Leshner, Brass Room.
J. P. Montgomery, Stockkeeper.
C. H. McCune, Inspection Department.
Harry Osbun, No. 79 Assembling Department.
Joseph Nauman, Adjusting and Testing Department.
Todd Patten, No. 35 Assembling Department.
F. W. Reiland, Adjusting and Testing Department.
F. Weisenberger, Punch Department.
Miss Emma Weidner, Indicator Department.
H. L. Thomas, Stockkeeper.
D. M. Zile, Adjusting and Testing Department.
M. A. Taylor, Inspection Department.
George Schwarz, Adjusting and Testing Department.
William Rex, Brass Room.
N. W. Fricke, Milling Department.
R. B. Frazell, Drilling Department.

OFFICE EMPLOYES.

W. M. Brown, Repair Department.
William McCarthy, Patent Department.

MECHANICAL INSPECTORS.

Charles Grobet, New York City.
C. G. Miller, Washington, D. C.
C. G. Merkley, Chicago, Ill.
O. G. Smith, Philadelphia, Pa.
C. L. Ballard, Philadelphia, Pa.
F. A. Fabry, Berlin, Germany.
W. H. Lonsdale, London, England.
J. H. Best, London, England.
M. S. Laroche, Milan, Italy.

Substantial Increase in the Number of Prizes Announced for Suggestions of the Next Six Months.

Below we print a copy of a bulletin which has been posted throughout the factory, offering prizes for suggestions submitted during the six months ending December 31, 1898.

“ Six hundred and fifteen dollars in cash prizes will be awarded to employes submitting the best suggestions within the period of six months ending December 31, 1898, the amount to be divided as follows:

First prize.....\$50 00	Fifth prize.....\$20 00
Second prize..... 40 00	Fifteen prizes, each..... 15 00
Third prize..... 30 00	Fifteen prizes, each..... 10 00
Fourth prize..... 25 00	Fifteen prizes, each..... 5 00

“ By such an arrangement fifty persons will receive prizes instead of but twenty; and even though a suggestion be of minor importance compared with others, the employe submitting it will be much more likely to receive a prize than in former contests.

“ On the other hand, the first five prizes offered should be an inducement to each employe to look after defects and to invent and suggest improvements with the idea of having his suggestion considered among the best five.

“ For these prizes all factory and office employes (excepting heads of departments and their first assistants) and mechanical inspectors are entitled to compete.

“ Suggestions may relate to improvements in registers, tools, machinery, systems employed, and to the general management of the business.

“ Employes should submit their suggestions in writing to the Factory Committee, unless they refer to office work, when they should be addressed to the Office Committee.

“ Suggestions may be written on the autographic registers provided for that purpose, or they may be sent by messengers, shop mail, U. S. mail, or left with the doorkeeper.”

**A SUGGESTION AND COMPLAINT CARD USED BY AGENTS
AND SALESMEN.**

....., 1898.

I have received The N. C. R. for September 1. The strongest articles seem to me to be:

SUGGESTIONS AND COMPLAINTS.

Signed

Note.—Agents and salesmen are expected to sign the above and send to the Company whether they have any remarks to make or not. Others receiving The N. C. R. are invited to send this sheet whenever they have any suggestions.

SUGGESTIONS ADOPTED.

The following are the names of employes, exclusive of the heads of departments and their first assistants, whose suggestions have been adopted during the month of September:

FROM FACTORY DEPARTMENTS.

Inspection Department. **C. H. McCune** (two suggestions), **John Noonan**, **Fred Bonner**, **J. C. Carroll**.

Final Inspection Department. **Nat Clunet** (two suggestions).

Adjusting and Testing Department. **Charles Brennert**, **C. H. Barton** (two suggestions).

Foundry. **C. Matthews**.

No. 79 Assembling Department. **F. Theis**.

No. 35 Assembling Department. **Harry Nelson** (two suggestions), **C. E. Arden**, **George S. Green**, **A. Ward Hayes**.

Plating Department. **C. S. Seely**.

Packing Department. **D. M. Zile**.

No. 33 Assembling Department. **A. Grau**.

Bench Department. **N. Wharton**.

FROM MECHANICAL INSPECTORS.

F. C. Fabry, Berlin.

William Westwater, Pittsburg.

G. L. Walker, New York City.

C. G. Merkley, Chicago.

O. G. Smith, Philadelphia.

T. F. Lockton, salesman, New York City.

PRIZES TO STOREKEEPERS.

**Offered by the Philadelphia Office for the Best Reasons Why Every Merchant
Should Use a National Cash Register.**

These prizes have just been awarded as follows:

Five Reasons Winning the First Prize, \$25 in Gold.

George H. Macmunn, Third and Norris Streets, Philadelphia.

1. It makes fraud very difficult, yet protects the clerk and customer alike.
2. It prevents losses through failure to charge goods sold on credit or C. O. D.
3. I began to make money after I started using cash registers.
4. It prevents controversy between customers and clerks.
5. It gives you a complete account of all your business transactions.

Five Reasons Winning the Second Prize, \$15 in Gold.

Joseph Way, Cigar Dealer, 1105 Market Street, Philadelphia.

1. It shows you are up to date and looking for the best helps to do business in the best way.
2. It prevents loss through failure to charge goods sold on credit, especially during a rush of business.
3. It concentrates the mind and teaches accuracy to hands who otherwise might be careless.
4. It makes fraud difficult, and thus lessens temptation.
5. It enforces carefulness in all business transactions and compels a systematic way of doing business, without which no business can be a success.

Five Reasons Winning the Third Prize, \$10 in Gold.

John C. Sheldon, Jeweler, Bridgeton, N. J.

1. It enforces care in handling transactions.
2. It prevents mistakes in making change.
3. It prevents losses through failure to charge goods sold on credit.
4. It gives you a record of all money received and paid out, with very little labor.
5. It tells whether money is made or lost in each department of the business.

MONTHLY ROLL OF HONOR.

Twenty-five Suggestions for Improving the Construction of Our Registers Were Adopted in December, 1898.

For brevity we print now only the following:

- C. E. Shroyer, No. 35 Assembling Department.** Detail key-coupler adjusting blocks of malleable iron instead of brass.
- M. H. Pursell, Clearance House.** A different method of handling key-cams.
- A. F. Leiter, Inspection Department.** Punch the bell-trip lever instead of casting it.
- John Gelzenlichter, Experimental Department No. 2.** Improve key-lock for 15-key registers on No. 35 principle machines.
- C. H. Chappel, Stock Room.** Use cast instead of sheet metal till-covers; abandon No. 472 drawer-catch spring, using instead No. 202 drawer-lock-lever operating-arm spring; purchase repair parts for locks.
- J. H. Miller, Inspection Department.** Remove useless lugs from No. 35 upper back patterns; use different material for detail-wheel transfer-pins.
- A. Bohn, Carpenter Department.** Use different traveling-case roller-frames.
- Ward A. Hayes, No. 35 Assembling Department.** Use two instead of three segment-locking pawls on certain segment frames.
- William Murphy, No. 79 Assembling Department.** Device to prevent check-paper from feeding through when it should not; automatic check-lever, and milled paper chute on No. 79 principle check-printer.
- L. A. Jordan, Inspection Department.** Shave No. 79 retaining-bar cams No. 2 on punch.

1899

MONTHLY ROLL OF HONOR.

Eighteen suggestions were adopted February 15; we now print only:

- C. H. Barton, Adjusting and Testing Department.** (1) Abandon paper-roll pin in the flange of No. 35 tape-printer detail-supply-roll sleeve. (2) An improvement in connection with the meshing of No. 35 principle counters. (3) Abandon spring under drawer-lock lever No. 35 if it prove to be satisfactory after trial. (4) An improved No. 35 lid-support.
- C. Brenner, Adjusting and Testing Department.** Use shorter No. 79 back-indicator-gear line-shafts.
- Harry Young, No. 35 Assembling Department.** Elongate screw-holes in No. 35 principle counter-plates.
- H. V. Hendrickson, Brass Room.** Cover to protect motor in Brass Room.
- Charles Crusoe, Engineering Department.** (1) Number the floors at elevators. (2) Keep the elevator gates greased so that they will operate freely.
- N. S. Clunet, Final Inspection Department.** (1) Improve construction of No. 35 principle counters. (2) Cast lock-numbers on cabinet for No. 35 two-counter locks.
- H. W. Fricke, Milling Department.** Combine second monitor operation with a milling operation on No. 35 flexible carrying-cam.
- C. H. Chappel, Stock Department.** See that the lids of American supply-boxes fit better.
- Harry Gamble, Tool Room.** Improved method of making No. 79 inking-pad plates.
- G. L. Walker, Mechanical Inspector, New York City.** Punch No. 79 check-ejector arms with the grain of the stock. (Mr. Walker did not suggest this, but he and others called attention to the trouble that these arms were giving by breaking, and his complaint led to the change.)
- Edward F. Meier, Purchasing Department.** New filing-case, to take the place of the 'B' filing-case.
- James P. Ward, Advertising Department.** Place autographic register at the main entrance for suggestions from visitors.

AUTOGRAPHIC REGISTERS FOR COMPLAINTS AND SUGGESTIONS.

Frequent inquiries are received from manufacturers and merchants who are interested in our plan of prizes for complaints and suggestions. They desire to know the facts regarding the kind of register we use and the probable cost of fitting up their factories and the method of using the system.



We use a National Autographic Register for this purpose. One is placed in each department, with a sign above it marked "Complaints and Suggestions." Each register is fitted to make two copies, the duplicate being rolled up within the box. The original is torn off by the one making the suggestion and is kept by him. At regular intervals the secretary of the Factory Committee takes from each box all the suggestions that have been written, and they are carefully examined by the committee. These suggestions are referred to some competent authority whose approval or disapproval is sought. They are then carefully considered and approved or declined, as thought best.

The secretary of the committee immediately acknowledges the receipt of every suggestion, and the record of adoption is made at regular intervals in The N. C. R. At the close of six months all the suggestions adopted are compared, and the most valuable ones receive the prizes offered by the Company. These prizes are fifty in number, amounting to \$615 and varying from \$50 to \$5 each. The entire system has been very successful and is satisfactory both to the Company and to the employees.

The registers in use in the factory are the No. 228, this being the largest size. It is possible to use the No. 225, the No. 226 or the No. 227 in the same manner. Samples are to be found in all our offices.

THE SEMI-ANNUAL PRIZE DISTRIBUTION.

On Monday evening, March 13, the N. C. R. semi-annual prize distribution took place at the Grand Opera House in Dayton, Ohio. Six hundred and fifteen dollars in gold was distributed to N. C. R. employes for the best suggestions during the previous six months.

Fifty prizes and diplomas were awarded. The first five prizes were \$50, \$40, \$30, \$25 and \$20. Then followed fifteen prizes of \$15 each, fifteen of \$10 each, and fifteen of \$5 each. The following is the program in brief:

P R O G R A M .

7:00-7:30 P. M.

ConcertN. C. E. Orchestra

7:30 P. M.

“ The Prize-Winners.”

WelcomePresident John H. Patterson

Award of PrizesVice-President Frank J. Patterson

ResponseMr. George S. Green, No. 35 Room

MusicN. C. E. Orchestra

The Latest InventionsMr. Alvan Macauley and the

Heads of Experimental Departments

SongJanitors' Glee Club

AddressPresident John H. Patterson

Song —“ America ”The Audience

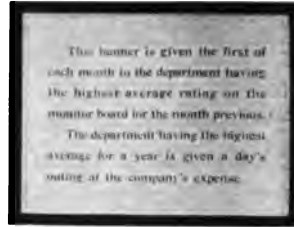
9:45-11:00 P. M.

Concert by Orchestras

Social

Refreshments

“ Home, Sweet Home ”N. C. E. Orchestra



PRIZE DEPARTMENTS FOR 1898.

For Best Records on the Monitor Board.

FACTORY:

The Foundry — 67 Employees.

OFFICE:

Supply Department — 12 Employees.

SUGGESTIONS ADOPTED IN FEBRUARY.

Below is a partial list of names of employes who submitted suggestions which were adopted in February. Opposite each name is a brief statement of the suggestion adopted:

For brevity we now print only the following:

- C. H. Barton, Adjusting and Testing Department.** (1) Make the ends of No. 35 counter-carrying pawls round, thus breaking the sharp edges and corners. (2) Improve the fitting of the two-counter locks Nos. 7 and 8, No. 35 principle. (3) Use set-screws to prevent the cams that operate the special two-counter indicators from slipping. (4) Change lugs on No. 35 principle cabinet sides to obtain more room for the new indicator-flash, etc. (5) Use smaller drawer-rolls in No. 35 principle registers to make the drawers operate more freely.
- C. Brenner, Adjusting and Testing Department.** (1) Use steel instead of brass for strips on the bottom of coin-displayer auxiliary drawers. (2) Carry in stock cash-drawers cut out for till covers.
- D. M. Zile, Packer.** Add lug to No. 35 principle marble slab strip to prevent it from springing upward in the middle.
- J. A. Oswald, No. 79 Assembling Department.** Abandon No. 86 type-segment hub and use instead the No. 96.

- Theodore Bacher, No. 79 Assembling Department.** Punch and form the block on No. 2 slide-lock lever, instead of using separate blocks.
- Charles Crusoe, Engineering Department.** Make elevator gates higher to avoid accidents.
- John Gelzenlichter, No. 2 Experimental Department.** Use stud instead of screw to guide revolution-rack, No. 35 principle.
- Miss Clara Short, Indicator Department.** Make fixture for marking No. 79 indicators to accommodate twelve wheels instead of two.
- H. K. Scott, Mill Department.** Have Piecework Department check up books with Stock Department and cancel from the books items referring to stock that has been abandoned.
- H. Fricke, Brass Room.** (1) Drill the holes in lap-joint cabinet-bases from spots on the patterns. (2) Use wire netting to prevent stock from falling down the stairway and possibly injuring someone.
- Harry Gamble, Tool Room.** Buy stock the correct width to avoid punching drawer angle-irons; simply cut off and form.
- Charles Roth, Sales Department.** Get up a small book showing how to dress windows, etc., and advertise it in the next 'Hustler.'



Scene at the Distribution of N. C. R. Prizes at Dayton Grand Opera House, March 13, 1899.

One of the Greatest Occasions in the History of the N. C. R. Company.

PRESIDENT PATTERSON'S ADDRESS OF WELCOME.

President Patterson, in part, said:

“To-night we have come together to honor fifty of our co-workers. (Here the fifty prize-winners on the stage arose.) Here are fifty inventors — fifty people who have done something in their departments that has never been done before.

“The American people are progressing through inventions. To handicap the spirit of invention is to handicap the progress of the world.

“When I followed the plow a man received \$8 a month and board, and it was considered good wages. He then paid \$9 for a pair of boots. To-day he is paid \$20 to \$30 and his board, and he gets a better pair of boots for less than half the price he formerly paid. Improved machinery makes men dear and their product cheap.



George S. Green, First-Prize Winner.



William Murphy,
Second-Prize Winner.



A. W. Hayes,
Third-Prize Winner



Harry Nelson,
Fourth-Prize Winner.



John Gelzenlichter,
Fifth-Prize Winner.

WHY THE UNITED STATES IS IN ADVANCE.

“Why is it that the United States is so far in advance of any other country? Not because of better schools. Look at the schools of philosophy, technology and manual training in Paris, Berlin and London. Yet we are out-

SUGGESTION SYSTEM.

stripping the world with our progress and everything that makes people enlightened and better.

“ The difference between this country and other countries is that we have a patent-office which gives inventors seventeen years to own what they make,— what they have constructed out of their own minds,— while the patent-offices of other countries give their inventors only a few years to reap the profits of their own labor.

THE PRIZE SUGGESTIONS.

“ Now as to suggestions. What has this band of thinkers done? They have done what we requested — exercised their brains, made suggestions; and in doing that have made themselves intellectually stronger. Men's muscles become weak without exercise; so do their brains. These bright suggesters have given their minds a chance to grow.

VALUE OF A GOOD RECORD.

“ Not long ago a woman said to me, ‘ There is danger of my husband being dismissed from his department.’ Then she showed me five letters. I read them. They were testimonials to this man for having made five good suggestions. I said to her: ‘ You don't care for these: I will put them in my pocket.’ She answered: ‘ Oh, no, please don't take them; I would not take anything for them, because if my husband is discharged he can take them to some other place and get a position.’ I said to her: ‘ We will see that your husband is well cared for.’ Now that man is the first-prize winner tonight.

**The National Cash Register Company**

Dayton, O. U. S. A. March 1899

This certifies that George S. Green has been awarded one of the Prizes for suggestions submitted between July first and December thirty-first 1898 inclusive.

Secretary

President

Chairman
Factory Committee

Vice-President

THE RACERS AND THE GRAND-STAND.

“ I will divide this audience into three classes: First, the prize-winners — those who ran in the race and came out ahead.

“ Second, those who did what they could, but did not succeed in securing a prize. But the knowledge of their having run well forward in the race will cheer them on, and they will put forth greater efforts the next time. To those who did their best we extend our sincere thanks.

“ The third class is composed of those who made no exertions — those who sat in the grand-stand looking down at the people striving in the race.

COME DOWN FROM THE GRAND-STAND.

“ During the last six months there were twelve hundred suggestions made. Nearly half of our people made suggestions, and yet more than half of us are still in the grand-stand! Now let us see if we cannot all get down and enter the race for the coming six months. The entry is open until the first of July. There is plenty of time. Let us all make an earnest effort — not only for ourselves and for the Company, but for humanity. Let us make an example for every concern in the world. Please come down from the grand-stand and join in the race! You will feel better and will do more good, not only to yourself, but by your example you will induce others to join in also.

FIFTEEN THOUSAND WORKINGMEN BENEFITED BY N. C. E. SUGGESTIONS.

“ You will be surprised to learn that because of the suggestions made by our people here the manufacturers of the United States have thrown open opportunities for fifteen thousand people to make suggestions. Think how the idea is growing.

“ I hold in my hand a little paper, the outcome of a talk made in London. Some person attending a lecture which I made there said to me: ‘ How do you get your pay? There is nobody in this audience going to buy a cash register.’ I said: ‘ If there is one man in this audience who employs a few hundred men and who will take home our ideas and put them into practice in his business, the good that he will do those men will repay me one hundred times for the evening spent in giving this lecture.’

INSPIRED WITH NEW THOUGHTS.

“ I did not know that Mr. Eastman, the president of the Eastman Kodak Company, was present. After the lecture he came to me and said: ‘ You have inspired me with new thoughts. I am going to put into practice some of the things you say you are doing at home, and I will see in a few years what I have accomplished.’ To-day we have this little bulletin from the Eastman Company. It gives a list of twenty prize-winners for best suggestions.

“ One man who earned a prize suggested that they put a disinfectant with the sawdust they used in sweeping up the floor. Now that is something that is within the reach of everybody. There are suggestions of how to make kodaks a little cheaper, a little better and so on — a long list of them.

THE N. C. E. COMPANY MEANS THE PEOPLE.

“ And when Mr. Eastman speaks of our Company he does not speak of my brother and myself. He speaks of every person within hearing of my voice and of our agents clear over in Australia. They are the people who are

SUGGESTION SYSTEM.

doing this great work. It is not the officers and the capitalists who are doing this; it is the **people** who are making this Company.

“ It is what you do. If we were to appeal to you to give suggestions and you did not respond, what could we do? You are the mainstay of the institution. There are sixteen hundred of you, and very few of us. So that all the compliments that are given to me abroad, and here, are not for me personally, but for the people I represent. I always say: ‘ **They** are the people who deserve your thanks; **they** are the people who have done and are doing this. We all work together as one great automatic machine.’ This is what the Eastman Company says:

WHAT THE KODAK COMPANY HAS DONE.

“ ‘ We regard the month just past as having recorded another step in the advancement of our concern and care of our employes. The young women’s dining-room has been made more comfortable, and a competent cook has been placed in charge of it. Employes are now enabled to get luncheon daily, and it is very pleasant to note the increase in the number of employes who are availing themselves of this advantage. We believe it will take but a short time to convince all of the good health and advantages to be derived from this. We hope soon to be able to announce the opening of a men’s dining-room.’ ”

The suggestion scheme has been in use at Kodak Park under the direction of their general manager. During the year 1898 they received 579 suggestions — 579 minds made brighter — 579 inventors thanked — 579 people on the way to the patent-office. Three hundred and twenty-two of these ideas, or 55 per cent., were adopted, with sixteen still under consideration. Sixty-two prizes were awarded. We understand that the system has given excellent results at Kodak Park and proven highly satisfactory. Here is another Company. Mr. Eastman says:

ANOTHER MANUFACTURER.

“ ‘ We understand that the Bosch & Long Optical Company, Rochester, employing many people, are considering the suggestion scheme, and will probably put it into operation in a week or two. The National Cash Register Company of Dayton, Ohio, employing 1,600 people, were the originators of this scheme. They put the system into effect, have had it in effect for years, and it has worked wonders in bringing the employes and employers together and in keeping them together for their own and the Company’s interests. They issue the first and the fifteenth of each month a book for employes and employers — a beautiful magazine entitled The N. C. R. It is full of information pertaining to cash registers, and is greatly appreciated by the large army of employes.’ ”

This is what I want to call your attention to:

“ ‘ We take pleasure in giving the N. C. R. Company credit for our adoption of the suggestion scheme, and thank them for courtesies received.’ ”



A photograph of one of the diplomas and bag of gold.

N. C. E. PRIZES FOR 1899, FOR BEST SUGGESTIONS.

Six hundred and fifteen dollars in gold prizes will be awarded to the fifty employes submitting the best suggestions within the period of six months, ending June 30, 1899, the amount to be divided as follows:

First Prize.....	\$50 00
Second Prize.....	40 00
Third Prize.....	30 00
Fourth Prize.....	25 00
Fifth Prize.....	20 00
Fifteen Prizes.....each	15 00
Fifteen Prizes.....each	10 00
Fifteen Prizes.....each	5 00

For these prizes all factory and office employes (excepting heads of departments and their first assistants) and mechanical inspectors are entitled to compete.

Suggestions may relate to improvement in registers, tools, machinery, systems employed and to the general management of the business.

For details of the manner in which suggestions are to be submitted see bulletin boards at the factory.

SUGGESTION SYSTEM.



Check-printing attachment on No. 35 tape-printer suggested by George S. Green. This suggestion won the first N. C. R. prize of \$50 in gold.



Automatic check-lever for No. 79. Second prize, \$40—William Murphy.



Improved No. 35 revolution-rack spring. Third prize, \$30—A. W. Hayes.



Lug on tie-bar of No. 35 register. Fourth prize, \$25—Harry Nelson.



Positive pawl and cam on No. 35 counter turn-back rocking frame. Fifth prize, \$20—John Gelzenlichter.

PRIZE-WINNERS.**Prizes Awarded for Best Suggestions.****First Prize, \$50; George S. Green, No. 35 Assembling Department.**

1. Check-printing attachment on No. 35 tape-printer. While this may not be adopted for some time, it has immediate value from a patent standpoint.
2. Roller indicator to indicate characters represented by special keys used in connection with No. 35 tape-printer.

Second Prize, \$40; William Murphy, No. 79 Assembling Department

1. Automatic check-lever for No. 79 which causes the color-system keys to issue checks whether the check-knob be turned on or off.
2. A device to prevent paper from feeding through, so that small bits are cut off when checks are not issued.

Third Prize, \$30; A. W. Hayes, No. 35 Assembling Department.

1. Improved No. 35 revolution-rack spring. The use of this spring simplifies the mechanism.
2. Abandon one kind of special key-stops for No. 35 principle registers.

Fourth Prize, \$25; Harry Nelson, No. 35 Assembling Department.

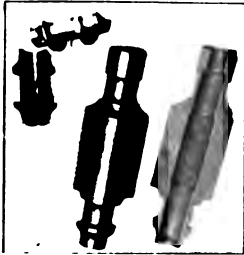
1. Use lug on tie-bar of No. 35 register to hold prongs of key-guard in position. They formerly became bent in the operation of the keys, causing the keys to stick.
2. Improved key-arrester pawl and spring for No. 335 register.

Fifth Prize, \$20; John Gelzenlichter, No. 2 Experimental Room.

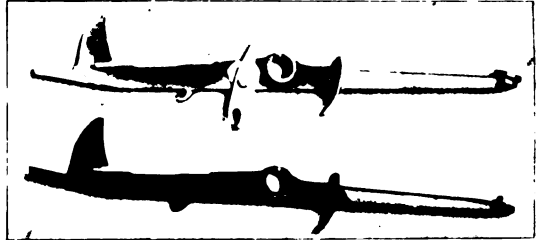
1. Abandon No. 35 counter turn-back rocking-frame and use instead a positive pawl and cam. The rocking-frame sometimes became bent and caused the counter to add incorrectly.
2. Improve No. 35 counter operating arm by making it in two pieces.

FIFTEEN PRIZES—\$15 EACH.

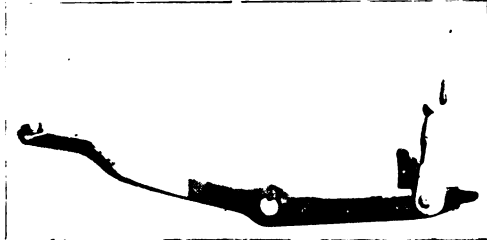
- No. 6. O. D. Casterline, Tool Room.** Improve the bearings of spindles of polishing-lathes to prolong the life of the machines.
- No. 7. C. H. McCune, Inspection Department.** Nickel-plate keys for cheap detail registers, instead of giving them a dark steel finish, which would not wear well. Also other suggestions.
- No. 8. Harry Gamble, Tool Room.** Make No. 35 key-cam longer and abandon key-cam stop-pins on No. 35 keys.
- No. 9. F. J. Baker, No. 35 Assembling Department.** Check-printing attachment for No. 35 tape-printer, invented by Mr. Baker and Mr. Wolf. This was not adopted, but it is valuable from a patent standpoint.
- No. 10. John Noonan, Inspection Department.** Simplify the manufacturing of No. 79 check-printer cylinders.
- No. 11. August Peters, Brass Room.** Improved cabinet indicator-glass springs.
- No. 12. H. C. Clevenger, Treasurer's Office.** An improved system of filing customers' closed accounts.



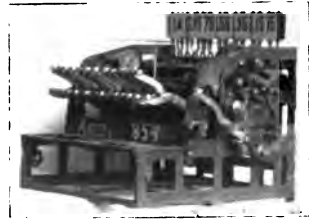
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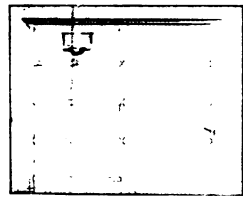
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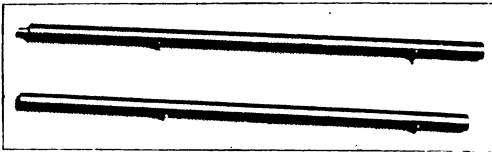
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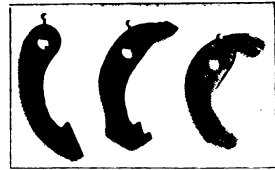
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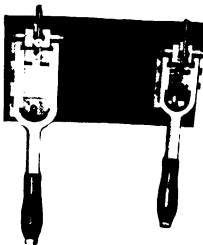
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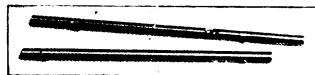
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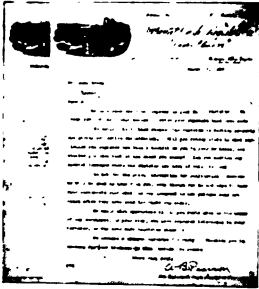
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- No. 13. **C. E. Arden, No. 35 Assembling Department.** Improve the manufacturing and fastening of No. 35 lower drawer-slide.
- No. 14. **J. T. Lewellyn, No. 79 Assembling Department.** Improves construction of No. 79 English counter.
- No. 15. **Joseph Gregor, No. 79 Assembling Department.** Invented a cutter for trimming electros.
- No. 16. **D. M. Zile, Packing Room.** Use different packing-cases for certain registers to save weight; also other suggestions.
- No. 17. **C. H. Barton, Adjusting and Testing Department.** Punch and form No. 35 counter turn-to-zero stop-pawl, and other suggestions.
- No. 18. **O. G. Smith, Mechanical Inspector, Philadelphia, Pa.** Mr. Smith submitted several suggestions, one of the most important being the carbonizing of the No. 35 counter operating-arm rolls.
- No. 19. **Charles Brennert, Adjusting and Testing Department.** Use shorter back-indicator gear-line shafts in No. 79 principle registers; also other suggestions.
- No. 20. **C. H. Chappel, Stockkeeper.** Mr. Chappel submitted several suggestions, one of which was to make desk autographic combination-lock-tumbler patterns narrower, to avoid machining the castings.

FIFTEEN PRIZES — \$10 EACH.

- No. 21. **Clarke Sullivan, Advertising Department.** Improve the form of letter sent by the Treasurer to a user who has paid for his register. The form used heretofore has been stereotyped and indirect.
- No. 22. **F. Theis, No. 79 Assembling Department.** Cut grooves in No. 79 side-frames for the key-springs, instead of drilling holes in the inside key-covers.
- No. 23. **C. G. Merkley, Mechanical Inspector, Chicago, Ill.** Change No. 79 platen so that checks will be issued properly if, for any reason, the detail paper is not used; also improve the hardening of the No. 79 consecutive-numbering-device pawls.
- No. 24. **C. E. Shroyer, No. 35 Assembling Department.** Use malleable iron instead of brass for detail and No. 33 key-coupler adjusting-blocks.
- No. 25. **George P. Wolf, No. 35 Assembling Department.** Mr. Wolf, with Mr. Baker, invented a check-printing attachment for No. 35 tape-printer, which is valuable from a patent standpoint.
- No. 26. **A. J. Flath, No. 35 Assembling Department.** Abandon No. 5 and use No. 2 counter-center for No. 35.
- No. 27. **F. W. Reiland, Adjusting and Testing Department.** Mr. Reiland submitted several suggestions, one of which was to use longer indicator-glass springs.
- No. 28. **P. J. Weillhart, Inspection Department.** Discontinue the burring of oil-holes in No. 35 principle segment-frames.
- No. 29. **Fred Bonner, Clearance House.** His suggestion to punch segment-locking-cams led to making these castings lighter.
- No. 30. **Fred Long, No. 4 Experimental Department.** Use cheaper oil-brushes in the Lock and Drill Department.

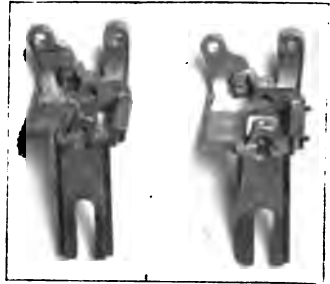
SUGGESTION SYSTEM.



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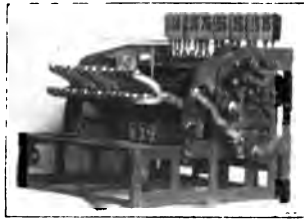
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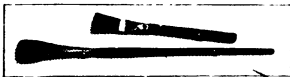
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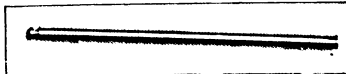
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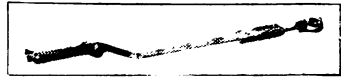
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No. 33



No. 34



No. 35

- No. 31. **J. C. Carroll, Inspection Department.** Use steel instead of brass for lid-support screws.
- No. 32. **N. S. Clunet, Final Inspection Department.** Mr. Clunet made several suggestions, one of the most important being to use steel instead of brass for the small pieces that hold No. 79 indicator glasses.
- No. 33. **J. Burnett, Mill Department.** Punch instead of mill spring-catch in No. 35 counter-turn-back pawl.
- No. 34. **George May, Inspection Department.** Consolidate the operations on No. 79 counter-pinion-arm shaft in the Screwmaking Department.
- No. 35. **H. N. Haas, No. 35 Assembling Department.** Improve special indicator connection and link on No. 35 principle two-counter machines.

FIFTEEN PRIZES — \$5 EACH.

- No. 36. **J. E. Carroll, Mechanical Inspector, St. Louis, Mo.** Instead of counter-sinking the hole in the No. 79 ink-pad holder for the ink-pad plate, drill the hole clear through the casting.
- No. 37. **Boy Turner, Lock and Drill Department.** Use fixture to hold clock-case, while the pawl-hole is being dressed out with the file.
- No. 38. **J. H. Best, Mechanical Inspector, London, England.** Use larger screw in No. 35 coin-displayer lever to avoid trouble caused by the old screw working out.
- No. 39. **W. J. Wells, Stock Department.** How to use a large number of abandoned screws, and thus avoid scrapping them.
- No. 40. **E. E. Marshall, Foundry.** Called attention to the advantage of rebate in purchasing internal-revenue stamps in large quantities.
- No. 41. **A. Bohn, Carpenter Department.** Use round instead of square frames for traveling-case rollers.
- No. 42. **Theodore Bacher, No. 79 Assembling Department.** Punch the No. 79 crank-arrester ratchet-pawl and save one mill-cut.
- No. 43. **George Bodem, No. 79 Assembling Department.** Abandon pawl-cut on No. 1 counter-cam, No. 79.
- No. 44. **L. H. Blum, Drill Department.** Change detail and No. 35 special-counter carrying-arm patterns to avoid hollow-milling.
- No. 45. **Charles Grobet, Mechanical Inspector, New York City.** Drill hole in No. 79 positive check-ejector gear for convenience in locating.
- No. 46. **J. H. Miller, Inspection Department.** Take unnecessary lugs off No. 35 upper back patterns.
- No. 47. **J. Siegman, Indicator Dipping Department.** Do not wash indicator tops until the department is ready to use them, and thus avoid oiling them.
- No. 48. **C. Hardcastle, No. 35 Assembling Department.** Abandon unnecessary drilling in No. 35 bell-stud.
- No. 49. **Miss Minnie Stauffer, Stockkeeper.** How to use a quantity of old-style special-counter turn-back shafts, and thus avoid scrapping them.
- No. 50. **G. Matthews, Bench Department.** Change drill-jig for No. 79 keys to insure the proper position of the hole.

SUGGESTION SYSTEM.



No. 36



No. 37



No. 38



No. 39



No. 40



No. 41



No. 42



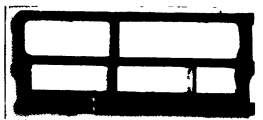
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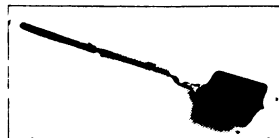
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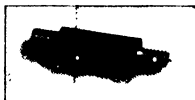
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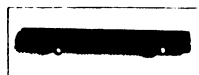
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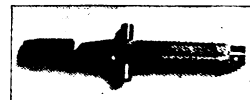
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No. 48



No. 49



No. 50

COMPLAINTS, SUGGESTIONS AND QUESTION COLUMN.

“ Every one connected with the N. C. R. institution is requested to send to the editor of The N. C. R. complaints, suggestions and questions concerning the work of the institution and the conduct of The N. C. R. magazine. Persons need not sign their names to these communications unless they choose, but are requested to give some initials by which each communication may be identified.

“ Now, everybody, please send in your complaints, suggestions and questions, and help to put some ‘ ginger ’ into this column.”



Employees whose suggestions were adopted during March.

SUGGESTIONS ADOPTED IN MARCH.

Forty-seven suggestions adopted; among them:

D. M. Zile, Packing Room. (1) Abandon one of the descriptive cards sent with each register by printing on both sides of another card. (2) Print on backs of tags to which register keys are attached when sent out with machines, a notice to the user to save his register-cover to protect his machine when not in use.

Charles Will, Detail Assembling Department. Use one stamp for the German translation for “ key-lock ” instead of one stamp for each letter of the translation.

Theodore Bacher, No. 79 Assembling Department. Punch and form retaining-cam on bar, instead of making it separate.

SUGGESTION SYSTEM.

- Charles Schmieding, Bindery.** (1) Relieve sample check-book by putting on the covers plain borders. (2) Equip folding-machine with two small rollers for convenience in handling certain work.
- L. A. Jordan, Inspection Department.** Punch No. 79 ink-roll caps of steel.
- W. A. Wells, Stock Department.** (1) Make the drawer-pulls for cheap iron cabinets of cast iron instead of brass. (2) Make traveling-case leg-supports of malleable iron instead of brass. (3) Make No. 472 drawer-catch frames of cast iron instead of brass.
- Miss Rena E. Owen, Lock and Drill Department.** Make No. 5 special-counter turn-back-shaft collars the correct size at first and thus avoid the operation of facing.
- Miss Ella M. Long, Lock and Drill Department.** (1) Make tables about the milling machines larger. (2) Make wrenches for the milling machines. (3) Have the girls devote five minutes of their recess to calisthenic exercises.
- J. C. Carroll, Inspection Department.** Combine the two gauges for the bell-muffler-lock cylinders into one in order that the cylinders may be handled only once instead of twice.
- J. P. Ward, Advertising Department.** Use less rope in making our packing-case handles.
- J. H. Best, Mechanical Inspector, London, England.** No. 35 English machine with "ten-shilling" key in separate bank, thus increasing the registering capacity of the machine to nineteen shillings.
- W. E. Clevenger, Repair Department.** Change the dial of our time-detectors by making the part representing day white and the part representing night black.

GOOD NEWS SPREAD.

"I have just been spending a little time with Mr. George Eastman, of the Eastman Kodak Company, Rochester, and was much interested in his prizes for suggestions, which he says were gathered from your methods. I am getting some account of his system for pamphlets and magazines, and shall be greatly obliged if you can let me see a copy of your 'N. C. R.'"

"H. SNOWDAN WARD,
"New York City."

"Philadelphia, April 5, 1899.

"Our 'suggestion boxes' plan is not quite fully under way, being as yet in its infancy; but we have great hopes.

"C. O. E. PAYNE,
"The F. Middleton Co."

THE SYSTEM IN ENGLAND.

The diploma and prize awarded to Mr. J. H. Best, of the English N. C. R. force, was delivered to Mr. Best during the recent English convention. Mr. Carr presented the diploma in the name of the Company, expressing his thanks for the interest Mr. Best had shown in the Company's welfare. The convention greeted the announcement of the award with cheers "loud and prolonged," and Mr. Carr says that all the mechanics as well as other employes in England are greatly encouraged in their desire to assist by suggestion.

SUGGESTIONS ADOPTED IN APRIL.

Below is a list of employes whose suggestions were adopted during April. They number sixty-two, but for brevity we print only:

- George S. Green, No. 35 Assembling Department.** (1) Use a screw of the proper length for No. 35 tape-printer clutch instead of the No. 79 indicator back-gear screw. (2) Suggestion regarding the construction of the No. 35 tape-printer supply-roll cap. (3) Strengthen the No. 35 tape-printer hammer by changing the patterns.
- William Ohring, No. 79 Assembling Department.** Use of a device which locks the No. 79 counter so that it cannot be turned to zero after a key has been pressed or after a crank has been started.
- J. S. Appenzellar, Inspection Department.** Mill only six instead of nine retaining-pawls in the three No. 79 special counters.
- S. W. Bartel, Inspection Department.** Place a box where keys and other parts are washed to receive the dirt, etc.
- J. H. Miller, Inspection Department.** Use rivet instead of screw to fasten pawl to detail driving-arm.
- P. Weilhart, Inspection Department.** Make the bell-muffler-lock cylinder-barrel guide-studs of screw-steel instead of brass.
- C. H. Chappel, Stock Department.** (1) Use a lot of autographic combination lock tumblers that were ordered scrapped. (2) Use steel instead of brass for revolving-base corners. (3) Make the small corner-plates used to hold registers in position in window displays of gray iron instead of brass or bronze. (4) Use iron instead of brass for bell-muffler knobs. (5) Use a smaller ink-brush than that we are now sending out with Nos. 35 and 79 supplies. (6) Do not send to the Stock Room from the Clock Department clocks with the dials distorted.
- J. P. Montgomery, Stock Department.** Suggested that instead of scrapping the 4,500 old-style No. 5 transfer-line sleeves, they be turned down and used.

THE BEST TEN REASONS.

The \$100 in gold offered in the December Hustler for the best ten reasons why every merchant should use a National Cash Register has been awarded as follows:

First prize, \$50 — E. M. Fithian, grocer, Bridgeton, N. J.

Second Prize, \$25 — J. D. Clark, general merchandise, Scranton, Miss.

Third prize, \$15 — D. B. Watson, druggist, 20 Chestnut Street, Allegheny, Pa.

Fourth prize, \$10 — J. L. Fravel, grocer, Gratz and Dauphin Streets, Philadelphia, Pa.

These reasons are the result of actual experience, and should be carefully studied by every salesman, and quoted whenever possible to back up any statement made to P. P's. Emphasize the fact that these are the words of disinterested men, who have used our registers and found out their value.

FIRST PRIZE — MR. E. M. FITHIAN.

1. It protects the cash.

"The register is a place of safe deposit during business hours for the incoming cash, that can be opened only with sign and signal. It is an automatic receiving and paying teller under mechanical bonds for faithfulness and accuracy.

2. It protects the customer.

"It shows instantly to every customer a record of his transactions and gives him a printed voucher for the same.

3. It protects the merchant.

"It makes an open record of every transaction and calls attention to it by signal.

"It preserves these records for inspection, showing every salesman's share in the day's business and the amount done, and furnishing ready data for balancing the day's work

"It provides the readiest means of discovering errors and locating responsibility for them.

"It puts dishonesty in danger of detection.

4. It protects the books.

"It is a star witness against the one who 'forgot to make the entry.'

"With its 'Charge' and 'Received on Account' keys it makes the connecting link between a credit sale and its corresponding charge on one hand, and the taking of money on account and its corresponding credit on the other. It promotes system in business and backs up the books.

5. It protects the clerk.

"It safeguards the rights of employes by making every clerk responsible only for his own transactions and filing a record of the same, which can be referred to in case of doubt.

"If an error appears, it is better for someone to be convicted of a mistake than for anyone to be suspected of crime.

6. It makes occasional purchasers regular customers.

"The paper check which it issues for each sale is a drawing card. The printed promise on this check of a premium when cash purchasers have reached a certain amount will bring the customer back in order to reach the amount, until coming has become a habit and the occasional customer has become a regular patron.

7. It causes credit customers to buy for cash.

"With its check system offering a discount for cash, it encourages cash buying and so reduces the risks of accounts. The system may also be extended to favor weekly payments instead of long accounts, and so solve the somewhat difficult problem of the good but slow credit customer.

8. It protects the expense account.

"In stores of moderate size it takes the place of the cash-carrier system and saves its expense.

"With its 'Paid Out' key it keeps track of small outgoes.

9. It is "a thing of beauty."

"It attracts attention, provokes favorable comment and so benefits the store in the estimation of people who appreciate the best things.

10. It is a profitable investment.

"A cash register must be the best machine possible; nothing short of that will meet the demands upon it. The business wayside is littered with the wrecks of cheap registers that have proved partial or total failures and involved the waste of all the money they cost.

"The best is the cheapest, and the best, in all the experience and testimony of the business community the world over, is the National Cash Register."



Employes whose suggestions were adopted in May.

SUGGESTIONS ADOPTED IN MAY.

Sixty-four suggestions were adopted in May, among which were the following:

- A. J. Flath, No. 35 Assembling Department**, called attention to the fact that the slot in the drawer partitions for key-locks could be abandoned.
- O. K. Morris, No. 35 Assembling Department**, suggested a new improved counter turn-to-zero locking-pawl.
- Miss Mary Stier, Bindery**, suggested that the carbon paper for the Bindery be 11 x 12½ inches instead of 12½ x 15 inches.
- J. H. Miller, Inspection Department**. Use a rivet in assembling the pawl on the special and customer-counter number-wheels.
- P. J. Weilhart, Inspection Department**. (1) Make the lid-counter ratchet-spring screw of steel or screw-iron instead of brass. (2) Make the No. 35 idler-rolls of steel.
- Miss Kathryn Kern, Lock and Drill Department**, suggested an improvement in the jig for drilling holes in the ends of No. 35 key-stops.
- D. Kipp, Plating Department**. Discontinue the polishing of the new-style drawer angle-irons and only nickel-plate them.
- C. M. Crummel, Stock Department**. Use special axle-steel instead of Crescent Drill Rod for No. 35 segment-rods.
- Claude Johnson, Tool Designing Department**. Suggestion for a drawer-catch and drawer-stop combined.

John Salisbury, Tool Room. Make the mill-jaws to mill the two large key-arrester pawls at one time.

J. W. Jones, Mechanical Inspector, Brooklyn, N. Y. Use a pin in the tape printer plate to prevent the ribbon-tension roll from striking the printer-wheels.

C. V. Wilgus, Mechanical Inspector. Make the angle of the divided-bank detent retaining-bar less acute, so that the machine will operate a trifle easier.



The fifty prize winners.

THE SEMI-ANNUAL PRIZE-DISTRIBUTION FOR SUGGESTIONS

This ceremony was held in the beautiful grove on the hilltop near the factory, since made the country residence of President Patterson, and known as "Far Hills." The grounds were beautifully decorated; there was a large assembly of distinguished persons; there were games and dancing in the afternoon, and at night the ceremony of the distribution of prizes. When President Patterson began the latter, report states: "Applause went up from five thousand throats."

HOW THE SUGGESTION SYSTEM ORIGINATED.

President Patterson said:

"Probably it would be interesting to you to know how this suggestion idea was first brought to our attention. About four years ago a member of our organization said to me: 'I used to weigh coal for you in Jackson County, but am now cleaning castings in the back of your foundry.'

"'Why are you doing that?' I said.

"'Because I cannot get anything better to do,' he replied.

"'Make some good suggestions,' I advised him, 'and do something to help out, and your merit will soon be rewarded by promotion.'

"He replied: 'If I should do that you would never hear of it; it would be smothered long before it got to you, and I would get no credit for it.'

"That opened my eyes. For three months I labored over that problem. I thought what a great opportunity it was; how rapidly the Company would progress if we had twelve hundred brains working for us, correcting wrongs and helping us on what was right. And from that came the suggestion system, which has, more than any other cause, pushed this Company forward.

"Good suggestions are inventions, because they are something new. Instead of giving a man a patent, we give him an acknowledgment. To the fifty who have originated the best inventions we give special prizes. We only wish we could do it for all."



Our splendid corps of inventors and their work.

President Patterson then spoke of the immense benefit that the United States patent system is to all the people; of how American inventive genius, thus encouraged, largely helped to make us victorious in the late war.

He expressed the Company's gratitude to those who had made good suggestions; praised them for their pluck and exercise of brains, and spoke of his personal pleasure in awarding the diplomas.



From a photograph of the agents who attended the prize distribution.

LIST OF PRIZE-WINNERS.

FOR BEST SUGGESTIONS ADOPTED BETWEEN JANUARY 1 AND JUNE 30, 1899, INCLUSIVE.

No. 1. First Prize, \$50: I. W. Smith, Inspection Department.

Suggestion (1) of an improved No. 79 cylinder retaining-pawl, one that can be made cheaper as well as better; (2) that more stock be shaved off of No. 79 counter transfer cams to avoid milling; (3) to abandon an expensive operation of facing on No. 79 impression-rolls.

No. 2. Second Prize, \$40: Gustave Riebe, Mechanical Inspector, Konigsberg, Germany.

Suggestion of an improvement in the construction of the mechanism for printing backs of checks, the principal change being a placing of the gear on the frame instead of on the cylinder. This is convenient especially for those making repairs on machines in use.

No. 3. Third Prize, \$30: Charles H. Barton, Adjusting and Testing Department.

Suggestion (1) to round the forward ends of No. 35 counter carrying-pawls where they come in contact with the counter-wheel ratchets, by which change trouble that had been experienced in the operation of the mechanism is avoided; (2) to use a flat instead of an adjustable plate in connection with the mechanism intended to lighten the key pressure of No. 35 registers, the flat plate being cheaper and just as effective. Mr. Barton also submitted a number of other suggestions.

No. 4. Fourth Prize, \$25: William Ohring, Adjusting and Testing Department.

Invention of a device for locking the No. 79 counter so that it cannot be turned to zero after a key has been pressed or the crank has been started.

No. 5. Fifth Prize, \$20: George S. Green, No. 35 Assembling Department.

Model of a No. 35 tape-printer detail supply-roll cap which can be manufactured cheaper than the one in use. Mr. Green also submitted two other suggestions of value.

FIFTEEN PRIZES — \$15 EACH.

No. 6. George Skelton, No. 35 Assembling Department.

Mr. Skelton called attention to the fact that Nos. 55, 56, 63 and 64 cabinets are alike except the key-guards and suggested that by carrying in stock special key-guards for the No. 64, the same cabinet could be used for all of these sizes. He also suggested that by having on hand a few special parts of cabinets, the number of finished No. 35 cabinets necessary to be carried in stock might be reduced one-half.

No. 7. George Bodem, No. 79 Assembling Department.

Suggestion that arrangements be made so that three No. 1 counter transfer cams for No. 79 might be made out of one piece instead of two. Mr. Bodem also submitted other suggestions, one of which pertained to the application of springs to the No. 79 counter.

SUGGESTION SYSTEM.



No. 1



No. 2



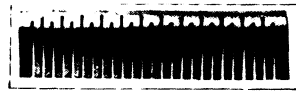
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No. 4



No. 5



No. 6



No. 7



No. 8



No. 9

No. 8. O. K. Morris, No. 35 Assembling Department.

Invention of an improved No. 35 counter turn-to-zero locking-pawl, cheaper and just as good as the one formerly used.

No. 9. J. H. Best, Mechanical Inspector, London, England.

Suggestion that the "10-shilling" key in the No 35 English register be placed in a separate bank, so that it can be operated with the "9-shilling" key, thus increasing the registering capacity to 19 shillings, 11½ pence.

No. 10. J. A. Oswald, No. 79 Assembling Department.

Suggestion that by lengthening the No. 1 counter pitman-arm for No. 79 the No. 4 counter pinion-arm can be abandoned and a cotter-pin used instead. Mr. Oswald submitted two other suggestions of value.

No. 11. John Gelzenlichter, Experimental Department No. 2.

Suggestion of the use of stud instead of screw to guide the revolution-rack for No. 35 registers, and the use of an improved No. 79 detail receiving-roll paper-clamp, or stay-pin, punched.

No. 12. O. C. Wheeler, Mechanical Inspector, New York City.

Mr. Wheeler complained about the breaking of the ink-pad holders in No. 79 principle registers and submitted a suggestion which led to the adoption of an improved holder, one cheaper than that formerly in use.

No. 13. Harry Nelson, No. 35 Assembling Department.

Suggestion (1) to punch the No. 35 special-counter shaft-support; (2) to change the No. 35 tape-printer hammer-cam to lighten the operation of the mechanism.

No. 14. P. J. Weilhart, Inspection Department.

Suggestion of the use of steel instead of brass for the No. 35 tape-printer ribbon idler-rolls and for the bell-muffler lock-cylinder-barrel guide-studs.

No. 15. D. M. Zile, Packing Department.

Suggestion of the use of a lug on the No. 35 marble-slab strip so that it could not spring upward in the middle, making an open joint. Mr. Zile also submitted two other good suggestions.

No. 16. Miss Emma Weidner, Indicator Department.

Suggestion to print instead of paint the various colors on No. 35 principle counter-plates.

No. 17. Miss Clara Short, Indicator Department.

Suggestion that the fixture for marking No. 79 indicators be made to accommodate twelve indicators instead of two.

No. 18. T. E. Virts, Carpenter Department.

Suggestion (1) of the use of a wood block instead of a cast-iron block for drawer-springs in desk-autographic cabinets; (2) of the use of a cheaper desk-autographic bell-trip.

No. 19. J. C. Carroll, Inspection Department.

Suggestion of the use of steel instead of brass for No. 79 counter-slide and for No. 79 impression-roll stud-nut.

No. 20. Charles Schmieding, Bindery.

Suggestion (1) that by printing on more of the space on envelopes "B" and Bellows filing-cases they could be made to last longer; (2) of an improvement in folding machine; (3) of a device for putting glue on keratol.

SUGGESTION SYSTEM.



No. 10



No. 11



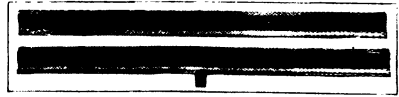
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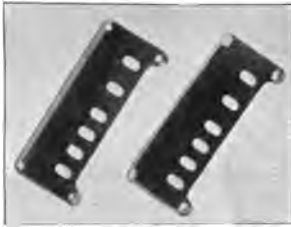
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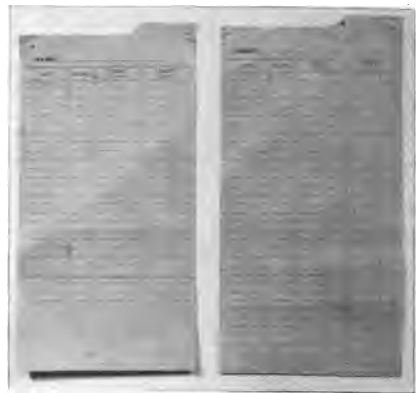
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No 18



No. 19



No. 20

FIFTEEN PRIZES — \$10 EACH.

No. 21. Frank Wagner, Treasurer's Office.

Suggestion that our register order-forms be printed with space for the "O. K." of departments handling the orders at the factory, thus saving considerable time and annoyance.

No. 22. C. W. Stewart, No. 79 Assembling Department.

Suggestion that the No. 79 counter-slide be made to operate by the side lock, so that in unlocking the lock the slide would be open. This was also suggested by George S. Green.

No. 23. C. T. Johnson, Tool Designing Department.

Suggestion that Mr. Carney's improved No. 35 drawer-catch be made to act also as a drawer-stop.

No. 24. O. G. Smith, Mechanical Inspector, Philadelphia, Pa.

Suggestion of the desirability of hardening the No. 79 counter transfer-cams. Mr. Smith also suggested that the new wire drawer-stops be made heavier.

No. 25. A. F. Leiter, Inspection Department.

Suggestion to punch instead of cast the detail bell-trip lever, which is considerably cheaper. This was also suggested by J. H. Miller.

No. 26. John Grennell, Experimental Department No. 1.

Suggestion to use rivet instead of screw for fastening No. 35 drawer-wheels.

No. 27. L. A. Jordan, Inspection Department.

Suggestion that the No. 79 ink-roll cap be punched of steel instead of being turned out on screw-machine, which would be considerably cheaper. The suggestion also includes the abandonment of the counterboring holes.

No. 28. F. C. Fabry, Mechanical Inspector, Berlin, Germany.

Suggestion to pin fast the No. 35 principle counter operating-cams, as the staked cams were likely to work loose and cause trouble.

No. 29. J. H. Miller, Inspection Department.

Suggestion (1) to use rivet instead of screw to fasten pawl on No. 79 detail driving-arm; (2) to discontinue straightening certain key-couplers.

No. 30. C. E. Shroyer, No. 35 Assembling Department.

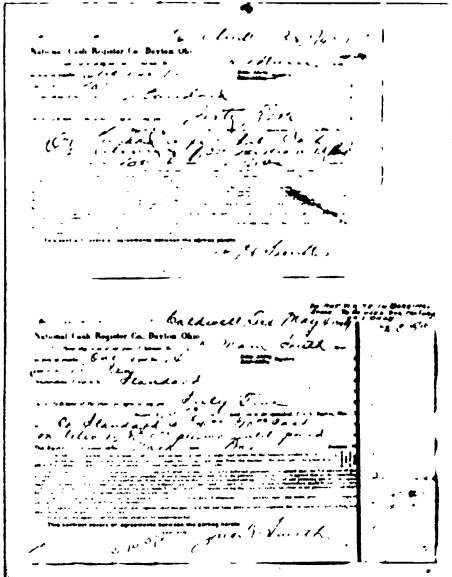
Suggestion (1) to take 1-16-inch stock off No. 2 disconnecting-plunger used in two-counter register, to avoid filing; (2) to make the plunger-spring a little shorter; (3) to drill and tap some of the No. 2 segment-hubs on the opposite sides for use in two-counter registers, No. 35 principle.

No. 31. Theodore Bacher, No. 79 Assembling Department.

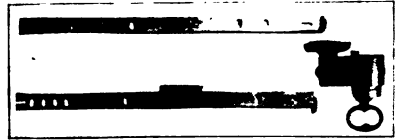
Suggestion (1) to make the block on No. 79 slide-lock lever a part of the lever instead of a separate piece; (2) to make the retaining-bar cam a part of the bar in the same manner. The latter was also suggested by C. E. Beason.

No. 32. William J. Wells, Stock Department.

Suggestion of the use of iron instead of brass for various parts, including traveling-case leg-supports, No. 472 drawer-catch frames, No. 225 operating-cranks, certain drawer-pulls, etc.



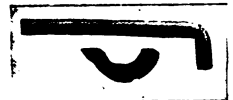
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No. 23



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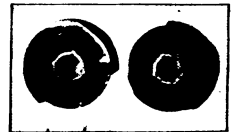
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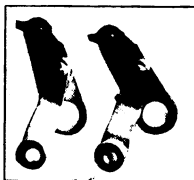
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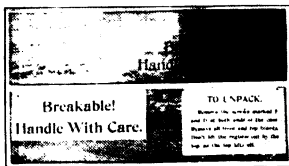
No. 30



No. 31



No. 32



No. 33



No. 34



No. 35

No. 33. J. J. Wiley, Packing Room.

Suggestion of the use of rubber stamps instead of certain painted labels on packing-cases. While the rubber stamps, in all probability, will not be used, it is the intention to abandon the printed labels. The matter will probably be printed directly on the boards.

No. 34. August Peters, Brass Cabinet Department.

Suggestion (1) to cast certain till-covers instead of making them of sheet metal; (2) to buy instead of manufacture a certain till-cover lock.

No. 35. C. H. Chappel, Stock Department.

Mr. Chappel submitted a number of suggestions of importance, two of which referred, respectively, to the use of iron instead of brass for inside bell-muffler knobs, and for small corner-pieces used to hold registers in position in window displays, etc.

FIFTEEN PRIZES — \$5 EACH.**No. 36. James P. Ward, Advertising Department.**

Suggestion to use less rope for the rope handles on packing-cases.

No. 37. C. E. Arden, No. 35 Assembling Department.

Suggestion to abandon mill-cut on No. 1 segment frames, No. 35 principle, and use the same size mills on Nos. 1 and 27 segment-frames as those used on others.

No. 38. Harry Young, No. 35 Assembling Department.

Suggestion (1) to have screw-holes in No. 35 principle counter-plates elongated to avoid filing; (2) to arrange for a better joint between the key-guard and top-guard of No. 35.

No. 39. Henry Roman, Pattern Department.

Instead of cutting down cabinet-lid hinges to make No. 35 tape-printer hood-hinges, use special patterns for the hood-hinges.

No. 40. Miss Minnie Stauffer, Stock Department.

Suggestion to make the No. 79 side-lock-frame cap to come the correct size from the tools and avoid cutting off the ends; (2) to use 192 special-counter frames that were made wrong.

No. 41. G. P. Combs, No. 79 Assembling Department.

Suggestion pertaining to an improved counter-spring, No. 79 principle.

No. 42. J. S. Appenzellar, Inspection Department.

Instead of milling all of the special-counter pawls for clearance, mill only the six that require it in each counter.

No. 43. D. Kipp, Plating Department.

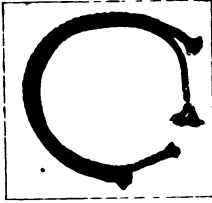
Suggestion to abandon the polishing of drawer angle-irons.

No. 44. John Salisbury, Tool Room.

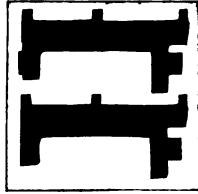
Suggestion to arrange the tools to mill two of the large detail key-arterer pawls at the same time.

No. 45. C. E. Beason, Milling Department.

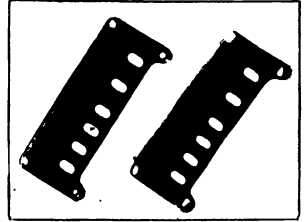
Suggestion to make the retaining-bar cam for No. 79 a part of the retaining-bar. This was suggested also by Theodore Bacher.



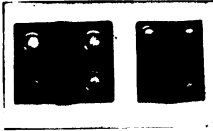
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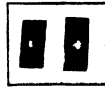
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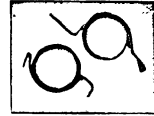
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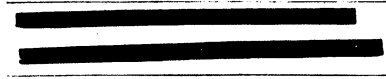
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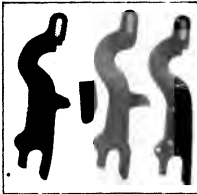
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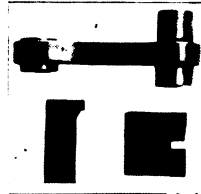
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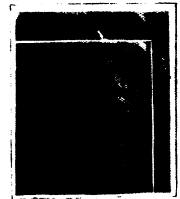
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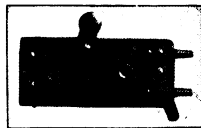
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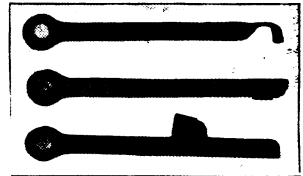
No. 47



No. 48



No. 49



No. 50

No. 46. Charles G. Wetz, Inspection Department.

Suggestion to make the snap-gauge and bevel gauge for No. 35 key-coupler in one, avoiding considerable handling of key-coupler stock.

No. 47. Miss Mary Stier, Bindery.

Instead of using carbon sheets 12½ x 15 inches, use sheets 11 x 12½ inches, which are cheaper.

No. 48. E. J. Hayes, No. 35 Assembling Department

Suggestion as to how the filing of the No. 35 tape-printer-hood catch could be abandoned, although this was not done just as he suggested.

No. 49. Miss Kathryn Kern, Lock and Drill Department.

Suggestion to put lever and thumb-screw on key-stop drill-jig No. 35, to hold the key-stops better in drilling the pin-holes in the ends.

No. 50. C. D. Osmond, No. 79 Assembling Department.

Suggestion to make the No. 1 counter throw-out lever for No. 79 so that the guide will be part of it instead of a separate piece. While this was not done just as Mr. Osmond suggested, his suggestion led to the improvement.

SUGGESTIONS ADOPTED DURING JUNE.

Forty-five suggestions were adopted during the month of June, a few of which are as follows:

C. H. Barton, Adjusting and Testing Department. (1) Wipe the lower drawer-guides with an oily rag to keep them from rusting. (2) Round the outside of the single back hangers to prevent their catching on the double hangers. (3) Finish the special two-counter top indicator in different colors.

G. E. Skelton, No. 35 Assembling Department, suggests that we can use the same cabinet for Nos. 55, 56, 63 and 64 registers by carrying in stock a few No. 64 key-guards.

Frank L. Ruehl, No. 79 Assembling Department, suggested the burring of No. 79 check-ejector levers after they are milled and before they are case-hardened.

E. A. Menke, Brass Room, suggested the spotting of No. 35 and No. 79 drawer-fronts for drilling the lock-holes, instead of laying them off.

J. W. Smith, Drill Department, suggested that we punch the three holes in No. 35 registering segment. We will arrange to punch two of these holes.

R. B. Frazell, Drill Department, suggested that the 3-16-inch hole in the desk autographic combination-lock lever-support be punched to size to avoid reaming.

Charles Hudson, Engineering Department. Cover steam pipes on second floor of Administration Building with asbestos where it has been torn off by the elevator.

John Sykes, Lock and Drill Department. (1) Punch and form a projection on the counter throw-out key-lock cap to keep the bolt from dropping in and catching on the side of the cap. (2) Drill the new-style lid-counter lever with a No. 44 instead of a No. 45 drill, because the No. 44 drill is too

SUGGESTION SYSTEM.

small. (3) Called attention to the fact that No. 128 reamer should be used for the lid-counter pawl. This had been overlooked in one lot of stock sent through.

F. G. Allsup, Milling Department, suggested an improvement in the two-counter throw-out key-lock lever to overcome trouble caused by sticking when transferring from counter No. 2 to counter No. 1.

J. P. Montgomery, Stock Department, suggested that No. 800 special back indicator-gear line-sleeves that were made from the No. 4 sleeves for No. 3½ side-frames be cut down and used for No. 7 sleeves.

Miss Minnie Stauffer, Stock Department, suggested that the 7-32-inch hole in the counter throw-out key-lock cap be punched at the same time the larger hole is punched.

WHY THEY ARE PERMITTED TO COMPETE FOR PRIZES.

Some question has been raised in regard to allowing employes in the four experimental departments to compete for the cash prizes offered semi-annually for the best suggestions. Some think that as it is the duty of these men to work out new ideas they should not receive prizes for anything they may suggest or invent.

It is entirely fair and right that these employes should have the same opportunity as others to win these semi-annual prizes. These men do not receive prizes for any suggestions they may make on a new machine or an invention on which they may be working, as it is their duty to experiment and to offer suggestions for improvements in connection with work in their own departments. The only suggestions which are entered in this competition are such as may pertain to work outside of their own departments — something that has nothing whatever to do with their own work or experimenting and inventing in their own departments. For these suggestions they should receive credit, and they are considered with others when the prize lists are made up.

FACTORY COMMITTEE.



Employees whose suggestions were adopted during July.

SUGGESTIONS ADOPTED DURING JULY.

Sixty-seven suggestions adopted during the month of July, but for brevity only a few are given:

FACTORY, EMPLOYEES.

- Harry T. Carvin, No. 35 Assembling Department.** Use a drill-guide on the jig for locating the key-weight holes in the check-device keys.
- H. N. Haas, No. 35 Assembling Department.** Change locating-jig for the segment locking-cam to set the cam farther back in the penny bank and thus allow more clearance for the return of the segment locking-plate.
- H. K. Scott, No. 35 Assembling Department.** Thread the drawer-roller screws close to the head to avoid countersinking the frame.
- Joseph Gregor, No. 79 Assembling Department.** New method of fastening the lower electro.
- F. Theis, No. 79 Assembling Department.** Abandon a mill-cut on the No. 79 keys, No. 6.
- George Bodem, No. 79 Assembling Department.** Use rivet instead of screw for the crank-arrester ratchet-pawl spring.
- George M. Leisentritt, Bench Filing Department.** Use nine-sixteenths instead of five-eighths inch cold-drawn steel for the No. 35 tape-printer-ribbon tension-rolls.
- Charles Schmieding, Bindery.** (1) Use 150 instead of 200-pound tag-board for "B" filing-case envelopes. (2) Use small square patch on cancelled "Memo." books.
- Walter Pfanner, Factory Committee Office.** (1) Repair railing on stairway leading to basement at west end of Administration Building. (2) Clean off packing-cases for registers consigned to Alaska. (3) Provide a new comb for the toilet room on first floor of Administration Building. (4) Repair wood base of the steel column just outside the stock room window at the west end of Machinery Hall. (5) Repair partition in the paper-stock room of Administration Building.

SUGGESTION SYSTEM.

- C. W. Dawson, Experimental Department No. 2.** Punch and form projections on the check-ejector arm for the ejector-claw, to take the place of the mille-l block.
- John Shook, Slitting Department.** Reduce the width of the No. 79 check-paper from nineteen to eighteen and three-fourths inches to avoid waste.
- E. E. Farnum, Treasurer's Department.** Number, by tag or ticket, the competing machines taken in exchange by our foreign agents and Company's offices.
- O. C. Wheeler, New York.** Make check-ejector compression-spring-caps screw longer, so that should the spring break the parts could not drop out and ball up machine.
- E. M. Gorden, Boston.** Use rubber washers under the marble-slab buttons to avoid breaking the marble.



Employees whose suggestions were adopted during August.

SUGGESTIONS ADOPTED DURING AUGUST.

Eighty-one suggestions adopted during the month of August. A few only are given.

FACTORY EMPLOYEES.

- D. D. Hendrickson, Adjusting and Testing Department.** (1) Build No. 35 principle registers having "Pint" key to operate in connection with the "Amount" keys. (2) Called attention to the fact that the dowel-pin holes

in the segment-frames and segment-locking plates were too large for the pin. (3) Called attention to rusty key-cams and hangers on No. 35 principle registers.

- J. C. Machol, No. 35 Assembling Department.** Use a 3-33 x 64 flat-head screw in the tape-printer clutch to avoid filing the inside of the counter.
- C. Brinkel, No. 35 Assembling Department.** Gauge the indicator-strips before sending them to the stock room.
- W. F. Baldwin, No. 35 Assembling Department.** (1) Refit the machine-stands in the No. 35 Room with tires. (2) Make the jig for the No. 2 segment hub to drill two holes instead of but one. (3) Drill the indicator-glass-caps for the new-style No. 35 principle cabinets on both the tops and sides before they are finished.
- C. E. Arden, No. 35 Assembling Department.** Add a lug to the middle of each of the long auxiliary key-boards, similar to that placed on each end, for strength.
- D. C. Herby, No. 79 Assembling Department.** Discontinue the drilling and tapping of the hole in the left-hand side-frame which was used for the hook for the spring to operate the divided-bank retaining-bar No. 4; also discontinue the drilling of hole in divided-bank retaining-bar formerly used for attaching the spring.
- W. Oswald, Composing Department.** (1) Improvements in connection with the ruling machine. (2) Order Brother Jonathan bond paper 17 x 22, sixteen pound, instead of 19 x 24, twenty pound, thus saving four pounds of paper on each ream used.
- I. W. Smith, Inspection Department.** (1) Make the No. 79 flash operating-lever rolls larger in order to grind all of them after they are hardened. (2) Use combination running-gauge for testing cylinder date and month wheel ratchets, and for testing cylinder sprocket-wheels Nos. 1, 2 and 3.
- W. F. Goodlove, Stock Department.** Cut off a lot of abandoned special-counter throw-out lever sleeves and use them for No. 5 indicator-gear line sleeves.
- C. E. Carroll, St. Louis, Mo.** Make the tape-printer-hammer plunger springs longer.
- O. C. Wheeler, New York City.** Harden the working end of the No. 79 latch stop-pawl.

SUGGESTIONS ADOPTED DURING SEPTEMBER.

Fifty-seven suggestions adopted during the month of September; for brevity a few only are given.

George Swaninger, No. 35 Assembling Department. (1) Drill oil-holes in No. 35 new special-counter pawls. (2) Called attention to unsatisfactory method of serving lunches in the evening.

Fred Huber, Brass Room. Use a lot of scrap sheet brass for No. 1 key-guards.

John Gelzenlichter, Experimental Department No. 2. Use cheaper check-paper-roll guard.

W. B. Newman, Final Inspection Department. A method for locking clerks' initial keys so that they cannot be operated when clerks are off duty.

SUGGESTION SYSTEM.

- N. S. Clunet, Final Inspection Department.** (1) Remove burr from the ends of drawer-fronts. (2) Improve the lids of the new " B " filing-cases so that they will not warp.
- Kaufman Schwartz, Indicator Dipping Department.** Clamp to hold No. 79 indicators on the shaft while sandpapering and painting them.
- J. H. Miller, Inspection Department.** (1) Use steel from which to punch No. 33 key-cups. (2) Add stock to No. 35 upper drawer-slides. (3) Send through as regular stock the center crossbars which have $\frac{1}{4}$ -inch hole drilled in them for tape-printer.
- C. Reinhard, Plating Department.** Make the old-style drawer-plunger pitmans used in tied-up-counter machines of some other material than brass.
- C. H. Chappel, Stock Department.** (1) Called attention to shortage of stock on the lugs of clock-cases for holding the cases to the bases. (2) Make metal key-checks thinner.
- O. D. Casterline, Tool Room.** Provide pans to be used under the machines in the Tool Room for catching brass borings.
- Harry Gamble, Tool Room.** Combine the first forming operation with the blanking operation on the detail wheels.
- A. W. Marshall, Order Department.** Adopt a standard key arrangement for German four-bank No. 79 principle registers.



Employees whose suggestions were adopted during October.

SUGGESTIONS ADOPTED DURING OCTOBER.

Sixty-six suggestions adopted during October. A few of those adopted:

- C. W. Marlin, Adjusting and Testing Department.** (1) Called attention to side-lock levers in Nos. 11, 13, 14 and 15 registers not locking properly. (2) Called attention to verdigris on lid-counters and too much solder on the screw-heads.

- Louis Berow, No. 35 Assembling Department.** (1) Cut stock off left end of pattern for new upper back to make room for push-button devices on Nos. 55, 57 and 58 registers. (2) Reduce the thickness of the punched pieces used in connection with the push-key devices in Nos. 55, 57 and 58 registers. (3) Change the tiebar to make the spring pull in line with the rack on push-key machines. (4) Use a stronger spring on arrester-pawl and arrester-slide on push-button machines.
- Herman Horn, No. 35 Assembling Department.** (1) Remove stock from certain lugs on the inside of the No. 35 cabinet-base patterns. (2) Drill old-style scroll-design cabinet sides in the Brass Room for the metal tops. (3) Called attention to the fact that the holes in the No. 2 Bohemian lower cabinet fronts do not match the holes in the upper front crossbars.
- W. Alstaetter, Brass Room.** Drill and tap the lid-support hole in the detail lap-joint cabinet-lids before they are plated or otherwise finished.
- P. J. Weilhart, Inspection Department.** (1) Arrange to round the edge of the hubs on the No. 35 turn-to-zero shaft bevel-gears. (2) Scratch-brush rusty segment-frame castings before sending them to be machined.
- Miss Helen Lamb, Lock and Drill Department.** Equip the engraving-machines with supports to prevent the idler from dropping and breaking the oil-guards.
- Ellsworth Brown, Pattern Department.** (1) Take surplus stock off of pattern for No. 35 upper backs, to avoid a milling cut. (2) Called attention to a limb of a tree protruding over the sidewalk.
- Harold Pryor, Final Inspection Department.** Discontinue sending "No Sale" pads with English registers where the only special key is a "No Sale" key.
- Leroy Gray, Supply Department.** Designate in next price-list the style of cabinet with which each register is equipped.
- F. W. Sluyter, Albany, N. Y.** Suggested that the revolution-shaft hole in the tape-printer plate be counterbored $\frac{5}{8}$ -inch, and that a double hub be made on the lining-cam.



Employees whose suggestions were adopted during November.

SUGGESTIONS ADOPTED.

Seventy-one suggestions adopted during November, but for brevity only a few are given :

- Frank Griefmeder, Detail and No. 33 Assembling Department.** Abandon one of the two-side frame holes drilled and tapped on each side of the No. 30 back.
- D. K. Allison, No. 35 Assembling Department.** Dispense with the two-counter throw-out-key stud on the Nos. 55, 57 and 58 machines.
- W. F. Baldwin, No. 35 Assembling Department.** Make the indicator-glass plates narrower, to make it unnecessary to file them for the flashes in two-counter registers.
- C. H. Barton, No. 35 Assembling Department.** Fasten the No. 35 customer-counter-arm roll with a rivet instead of a screw.
- Miss Mary Stier, Bindery.** Equip the stitching-machines in the Bindery with adjustable gauges.
- L. Huthman, Drill Department.** Place a foot on each of the key-cam jigs so that when opened they will stand without making it necessary to hold them.
- H. Ogle, Drill Department.** Abandon the auxiliary jig for No. 35 side-frames now used for the fourth drilling operation, and have the five holes in it placed in the regular No. 35 side-frame jig.
- P. J. Weilhart, Inspection Department.** Make the master-gear on the registering segment gauge No. 48 pitch so that two registering-segments can be gauged at once.
- C. E. Beason, Mill Department.** Equip the mill-jaws for the No. 35 special-counter carrying-pawl arms, slot-cut, with a slide block.
- Richard Lawrenz, Stock Department.** Abandon the No. 35 push-key stop-bracket stud No. 2, and use instead the No. 35 printer-hammer plunger pin.
- Edward Mull, Supply Department.** Do not use shipping-tags with eyelets where the tags must be tacked to boxes. Buy the stock and cut and print such tags here, instead of purchasing the tags already printed.

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WINNERS OF POSTER PRIZES.

Recently we exhibited at the factory over two hundred artistic posters brought home from Europe by President Patterson, and offered three prizes, amounting to \$18, to employes for best suggestions for reading matter adapting these posters to our business. The competition created a great deal of interest among the employes, and hundreds of suggestions were received. The prizes were awarded to the following employes: First prize, \$10, John Tapper, 79 Assembling Department; second prize, \$5, J. M. Roser, Order Department; third prize, \$3, Ray South, Experimental Department No. 4.

PRIZE SYSTEM FOR EUROPEAN OFFICES.

The Company Outlines a Plan for the Semi-Annual Distribution in Europe of Prizes for Good Suggestions.

The President decided to inaugurate in the several countries of Europe the semi-annual distribution of prizes to the office employes making the best suggestions and a yearly award by the Dayton Company of five prizes to the five leading European prize-winners. In detail the plan is as follows:

The National Cash Register Company, Ltd., of London, shall award semi-annually three prizes to its office and interior working force for best suggestions, making six prizes for the year. Office forces and mechanical employes in branch offices shall also be entitled to compete for these prizes.

The National Cash Register Company, m. b. H., Berlin, shall also semi-annually award three prizes — six for the year.

The Paris Company shall award two prizes semi-annually — four per year.

The Milan office, one prize semi-annually — two for the year.

Austria-Hungary, one prize semi-annually — two for the year.

We would be glad if Messrs. Wesmann, Frykholm, Moeller, Van Erk and Stuyck would join us in this enterprise, each of the above gentlemen awarding one prize semi-annually and two per year.

SUGGESTION SYSTEM.

If all the above participate there would be fifteen prizes distributed semi-annually — thirty for the year — in the several countries of Europe.

In those countries where only one prize is awarded semi-annually the manager shall have the right to divide the prize between two contestants if their suggestions should be of about equal value.

CONVENTION OF MANAGERS.

There shall be held hereafter at least once a year in Europe a convention of managers of various countries as follows:

England, France, Germany, Norway, Sweden, Denmark, Holland, Belgium, Italy, Austria-Hungary and Russia. At each of these conventions the Dayton Company shall endeavor to have a representative from Dayton.

To a committee of three or five of these managers will be submitted the suggestions of the thirty prize-winners of the various countries. Out of these thirty prize-winners the committee shall select five persons to whom the National Cash Register Company at Dayton will award prizes as follows:

First prize.....	\$50 00
Second prize.....	40 00
Third prize.....	30 00
Fourth prize.....	20 00
Fifth prize.....	10 00

These prizes shall be delivered to the winners at the next convention in their respective countries.

Copies of all adopted suggestions in each country shall be mailed as soon as they are adopted to the managers of all other European countries, and also to the Dayton Company, and the names of all persons who made the suggestions adopted shall be printed in the Dayton, London and Berlin "N. C. R.'s."

The names of the thirty contestants for the Dayton prizes shall be published in the Dayton, London and Berlin "N. C. R.'s."

The names of the five winners of the Dayton prizes, with the suggestions made by each, shall also be published in the Dayton, London and Berlin "N. C. R.'s."

Managers and sales agents are excluded from this contest.

The fixing of the amounts of the semi-annual prizes to be given in the several countries shall be left to the respective managers of

those countries. The amounts of prizes should be regulated according to the number of contestants, importance of the business in that country, etc.

Messrs. Hall, Wark, Carr, Faguer, Peratoner and Minciaky are hereby requested to put this prize plan in operation beginning January 1, 1900. Messrs. Wesmann, Frykholm, Moeller, Van Erk and Stuyck are privileged (not required) to allow their office employes to join in this contest. We desire, however, that all of the countries of Europe may join in this contest, by which we hope to obtain an increased interest in our business on the part of everyone engaged in it.

WHERE TO SEND SUGGESTIONS AND COMPLAINTS.

All outside representatives of the Company are asked to bear in mind the plan given below when sending us suggestions or complaints. It will greatly facilitate matters if this plan is strictly followed.

From	Nature
Sales Agents, Salesmen	Suggestions or complaints concerning defects or betterment in construction of registers.... N. C. R. Co., Repair Department.
Traveling Mechanical Inspectors,	Suggestions of new inventions or new commercial features pertaining to registers.....N. C. R. Co., Sales Department.
Stationary Mechanical Inspectors, Collectors.	Suggestions or complaints concerning office departments, rulings, decisions, etc...N. C. R. Co., Assistant Secretary's Office.

In case there is any question as to what department should be addressed, direct communications to the N. C. R. Company.

The Repair Department will be responsible for acknowledging such suggestions or complaints as it receives, for submitting them to the Factory Committee and securing decisions thereon, which will be transmitted to the original writer in each case. The Factory Committee will keep a record of each suggestion or complaint received from the Repair Department and the name of the person making it.

The Sales Department will be responsible for acknowledging such suggestions as it receives, for passing upon them with the aid of the Inventions Committee, and for advising the person making the

SUGGESTION SYSTEM.

suggestion as to its final disposition. The department will also keep a record of each suggestion handled by it, the name of the person who made it, and of its final disposition.

The Assistant Secretary's Department will be responsible for acknowledging such suggestions or complaints as it receives, for passing upon them and transmitting decisions to the persons sending the communications. This department will also keep a record of each suggestion handled by it, the name of the person who made it, and of its final disposition.

NEW BUILDING OPENED.**PRIZE DISTRIBUTION TONIGHT.**

“At the semi-annual distribution of prizes this evening, April 7, 1900, all connected with our organization, including the making, selling and recording forces, are invited to be present and to bring one person with them. We will have two bands of music — one for dancing and one for the promenade room. There will also be a smoking room. The program will include a cake-walk. Eight thousand sandwiches and thirteen barrels of lemonade have been ordered. Two hundred new beautifully colored posters, recently from Paris, will be shown. One thousand Japanese lanterns illuminated with electric lights and thirty-five large colored arc lights are used to decorate the rooms.

“We propose to make this the greatest social event in the history of the Company. I ask it as a personal favor that no one allow any other engagement to interfere with his attendance this evening.

“The factory will not run this afternoon, in order that all persons may attend to their shopping and arrive at the factory promptly at 7 o'clock and remain until 11:30. Special arrangements have been made for prompt street-car service over the entire city until all arrive at their homes. The whole factory will be illuminated from 7 o'clock till 12 o'clock. All members of the Advance Club are a committee of reception to see that you have a good time.”

A handwritten signature in cursive script that reads "John A. Patterson". The signature is written in dark ink and is positioned above the printed name "President.".

President.

The place of this entertainment and ceremony was the magnificent new factory building now known as "No. 3." The President delivered the address of welcome.

Among other things he said:

"Tonight we celebrate three important events: First, we meet to honor fifty of our people for being the successful competitors in the race for giving to the Company the best suggestions for improving its business. And to them and to the large number who have made suggestions, but who were not so fortunate as to win a prize, I return my warmest and most sincere thanks for this very substantial evidence of their good will.

"I am glad to say that the first honor — that of winning the first prize — is carried off by a woman."



Miss Emma Weidner.
First-Prize Winner.

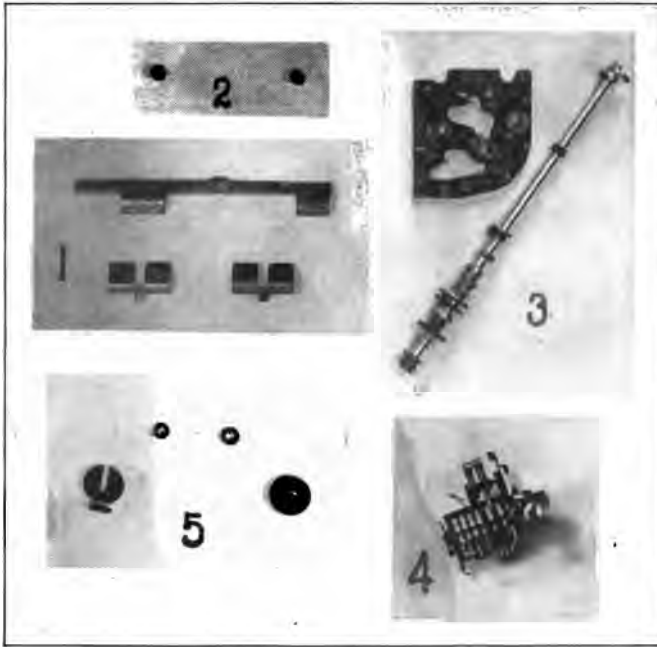
Mr. Frank J. Patterson said:

"These few ladies and gentlemen who have been selected as prize-winners this evening are not the only ones who have contributed to this success. Our helpers include the whole of the employes, and in a measure the whole community. Now I wish to call these few up who have won the first prizes, and introduce them to you. They are our prize employes this evening, and I doubt if a more capable set of people will be found in any factory in the United States or anywhere else."

The prize-winners then came upon the platform and received their diplomas and prizes.



THE PRIZE-WINNERS.



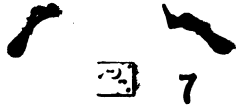
The first five prize suggestions.

THE PRIZE-WINNERS AND THEIR SUGGESTIONS.

- No. 1. **First Prize, \$50; Miss Emma Weidner, Indicator Department.** Print the lettering on No. 79 principle flashes. This suggestion led to the printing of other stock of this character, and we are now experimenting with the printing of indicators for key registers, which we think will prove successful.
- No. 2. **Second Prize, \$40; J. H. Miller, Inspection Department.** Use steel instead of brass for punching key cups.
- No. 3. **Third Prize, \$30; F. W. Sluyter, Mechanical Inspector, New York City.** Construct No. 35 tape-printer so that the revolution-shaft can be removed without taking off the tape-printer plate.
- No. 4. **Fourth Prize, \$25; A. W. Hayes, No. 35 Assembling Department.** Use an extension on the side of the right hand No. 35 counter-carrying lever to carry up the first counter-wheel and thus make it unnecessary to set the segment so wide and also make the mechanism more positive.
- No. 5. **Fifth Prize, \$20; John Gelzenlichter, Invention Department No. 2.** (1) Use simply a punched steel disc properly slotted and formed for the No. 79 check-paper-roll guard. (2) Use a blank counter-ratchet instead of a finished trip cam on third wheel of No. 35 regular counter.



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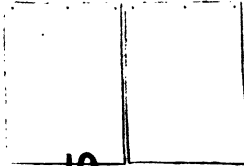
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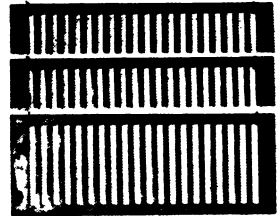
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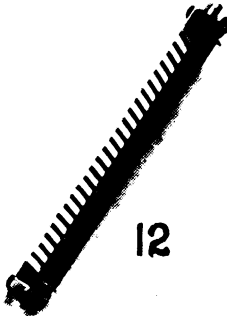
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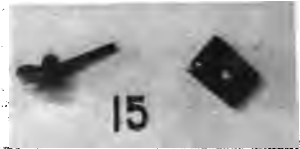
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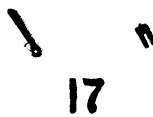
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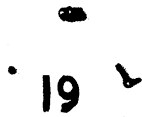
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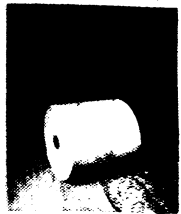
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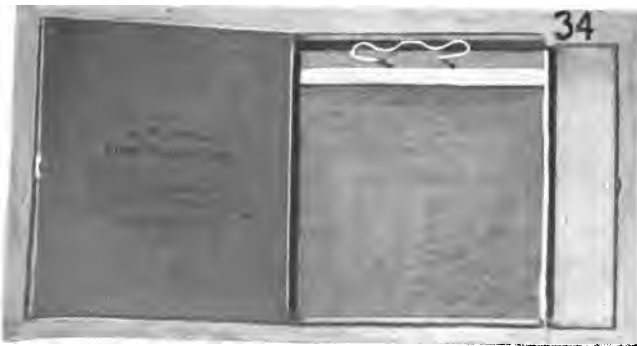
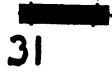
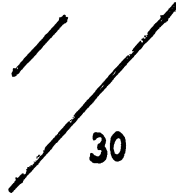


FIFTEEN PRIZES — \$15 EACH.

- No. 6. **D. M. Zile, Packing Room.** (1) Use a new-style No. 2 export packing-box. (2) Use a special packing-box for shipping competition registers.
- No. 7. **Julius Lutzezeit, Mechanical Inspector, Frankfurt-on-the-Main, Germany.** Place the German bell-muffler lock on the back side of the register.
- No. 8. **C. H. Barton, No. 35 Assembling Department.** (1) Use rivet instead of screw for fastening the No. 35 customer-counter-arm roll. (2) Break the sharp corners of No. 35 principle segment-frames. Mr. Barton submitted also several other suggestions.
- No. 9. **D. D. Hendrickson, Adjusting and Testing Department.** (1) Pin the No. 35 revolution-rack screw so that it cannot work out of position. (2) Make "Pint" key operate with amount keys, No. 35 principle.
- No. 10. **William Oswald, Composing Department.** Abandon certain paper stock, and carry instead cheaper stock.
- No. 11. **C. H. Chappel, Stock Department.** (1) Cut out No. 7 sheet-metal key-guards. (2) Make metal key-checks thinner. Mr. Chappel submitted also several other suggestions.
- No. 12. **Charles E. Grobet, Mechanical Inspector, New York City.** Improve the construction of the key check-device arrangement for printing the checks under the keys of a key machine.
- No. 13. **C. W. Dawson, Invention Department No. 2.** Use a new-style No. 79 check-ejector arm and block cheaper than that in use heretofore.
- No. 14. **C. W. Stewart, No. 79 Assembling Department.** Improve the No. 79 bell-muffler, and at the same time make it cheaper.
- No. 15. **Kaufmann Schwartz, Indicator Dipping Room.** Use clamp to hold No. 79 principle indicators on the shaft while they are being sandpapered and painted.
- No. 16. **George Skelton, No. 35 Assembling Department.** (1) Add stock to the key-guard lug on No. 35 iron cabinet side. (2) Mill returned No. 35 principle cabinets for the flashea. Mr. Skelton submitted also several other suggestions pertaining to cabinets.
- No. 17. **Harry Nelson, No. 35 Assembling Department.** (1) Use special key-stop on certain No. 35 principle registers. (2) Abandon the key-lock yoke, No. 35 principle, in certain cases.
- No. 18. **George M. Leisentritt, Bench Department.** Use 9-16-inch instead of 5-8-inch cold drawn steel for No. 35 tape-printer-ribbon tension-rolls. This will make the rolls cheaper.
- No. 19. **O. C. Wheeler, Mechanical Inspector, New York City.** (1) Make No. 79 latch stop pawl heavier, harden it, and use rivet in it instead of screw. (2) Lengthen No. 79 check-ejector compression spring cap-screw.
- No. 20. **John Shook, Paper Slitting Room.** (1) The large rolls of paper for No. 79 checks can be reduced in width. (2) Have "A" grade autographic paper shipped on iron cores.

FIFTEEN PRIZES — \$10 EACH.

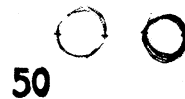
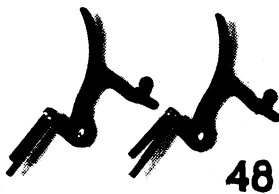
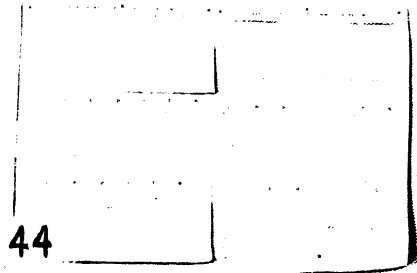
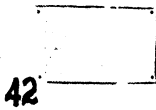
- No. 21. **Robert Stelzig, Lock and Drill Department.** Make the clock lock so that the No. 2 side-lock for No. 79 will not operate it; also make the No. 1 side-lock for No. 79 so that the No. 2 side-lock key will not operate it.



- No. 22. Joseph Gregor, No. 79 Assembling Department. Improve the method of fastening small electro, No. 79, which prints below the amount on the check.
- No. 23. Miss Mary Stier, Bindery. Equip the stitching machines with adjustable gauges.
- No. 24. W. F. Baldwin, No. 35 Assembling Department. Make the jig for No. 2 segment-hub, No. 35 principle, to drill two holes instead of but one; then this same hub can be used on the No. 4 segment.
- No. 25. J. C. Carroll, Inspection Department. Use steel instead of brass for making detail side-lock screws for iron cabinets; also cheapen certain inspection operations by the use of more suitable gauges.
- No. 26. Frank Griefmeder, Stock Department. Use old-style detail bell-hammers by providing bushings for the large holes.
- No. 27. H. W. Fricke, Mill Department. Use a cheaper grade of steel for the No. 35 special counter turn-back shafts.
- No. 28. Fred Huber, Brass Room. Use .025-inch stock for making No. 35 flashes instead of .032-inch stock.
- No. 29. E. B. Frazell, Tool Supply Department. The short flutes on rose-reamers should be cut back at least one-half farther than they have been, to lengthen the life of the reamers.
- No. 30. Henry Lengfellner, Tool Supply Department. Arrange to spline such shafts as the Nos. 35 and 79 counter turn-back shafts, so that the capacity can at least be doubled.
- No. 31. Miss Anna Kuntz, Indicator Department. Use two sizes of No. 35 special-counter glass stencils containing all the letters of the alphabet.
- No. 32. I. W. Smith, Inspection Department. Grind the No. 79 flash operating-lever rolls to make them accurate.
- No. 33. William McCarthy, Patent Department. Suggested improvement on the new-style indicator-flash used on No. 35 principle.
- No. 34. W. C. Dey, Assistant Secretary's Office. Carry in stock two kinds of filing-cases — the "Union" with an arch attachment, and the "Ideal" without such an attachment.
- No. 35. J. S. Appenzellar, Inspection Department. Use a concave striking-die for No. 79 intermediate gears and segments, and strike these parts in the Punch Press Department instead of in the Blacksmith Shop.

FIFTEEN PRIZES — \$5 EACH

- No. 36. O. J. Hatton, Stock Department. Use rags instead of muslin in the various assembling departments for wiping machines, etc.
- No. 37. E. H. Kelly, Bench Department. Burr the No. 2 side-lock frames for No. 79 on speed-lathe instead of on the bench.
- No. 38. Gus Hahn, Mill Department. Abandon the drilling of hole in the end of the bell-trip lever and use a cutter that will mill the slot the proper shape.
- No. 39. Miss Lola Lake, Lock and Drill Department. Put hardened plates around bushings of drill-jigs where satisfactory, to keep the drills from spoiling the jigs when they accidentally miss the bushings.



- No. 40. **H. Tuttle, Inspection Department.** Make No. 79 retaining-bar-spring hooks of soft screw-iron instead of brass.
- No. 41. **Arthur Marshall, Order Department.** Use standard key arrangement for German No. 79, saving time and labor.
- No. 42. **L. D. Baker, Collection Department.** Instead of mailing to agents private postal cards of inquiry, inclose them with the agents' regular mail.
- No. 43. **Miss Minnie R. Stauffer, Stock Department.** Send clock-cases directly from foundry to be machined, and order them out afterward to be finished, handling them similar to signs.
- No. 44. **E. C. Beaver, Treasurer's Department.** Change the printing of the register customer invoice to save time in writing.
- No. 45. **Harold Prior, Final Inspection Department.** Discontinue furnishing "No Sale" pads with registers to Great Britain on which the only special key is the "No Sale" key.
- No. 46. **C. W. Marlin, Adjusting and Testing Department.** Use a more satisfactory bell-hammer tongue for detail-adding registers.
- No. 47. **Edward Mull, Supply Department.** Print in the factory the linen shipping tags used in the various departments.
- No. 48. **E. J. Hayes, No. 35 Assembling Department.** Use a hook for the new No. 35 "Easy Device" spring instead of a straight pin.
- No. 49. **Miss Emma C. Brady, Lock and Drill Department.** Use stronger operating-spring on lid-counters.
- No. 50. **Andrew McMaster, No. 35 Assembling Department.** Use annealed iron wire instead of copper wire for tying back key-locks.

PRIZES INCREASED \$690.

Six hundred and ninety dollars in cash prizes will be awarded to employes submitting the best suggestions during the six months ending June 20, 1900, the amount to be divided as follows:

First prize, \$50.	Fifth prize, \$20.
Second prize, \$40.	Fifteen prizes, each \$15.
Third prize, \$30.	Thirty prizes, each \$10.
Fourth prize, \$25.	

The large number of prizes offered makes it possible to reward some minor suggestions, while recognizing the efforts which assist in more important matters. Suggestions should be made even though they seem of small importance, as each idea given may lead to a better one. In determining the relative order of the prizes, all the suggestions made by each one during the period will be considered, so that numbers as well as importance will count.

For these prizes all factory and office employes (excepting heads of departments and their first assistants), mechanical inspectors and employes of agencies (excepting sales agents and salesmen), are entitled to compete.

Suggestions may relate to improvements in registers, tools, machinery, system employed, and to the general management of the business.

SUGGESTION SYSTEM.

Factory employes should submit their suggestions to the Factory Committee; office employes, to the Office Committee, irrespective of the nature of the suggestion.

Suggestions may be written on the autographic registers provided for the purpose, or they may be sent by messengers, shop mail, or U. S. mail, or may be left with the doorkeeper.

These prizes will be distributed at our next International Convention, which will be held the first week in July. We earnestly solicit the co-operation of all employes in the above.

INCLUDED IN THE COMPETITION.

It has been decided that hereafter employes of our agencies, except sales agents, salesmen or repairmen, will be permitted to compete with the office employes at the factory for the regular semi-annual prizes offered by the Company for suggestions and complaints. As is already known, mechanical inspectors can compete with the factory employes for these prizes.

DATE OF PRIZE AWARD CHANGED.

The prize-suggestions contest for the current six months will close June 20, 1900, instead of the 30th, in order to give time to award the prizes during the first week in July, on the occasion of our convention. We call upon all employes to make an extra effort to furnish us the best suggestions they can before that time, especially those employes who have not responded before.

This effort will not only be appreciated by the Company, but will serve to develop and encourage the inventive faculties in the one making the suggestion, and thus to improve him.

Suggestions in regard to what to do at the convention, how to handle it, etc., will be considered eligible for prizes among the others submitted during the current six months.

Our people should never lose sight of the fact that the greatest good which they accomplish by making these suggestions is not their pecuniary value to the Company, nor is it the immediate money prize awarded to the suggester. The real achievement which is worth more than all else to him is the mental and creative power developed in himself and the special exertion of his intelligence. This makes him a more useful and valuable man, increases his future earning capacity and adds to that permanent strength and broadening of character whose value cannot be measured in dollars and cents.





Agents renewing acquaintances.

INTERNATIONAL CONVENTION, JULY, 1900.

In this month, what is known at the factory as "The Great International Convention" was held at Far Hills the last of the month. Officers and salesmen were present from Great Britain, France, Germany, Sweden, Holland, South Africa and other distant points.

The winners of prizes for good suggestions were called upon the stage, and after various addresses, a photograph was taken and they were given the special honors of the occasion.



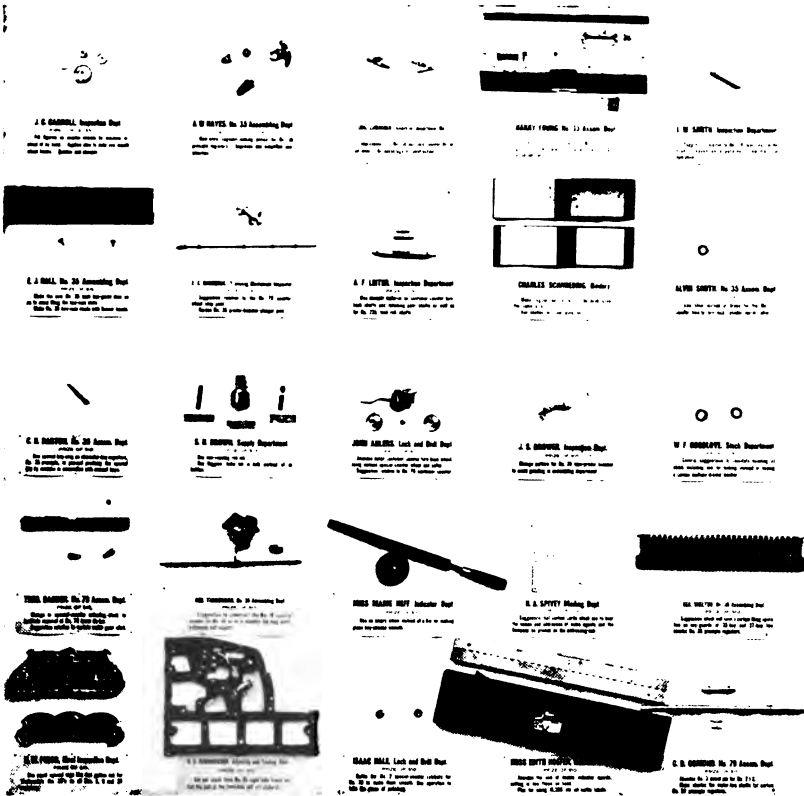
The prize-winners.

THE PRIZES AND THE WINNERS.

The following is a list of the prize-winners and their suggestions submitted between January 1 and June 10, 1900:

First Prize, \$50; J. C. Carroll, Inspection Department. Fill the figures on the various counter-wheels by the use of machine instead of by hand. This applies also to the No. 79 cylinder date and month wheel knobs and other stock of this kind. It enables us to produce the work much quicker, and therefore much cheaper.

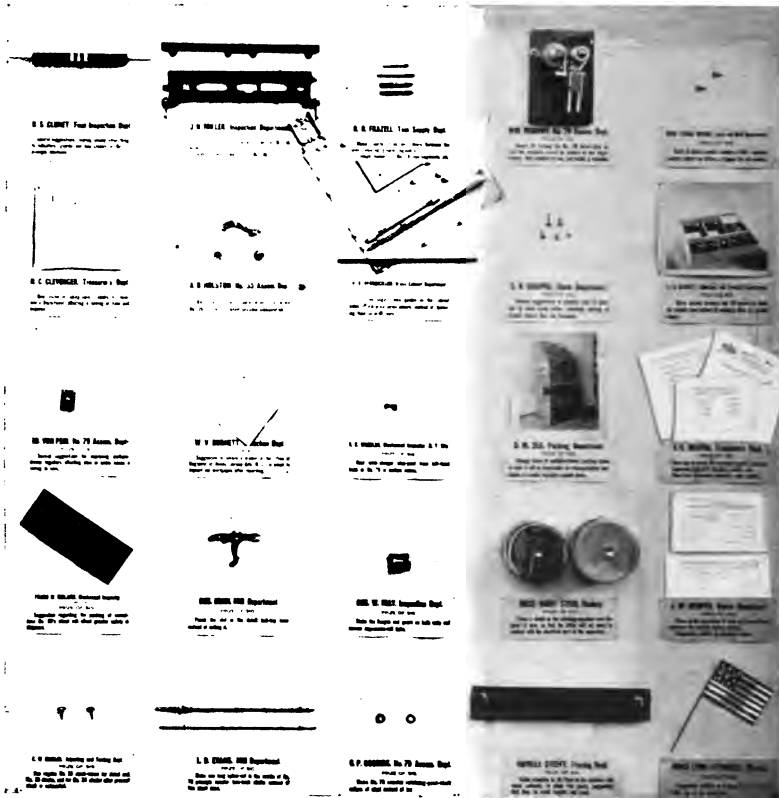
SUGGESTION SYSTEM.



Second Prize, \$40; A. W. Hayes, No. 35 Assembling Department. New-style segment-locking device for No. 35 principle registers. The segment-locking cams are abandoned, and the locking-plates are made part of the registering-segments. This improves and simplifies the construction.

Third Prize, \$30; Emil Lundgren, Inventions Department No. 2. Punch and form the projection on the auxiliary-counter throw-out lever for No. 35 to take the place of the stud entering the slot of the auxiliary-counter frame. This proved to be quite an advantage in the construction of the two-counter registers.

Fourth Prize, \$25; Harry Young, No. 35 Assembling Department. Several suggestions for changing and improving the No. 35 principle guards, counter-plates and counter-glasses, with the idea of saving stock and labor. One suggestion includes the abandoning of No. 73 counter-plate and counter-glass.



Fifth Prize, \$20; I. W. Smith, Inspection Department. Carry in stock operating-handle studs for No. 79's with the short operating-handles separate from the studs for the long handles, thus omitting an expensive screw-machine operation.

FIFTEEN PRIZES — \$15 EACH.

Nat S. Clunet, Final Inspection Department. Several good suggestions, specifying among other things the desirability of using uniform wording on special indicators, guards and key-checks of two-counter No. 35 principle registers.

J. H. Miller, Inspection Department. (1) Discontinue the drilling of unnecessary spring-holes in No. 35 upper front cross-bars. (2) Use a shorter and less expensive dowel-pin to attach the flash operating lever to the key-coupler, No. 35.

SUGGESTION SYSTEM.

- B. B. Frazell, Tool Supply Department.** (1) Make counter-bores with fillets between the flutes, to make them last longer. (2) Use more appropriate reamers for No. 79 type-segments and No. 79 special detents.
- William Murphy, No. 79 Assembling Department.** Device for locking the No. 79 detail-strip. This improvement has not been adopted for use, but the idea was ingenious and the model is considered valuable.
- Miss Clara Busche, Lock and Drill Department.** Carry in stock a certain number of No. 1 special-counter collars, not drilled or tapped for the use of set-screws, as some of the collars are used without set-screws.
- E. J. Hall, No. 35 Assembling Department.** (1) Make the new back key-guide for No. 35 so that the key-cam slots will not have to be filed. (2) Make the No. 35 key-cam rivets with thinner heads, to save work in assembling.
- E. C. Rhonemus, Traveling Mechanical Inspector.** (1) Set the No. 79 counter-wheel stop-pawl so that it will not catch on the turn-back-pawl stud in turning the counter to zero. (2) Harden the No 35 printer-hammer-plunger pins.
- A. F. Leiter, Inspection Department.** Use a different material for the customer-counter turn-back shafts and retaining-pawl shafts as well as for the No. 225 feed-roll shafts.
- Charles Schmieding, Bindery.** (1) Make regular and drivers' order-book covers the same size. (2) Use common shellac instead of more expensive material for cover work, etc.
- Alvan Smith, No. 35 Assembling Department.** Use steel instead of brass for the No. 35 counter turn-to-zero lock cylinder barrel collar.
- H. C. Clevenger, Treasurer's Department.** New system for taking care of books in the Treasurer's Department, effecting a saving of expense for binders and of time in looking up accounts.
- A. B. Holston, No. 35 Assembling Department.** Knurl the right-hand counter-wheel of a certain No. 35 counter.
- H. V. Hendrickson, Brass Cabinet Department.** Cast the angle-drawer guides on the cabinet-sides of the low-price detail-adders, instead of fastening them on by the use of rivets.
- C. H. Chappel, Stock Department.** Several suggestions to cheapen the cost of stock and to make stock better, including the slotting of screws before they are threaded.
- S. B. Albert, Adjusting and Testing Department.** Carry certain drawers and till-covers in stock for regular use, instead of ordering them as special stock.

TWENTY-NINE PRIZES — \$10 EACH.

- C. H. Barton, No. 35 Assembling Department.** Use a special-key stop on character-key registers, No. 35 principle.
- S. H. Brown, Supply Department.** (1) Purchase non-copying red ink, instead of copying. (2) Purchase Higgins's India ink in bulk instead of in bottles.

- John Ahlers, Lock and Drill Department.** (1) Abandon the detail customer-counter turn-back wheel, using instead a special counter wheel and collar. (2) Use collars in No. 79 customer-counter to prevent the wheels from binding on the retaining-pawls.
- J. S. Brown, Inspection Department.** Change pattern for No. 35 tape-printer hammer to avoid grinding in the Assembling Department.
- W. F. Goodlove, Stock Department.** Several suggestions to facilitate the handling of stock, including the making of a certain multiple-drawer washer, instead of buying it.
- Ed. Von Pein, No. 79 Assembling Department.** Several suggestions for improving and cheapening the multiple registers, including the use of but one lock for the two doors of the cupboard below the drawers.
- W. V. Burnett, Collection Department.** Secure a drawer in office of Registrar of Deeds, Jersey City, N. J., in which our mortgages may be deposited after they are recorded, and where one of our representatives may get them and return them to us. This makes it unnecessary for us to send the Registrar of Deeds stamped envelopes for their return and fifteen cents each time for registration fees.
- O. C. Wheeler, Mechanical Inspector, New York City.** Omit the latch-plunger stop-pawl from the left-hand bank of No. 79 when that bank does not have amount keys and is used to operate the register.
- D. M. Zile, Packing Department.** Change the shape of the multiple-drawer packing case so that it will be impossible for transportation companies to handle the register upside down.
- E. C. Beaver, Treasurer's Department.** (1) Improvement in method of taking care of canceled agents' accounts. (2) Improvement in manner of handling credits, cash or notes received on registers where invoices have not yet reached the Treasurer's Department. (3) Form of notice to be sent to sales agents notifying them when it is impossible for the Treasurer's Department to locate an order for which it has received settlement.
- Theo. Bacher, No. 79 Assembling Department.** (1) Change special-counter actuating-block so that the No. 79 lower tiebar can be removed without taking off the release-key line. (2) Chamfer the end of the No. 79 intermediate motor-gear stud, to prevent the swelling of the stock in riveting.
- George Timmerman, No. 35 Assembling Department.** Construct the No. 16 special counter for No. 35 to abandon the long shaft, the extension and the support.
- Miss Mame Neff, Indicator Department.** Use an emery-wheel instead of a file for making glass key-checks smooth.
- R. A. Spivey, Mailing Department.** Have the Typewriting Department send to the Mailing Department to be addressed on the addressograph any cards on which should appear agents' addresses or the Company's address.
- George Skelton, No. 35 Assembling Department.** Make all No. 35 cabinet key-guards for two-counter registers with the slot in the end, so that the slot will not have to be filed in the guards used on 33-key and 37-key machines.

- Frank W. Beiland, Mechanical Inspector, Columbus, Ohio.** In packing swivel-base No. 79 principle registers use strips of wood or cardboard between the machine proper and the base, so that it will carry better in shipment.
- Gus Huhn, Mill Department.** Punch the slot in the detail bell-trip lever instead of milling it.
- Miss Mary Stier, Bindery.** Provide a shield on the stitching-machine over the spool of wire so that the wire in unwinding will not come in contact with the electrical part of the apparatus and cause a short circuit.
- J. M. Kemper, Repair Department.** (1) Place on the guaranties pasted underneath loan and second-hand registers the original factory number of the machine in addition to the loan or second-hand number. (2) When an order for a register is canceled either attach a memorandum to or make a notation on the order to this effect.
- H. W. Prior, Final Inspection Department.** Use the small special sign gotten out for Woolworth's No. 30's on all Nos. 5, 6 and 30 registers.
- D. D. Hendrickson, Adjusting and Testing Department.** Change No. 35 right side frame by cutting out stock so that the bolt of the hood-lock will not strike it.
- Isaac Hale, Lock and Drill Department.** Rattle the No. 2 special-counter ratchets for No. 79 to make them smooth, this operation to take the place of polishing.
- Miss Edith Hofer, Indicator Department.** (1) Abandon the use of double indicator-boards. Cut in two those on hand. The single boards are much more convenient. (2) Cut down the 10,000 old ink bottle labels in stock so that they can be used on the new bottles.
- C. D. Osmond, No. 79 Assembling Department.** (1) Abandon No. 3 dowel-pin and use the regular No. 2½ dowel-pin. (2) Make the motor-line shafts for certain No. 79 principle registers shorter, to come flush with the steel transfer-shaft and motor-line gears.
- C. W. Marlin, Adjusting and Testing Department.** Use the regular No. 35 clock-screw for detail and No. 30 clocks; also for No. 33 clocks after the present stock is exhausted.
- D. L. Evans, Mill Department.** Make one long spline-cut in the middle of No. 79 principle counter turn-back shafts, instead of two short cuts, the one long cut being cheaper than the two short ones and answering the same purpose.
- G. P. Combs, No. 79 Assembling Department.** Make No. 79 counter retaining-pawl-shaft collars of steel instead of brass.
- Orville Steffy, Tracer's Department.** Called attention to twenty fleur-de-lis cabinets with metal tops which have been in stock for about two years; suggested that they be made regular and used by removing the tops.
- Miss Lydia Stuessel, Bindery.** As a convention feature, roll a large number of small flags up in one large flag placed near the top of the tent, to be unfurled when the national anthem is sung, so that the small flags will flutter down on the audience.

1901

WANTED.

SUGGESTIONS FOR OUR EXHIBIT AT THE PAN-AMERICAN EXHIBITION

A Pan-American Exposition Committee has been appointed, consisting of Mr. W. F. Schweiger, Mr. W. B. Pearson and Mr. O. C. Reeves. This committee invites suggestions from our people as to the best way to exhibit our registers, and ideas on decorations and special features calculated to help make our exhibit at Buffalo the best we have ever had. Suggestions along these lines will be welcomed by the committee, and careful consideration will be given to every suggestion submitted.

Send along your suggestions.

PRIZE-WINNERS FOR 1900.

Owing to the death of Vice-President Frank J. Patterson, early in July, no formal delivery of prizes was made at this time, but the winners were paid their prizes at the Paymaster's Department.

CERTIFICATE

OF AWARD

This Certifies that

John Blank

has been awarded one of the Prizes for Valuable Suggestions submitted between July 1 1900 and December 31 1900 inclusive.

In token of our appreciation we herewith subscribe our names and have caused the Company's Seal to be affixed this 3d day of July Anno Domini 1901 at Dayton, Ohio, U.S.A.

John H. Patterson
PRESIDENT

F. J. Patterson
VICE PRESIDENT

Chas. B. Patterson
GENERAL MANAGER

Wm. B. Bickel
CASHIER



NATIONAL
CASH REGISTER COMPANY
OF THE
UNITED STATES OF AMERICA

N. C. R. Diploma for good suggestions.

PRIZE-WINNERS FOR 1900.

Prizes for good suggestions, landscape gardening and for boys' gardens, to the amount of \$961.75, are now ready for distribution.

The Company has decided to dispense with the customary public prize distribution in the future. The various prize-winners named below will therefore please call at the Paymaster's Department and receive their prizes and diplomas. This will be accepted as their notice to do so.

**List of Prizes and Prize-Winners for Good Suggestions, for Six Months Ending
December 31, 1900.**

I. W. Smith, Inspection Department	\$50 00
C. W. Schuder, Inspection Department	40 00
Charles Steffy, Inspection Department	30 00
Charles Schmieding, Bindery	25 00
H. J. Bucher, Inspection Department	20 00
Oscar Wilkerson, Treasurer's Department	15 00
J. C. Carroll, Inspection Department	15 00
William McCarthy, Patent Department	15 00
J. Seifert, Brass Foundry	15 00
O. V. Bell, Order Department	15 00
William Murphy, No. 79 Assembling Department	15 00
J. H. Miller, Inspection Department	15 00
John Shook, Press Department	15 00
Ed. Von Pein, No. 79 Assembling Department	15 00
R. B. Frazell, Tool Supply Department	15 00
J. B. Phillips, Inspection Department	15 00
A. A. Wentz, Sales Department	15 00
J. Aring, No. 79 Assembling Department	15 00
W. Reynolds, No. 35 Assembling Department	15 00
D. D. Hendrickson, Adjusting and Testing Department.....	15 00
E. D. Vagnier, No. 79 Assembling Department	10 00
W. F. Goodlove, Stock Department	10 00
B. Davidson, Treasurer's Department	10 00
E. J. Hall, No. 35 Assembling Department	10 00
L. Michel, Press Department	10 00
J. E. Franz, Treasurer's Department	10 00
C. H. Chappel, Stock Department	10 00
P. J. Weilhart, Inspection Department	10 00
F. H. Ruggles, Brass Cabinet Department	10 00
J. S. Appenzellar, Inspection Department	10 00
L. Meyer, No. 79 Assembling Department	10 00
L. E. Smith, Indicator Department	10 00
F. Augenthaler, Mechanical Inspector, Berlin	10 00
W. E. Francisco, Inspection Department	10 00
Miss Helene Gusman, Indicator Department	10 00
John J. Evans, No. 35 Assembling Department	10 00



N. C. R. PRIZE-WINNERS FOR SIX MONTHS ENDING JUNE 30.

It is with much pleasure that the Company presents to the readers of The N. C. R. the above photograph of the prize-winners for the six months ending June 30, 1901.

The awarding of the prizes has been delayed owing to the pressure of work and other matters at the factory.

We have printed many columns in the past showing the value of having employes keep constantly in mind the improvement of our product, and how valuable this feature has been to us and to them. Everything we have said in the past holds good today, but just for a novelty we publish extracts from a journal printed by the Acme White Lead and Color Works, of Detroit, Mich., in an article descriptive of the distribution of prizes to their employes for good suggestions for the first half of this year. The prizes were distributed by the president of the company, Mr. Wm. L. Davies, and in his talk he expressed the following excellent ideas:

“ The mere fact of an employe offering a suggestion indicates that that man or woman was thinking of something that might prove of interest to the business. The officers and managers of this company think that this is one of the very good features of the business, as through the offering of prizes for suggestions employes have an opportunity to show their interest in the business and their ability to think out ideas of practical benefit to the business in which we are all interested.

“ It is very essential that before the suggestion is put in the box the matter should be thought out thoroughly, and the suggestion should cover the various points in a brief and practical manner; and where special machinery or devices are suggested the suggestion should be accompanied by a careful drawing or plans. If suggestions are turned in that way the value of them can be ascertained with the least possible trouble and the points of vantage more readily appreciated.

“ In giving the above prizes we would not have those that offered suggestions and failed to get prizes feel discouraged; in fact, we trust that they will take the opposite view and strive all the harder to win recognition in the future. These prizes are not given grudgingly by us, but it is a positive pleasure to express our appreciation in this manner, covering the thought and work of the prize-winners. It is to be hoped that each and every employe within the sound of my voice will make a mental note to do some thinking on his or her own account and hand in a suggestion of some sort during the next six months.”

These views are so thoroughly in accord with those of the N. C. R. Company that we feel that no more need be said. We extend our heartiest congratulations to the prize-winners, and our thanks to those others who have sent in good suggestions, and hope that their success will stimulate all of our employes to renewed efforts in the future.

PRIZE-WINNERS.

Here is a list of the prize-winners and their suggestions for the period ending June 30, 1901.

First Prize, \$50; C. H. McCune, Inspection Department. Abandon the color-buffing operation on cabinet parts and trimmings.

Second Prize, \$40; George W. May, Inspection Department. (1) Improvement in No. 79 principle registers which makes it impossible to "ball up" the register by not turning the counter wheels fully to zero and then pressing a key and operating the handle. (2) Use steel instead of brass for making detail impression rolls, No. 79 principle.

Third Prize, \$30; Henry Hungling, Punch Press Department. Use steel only $4\frac{3}{4}$ inches wide instead of five inches wide for punching out steel keys.

Fourth Prize, \$25; I. W. Smith, Inspection Department. (1) Improvement in manufacture of No. 79 principle counter gears. (2) Making use of a lot of No. 79 principle counter frames.

Fifth Prize, \$20; P. J. Weihart, Inspection Department. Improvement in manufacture of No. 35 principle segment frames. Also other suggestions.

FIFTEEN PRIZES — \$15 EACH.

C. H. Chappel, Stock Department. Improvement in polishing key-cup rings. Also several other suggestions of lesser importance.

Wm. McCarthy, Patent Department. Construct No. 79 principle multiple-counter register so that no amount can be registered with the lever in the "No Sale" position.

D. D. Hendrickson, Adjusting and Testing Department. Send out small vest-pocket memorandum books only when specially ordered, instead of with all registers.

Charles Roth, Sales Department. Suggested circular letter to be mailed to druggists and confectioners advertising National Cash Registers for the soda-water trade. Also other suggestions.

August Peters, Brass Cabinet Department. Discontinue the filing of detail scroll and fleur-de-lis ends before soldering.

Frank Huber, Brass Cabinet Department. Use steel strips, each 72 inches long by $4\frac{5}{8}$ inches wide, for detail and No. 35 principle flashes.

S. B. Minnich (not now in employ of the Company, owing to ill health). Use a better form of counter shield, No. 35 principle.

E. S. Manchester, Brass Cabinet Department. Cast check-device cups with the hinges on them, instead of fastening the hinges on afterward.

C. W. Schuder, Inspection Department. Use No. 40 instead of No. 60 tar-board for backs of statement books.

L. A. Rader, Repair Department. Rebind and put in better shape certain valuable records of the Shipping Department, kept in the vault.

- Harry Davis, Inspection Department.** Instead of scrapping No. 79 principle drawer front strips that have letters or figures slightly filled in casting, send to pattern-makers and have them cut out.
- Joseph Esch, Stock Department.** Save and use a lot of old-style center cross-bars and lower front cross-bars, No. 35 principle, in raw stock by putting on them certain machining operations.
- Homer Hockett, Collection Department.** Ship certain low-price registers that are sold on cash terms, C. O. D.
- J. C. Carroll, Inspection Department.** Save a large lot of No. 79 principle indicators, old-style, by converting them into useful stock. Also other suggestions of considerable merit.
- William Murphy, No. 79 Assembling Department.** Discontinue facing operations on No. 79 principle detail strip driving and retaining pawls.

THIRTY PRIZES — \$10 EACH.

- F. A. Wagner, Treasurer's Department.** Suitable index for "Duplicate Paid in Full" cabinet, so that records can be located more readily.
- A. T. Bentz, No. 35 Assembling Department.** Change dies for No. 35 principle special printer wheel operating levers.
- Charles Ever, Stock Department.** Make use of No. 35 principle counter turn-to-zero locks No. 4, ordered abandoned, by converting them into regular stock.
- J. Davis, No. 79 Assembling Department.** The No. 2 detents, No. 79 principle, that come through with teeth broken can be used by converting them into No. 8 detents.
- C. Boorum, Inspection Department.** Improvement in manufacturing the special and customer counter turn-back shafts.
- Chas. H. Parker, Press Department.** Carry a stock of 17½-inch A-grade autographic paper, the same as B-grade.
- E. B. Frazell, Tool Supply Department.** Drill No. 35 principle counter carrying levers for the extensions and thus carry them in stock. Also other suggestions.
- C. G. Wetz, Inspection Department.** Instead of putting pins in upper front cross-bars, No. 35 principle, to which to fasten the easy device springs, cast a lug on the piece and drill the spring holes in the lug. And other suggestions.
- D. M. Zile, Adjusting and Testing Department.** A method of attaching marble slabs on extended base machines to avoid breakage. And other suggestions.
- J. L. Mayer, Woodworking Department.** Provide a swedge for drawing out partitions, etc.
- W. J. E. Lloyd, Order Department.** Take off the clocks and signs of returned second-hand registers. Also make out only one repair card instead of two.
- J. W. Mackey, No. 79 Assembling Department.** Lock-plate for multiple-counter hood, bearing the lettering and formed to receive the lock bolt. And other suggestions.
- Gus Huhn, Mill Department.** Abandon milling for clearance on ink-pad arm pitman collar, No. 79 principle, by changing pattern.

- O. G. Espy, No. 35 Assembling Department.** Special riveting tool for use in riveting flexible carrying cam-stop pin into the shaft, No. 35 principle.
- M. S. Barr, No. 35 Assembling Department.** Use No. 37 instead of No. 40 drill in No. 35 principle lining pawl spring supports; also overhaul the lining pawl tools to correct certain troubles experienced by the assemblers.
- Charles Shearer, No. 2 Inventions Department.** Change No. 35 principle upper drawer-slide and upper front cross-bar patterns.
- Miss Ada Brumbaugh, Indicator Department.** Carry in stock certain indicators dipped in lead, all ready for zinc, so that orders can be filled quicker. Also convert old style two-counter special indicators No. 3 into No. 2, No. 35 principle.
- E. Lawrenz, Stock Department.** Convert old style No. 2 segment shafts, as well as No. 3, into ink-pad cam-shafts, No. 79 principle. And other suggestions.
- Charles Schmieding, Bindery.** Rule our own English memorandum books. And other suggestions.
- J. J. Weinman, Woodworking Department.** Convert into No. 2 size a lot of old No. 3 size wood cabinets. And other suggestions.
- C. D. Osmond, No. 79 Assembling Department.** Change hole in key-lock lever for counter locking-pawl, No. 79 principle, making it No. 44 size. And other suggestions.
- J. Aring, No. 79 Assembling Department.** Drill and counter-sink swivel base holes in No. 79 principle regular bases only when swivel bases are used, instead of in all.
- B. Phillips, Inspection Department.** Change locating jig for auxiliary counter throw-out lever No. 3 so that the extensions will not be too short in assembling No. 35 principle. And other suggestions.
- F. I. Eunyon, Woodworking Department.** Use the standard angle-irons on the drawers of multiple registers, then gain the drawers deeper and get a better bearing.
- Harry Young, No. 35 Assembling Department.** Make lid-support slot in No. 35 principle guards, two-counter, longer. And other suggestions.
- J. Lutzeweit, Mechanical Inspector, Berlin, Germany.** (1) Cast hole in No. 79 principle hood-plate through which to reach cabinet screw, so one could remove side without taking off hood-plate. (2) Use longer screws to attach check-receivers to the hoods, No. 79 principle, because of the short screws working loose.
- J. H. Bradbury, Adjusting and Testing Department.** Do not use back name-plates on concessionaire registers for Pan-American Exposition. The name itself on back of register will answer the requirements. Also several other suggestions.
- Miss India Teeple, Typewriting Department.** Furnish the girls steel markers to aid in checking Dun and directories.

INTERESTING INFORMATION REGARDING THE PRESENT PRIZE-WINNERS.



First Prize-winner C. H. McCune has won altogether five prizes (including this one)—\$10, \$60, \$10, \$15, \$50.

Second Prize-winner George W. May has won altogether three prizes — \$10, \$10 and \$40.

Third Prize-winner Henry Hungling has not won prizes before this, but this one starts him off with a good record.

Fourth Prize-winner I. W. Smith has a fine record of seven previous prizes — \$50, \$50, \$40, \$20, \$15, \$10, \$5 — making eight all told.

Fifth Prize-winner P. J. Weihart has won in all five prizes — \$15, \$10, \$15, \$10, \$20.

Mr. J. C. Carroll, who won a prize of \$15 in this contest, is a star performer. He holds the remarkable record of never missing a prize since this feature was inaugurated, having won a prize every six months for five years, making ten prizes in all, of the following amounts: \$20, \$20, \$15, \$10, \$10, \$15, \$20, \$50, \$15 and \$15. This is a splendid achievement, and Mr. Carroll is deserving of the heartiest congratulations.

Mr. William Murphy has also an excellent record, having won eight prizes ranging in amount from \$10 to \$100.

Mr. Charles Schmieding, of the Bindery, while not being as successful as Mr. Carroll in the amount of his winnings, has only missed getting a prize once, having won nine prizes out of ten contests.

Mr. Harry Young has won \$5 twice, \$10 once, \$25 once and \$15 once.

Mr. R. S. Manchester, who has been connected with the Company for over sixteen years, seems to be especially partial to gold eagles. His first prize was \$3; after that he won three golden eagles in succession, and then topped the record by taking the present prize of \$15. As he is on the upward track, we can probably expect him to win one of the higher prizes at the next award.

Mr. August Peters, of the Brass Room, holds the honorable record of two prizes of \$15 each, one of \$10, and his present prize of \$15.

Mr. E. B. Frazell has won \$15 twice, \$10 once, and his present prize of \$10.

Mr. D. M. Zile is a top-notch, with one \$20 prize, one \$15, two \$10's and his present winning of \$10.

Mr. H. L. Haas, of the Brass Room, is richer by one prize of \$15, two of \$10, one of \$5, and the present one of \$10.

Mr. Wm. McCarthy, of the Patent Department, took two prizes of \$10, one of \$15 and this one of \$15.

Mr. D. D. Hendrickson, of the Final Inspection Department, is up among the leaders with two prizes of \$10, one of \$15, and his present prize of \$15.

Mr. Charles Schuder made his initial winning by taking a \$40 prize. He now gets one of \$15.

Mr. C. D. Osmond has won two prizes of \$15 each and the present one of \$10.

Others of the prize-winners have been lucky before with one or two prizes each.

Emulate the example of the people at the factory by becoming a prize-winner yourself. The banner would look well with your name at the head.



1902

THE ENCOURAGEMENT OF LATENT TALENT AT THE FACTORY.

A short time ago mention was made in The N. C. R. of the contest which was to be held among the young women employes in the factory, to see who could originate the best expressions for use on our window display posters. We had no idea, when the contest was started, that such interest would be taken in it. Much to our surprise, 310 of the young women competed for the prizes, and the extraordinary number of 1,500 suggestions was submitted. There were about 500 posters in all. Because of the interest taken in the contest, the Company decided to make the gross amount of the prizes \$75, and to extend the list to twenty awards instead of ten.

It was also decided to make the awards at a dinner at the Officers' Club on Saturday, December 21. The young women prize-winners were invited to dine there on that day. The room was decorated with attractive posters and window display cards.

President Patterson spoke of the satisfaction the Company felt that so many had competed with such a large number of suggestions.

In awarding the prizes he further commented upon the accomplishments of many of the prize-winners in the direction of music and art. Following is the list of prize-winners:

- First prize, \$10. Miss I. MacGregor, Typewriting Department.
 Second prize, \$8. Miss R. Rotinson, Typewriting Department.
 Third prize, \$6. Miss P. Fansher, Indicator Department.
 Fourth prize, \$6. Miss L. Steussel, Bindery.
 Fifth prize, \$5. Miss Anna Cowan, Bindery.
 Sixth prize, \$5. Miss C. Smith, Indicator Department.
 Seventh prize, \$4. Miss E. Edelman, Lock and Drill Department.
 Eighth prize, \$3. Miss A. Dicka, Bindery.
 Ninth prize, \$3. Miss L. Chryst, Indicator Department.
 Tenth prize, \$3. Miss E. Brady, Lock and Drill Department.
 Eleventh prize, \$3. Miss Grace Lockyer, Typewriting Department.
 Twelfth prize, \$3. Miss Ruby Smith, Typewriting Department.
 Thirteenth prize, \$2. Miss M. D'Arcy, Typewriting Department.
 Fourteenth prize, \$2. Miss M. Monfort, Typewriting Department.
 Fifteenth prize, \$2. Miss A. Sealing, Bindery.
 Sixteenth prize, \$2. Miss Katharine Jenni, Sales Department.
 Seventeenth prize, \$2. Miss H. Gusman, Indicator Department.
 Eighteenth prize, \$2. Miss B. White, Indicator Department.
 Nineteenth prize, \$2. Miss Fanny Mitchell, Typewriting Department.
 Twentieth prize, \$2. Miss M. Stauffer, Lock and Drill Department.



First prize in poster contest. Title suggested by E. D. Vance, Order Dept.



Second prize in poster contest. Title suggested by E. E. Farnum, Auditor's Dept.



The prize-winners for suggestions from July 1, 1901, to January 1, 1902.

PRIZE DISTRIBUTION.

INSTRUCTIVE TALK BY PRESIDENT PATTERSON.

The prize distribution took place, April 1, 1902, before two thousand people who packed the audience room.



The prize money bag.

The President.

The Factory Committee.

In his address President Patterson, in part, said:

“While all of you fifty prize-winners have greatly benefited not only our Company, and hence all of our employes, and consequently Dayton, you have done much good to yourselves, because you are using your brains to produce something which no one else has done. You have initiated something; you have bettered conditions, and these ideas of improvement you will carry into your home life as well. This plan of suggestions gives us an opportunity to note who among our people are thinking and doing things for the benefit of our Company and all our people, and hereafter we will note those who give us suggestions more closely. I thank, more than words can tell, you fifty people who have won the prizes; also I wish to express not only my thanks, but the thanks of the officers to you and to that large number here tonight who made suggestions but who did not win a prize. To the latter I say, Do not be discouraged, but try again.”

Receipt for suggestion.

Date _____
M _____
We hereby acknowledge receipt of your suggestion of _____
relative to _____

The suggestion will be considered by the proper committee, and you will be advised as soon as possible of the decision.
We thank you for this suggestion and assure you of our appreciation of your effort to assist us. We would be pleased to receive other suggestions from you.
FACTORY COMMITTEE.
Per _____

Certificate of Award

This Certifies that

Anna Domini
has been awarded *3rd* Prize for *Palmetto* Suggestions
submitted between July 1 and December 31, 1901

In token of our appreciation we herewith subscribe
our names and have caused the Company
to be affixed this *10th* day of *Nov*

Anna Domini 1902 at Dayton, Ohio, U.S.A.

W. H. ...
...



NATIONAL CASH REGISTER COMPANY
DAYTON OHIO U.S.A.

A small reproduction of the Prize-Winners' Diploma—An original design printed in green and gold.

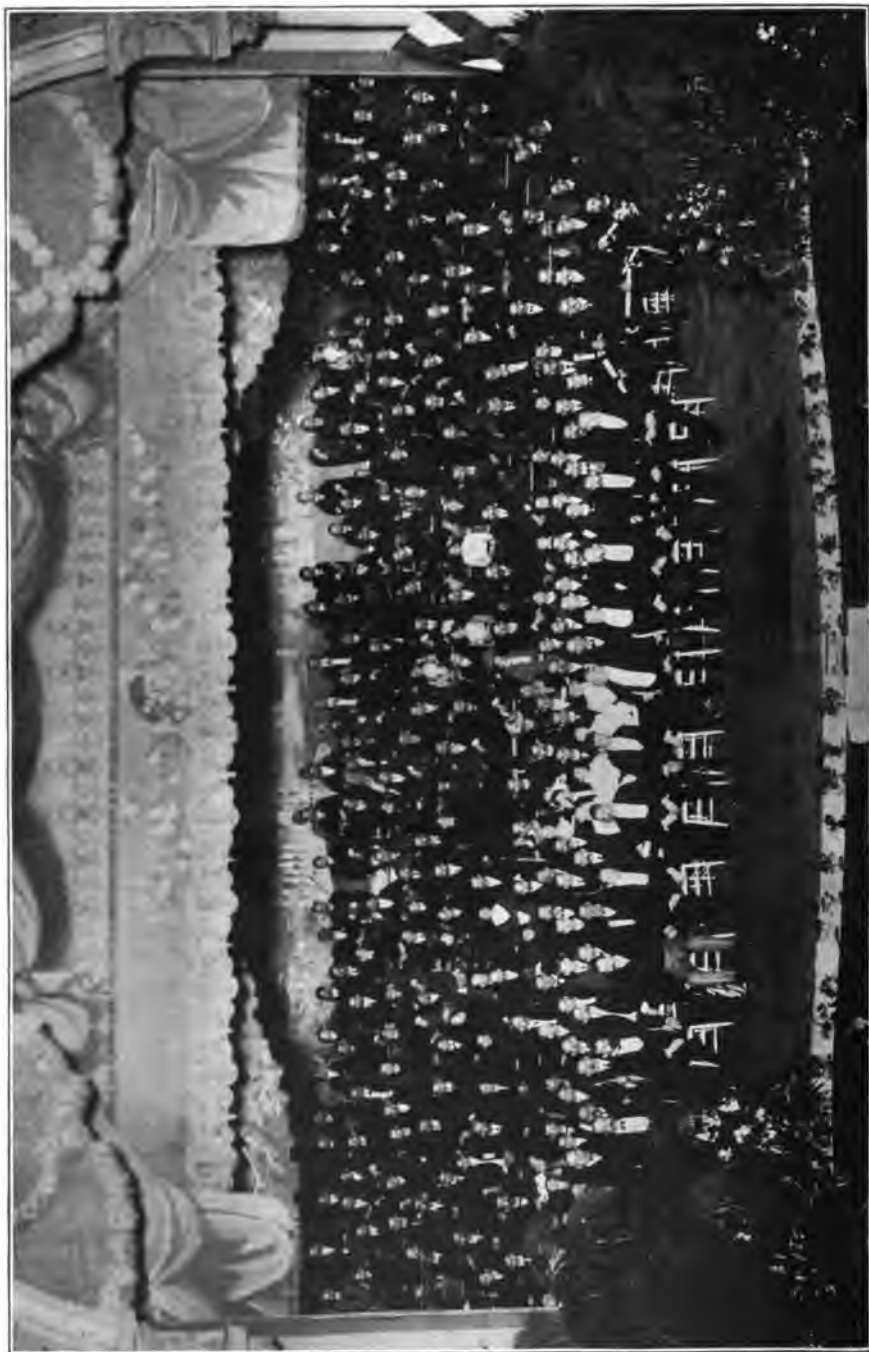


WHAT ONE MAN CAN DO.

Mr. J. C. Carroll, of the Inspection Department, and his diplomas. Making prize-winning suggestions has become with him a "continuous performance." For five and a half years, during eleven consecutive semi-annual prize distributions, he has not failed to win a prize. His extra earnings in prize money have been \$215 — not such a large amount in dollars and cents, but in addition it has gained for him much favorable recognition, promotion and increase of salary, to say nothing of the value to him of the continued opportunity for self-development which he has not failed to improve. What he has done, others can do.

BOXES FOR THE OFFICERS' SCHOOL.

In order to make the sessions of the Officers' School of real practical benefit to everyone, it was necessary to provide some way of securing suggestions and complaints. This has been done by placing a metal box in the room where the meetings take place, and also one each in the Officers' Club and the Reception Room. Suggestions or complaints may be made anonymously if desired. What is wanted is a free use of the boxes, and Mr. Carpenter, who is in charge of the school, asks especially for the co-operation of members in making a success of this important feature.



Photograph taken at the prize distribution in the Victoria Theater, showing the prize winners, the officers of the Company, visiting agents and members of the Advance Club on the stage.



Winners in the prize poster contest.

WINNERS IN THE PRIZE POSTER CONTEST.

While Mr. Chalmers was in Paris last winter he purchased two hundred posters to be used in advertising our registers. When he brought them home, Mr. Gibbs, head of the Publication Department, found himself confronted with a problem — how to find poster titles that would refer appropriately to the pictures and yet advertise our machines.

Finally a way out of the difficulty was proposed. The posters were hung in various prominent places about the factory, and each was given a number. The young women of the factory and the members of the recording force were invited to inspect them and offer suggestions for appropriate titles.

Many employes entered heartily into the spirit of the contest, and the competition was animated. The results achieved were particularly valuable to the Publication Department, because some of the

suggested titles, while hardly fitted for poster captions, were very appropriate as titles for pamphlets and other advertising matter.

In all, 655 suggestions were offered by 49 competitors. Mr. Gibbs, who made the awards, spent no little time deciding which suggestions were the most meritorious.

He finally awarded the first prize to E. D. Vance, of the Order Department, and the other fourteen prizes in the following order:

- E. E. Farnum, General Auditor's Department.
- W. J. R. Lloyd, Order Department.
- Roy Garst, General Auditor's Department.
- Harry E. Ewing, Collection Department.
- H. McGregor, Order Department.
- M. O. Nichols, Order Department.
- Jacob Royer, Sales Department.
- Edith Edelman, Lock and Drill Department.
- Clara Clemens, Order Department.
- S. J. Musson, General Auditor's Department.
- Chas. Hatmaker, Sales Department.
- Isabel MacGregor, Advance Department.
- O. V. Bell, Order Department.
- D. C. Beckett, Sales Department.

The distribution of prizes took place at the Officers' Club at noon, Wednesday, July 30. The fifteen prize-winners were guests of the club at luncheon. After luncheon Mr. Chalmers gave a short talk, reciting in a happy vein the difficulties which he encountered in purchasing the posters.

OUR PRESIDENT EXTENDS THE SUGGESTION SYSTEM INTO OUR EUROPEAN COUNTRIES.

This summer the President, with certain officers of the Company, visited Europe, where large conventions were held in London, Berlin and Paris. At the Berlin convention the President, among other things, said:

PRIZES FOR SUGGESTIONS.

"I had further offered \$100, to be divided by Mr. Wark into prizes for the best suggestions made by employes anywhere on the continent. These prizes were to be awarded in payments of \$50, semi-annually. As I value very highly the personnel and spirit of the men who take these prizes, I here append the statement which Mr. Wark has made of the persons who won them, and what they are given for:

H. Dobritz, First prize, M. 75. Suggestion to pack multiple-drawer bell mechanism in the machine box when coming from Dayton, thereby reducing the duty. When registers that have been repaired are returned to customers, they should bear tags showing that Lock No. 2 must be opened before the machine can be operated. Suggestion to save duty by packing supplies in separate boxes instead of with cabinets.

(These suggestions save us more than M. 1,000 per year.)

G. Bethell, Second prize, M. 50. For foreign correspondence use thin parchment paper, with shorter heading, so that more can be written on one sheet. This saves second sheets and copy sheets; also postage fees, as rate is 20 pfennigs for 15 grammes. Cable results to America without name of country and without autos, thereby saving \$101 a year. Have framed the addresses of all European agencies in the form of window cards, with the flags of the respective countries printed at the side. Especially meant for Dusseldorf store. Have advertising matter from the different European agencies on hand in the Dusseldorf store, so that foreign visitors may receive it.

(These suggestions save us about M. 600 per year.)

W. Muller, Vienna, Third prize, M. 30. Duplicating "charge" and "on account" covers to be made without wording, so that they may be used in all countries. Make the receipt forms on the orders larger, and provide them with dates. Make the new color system blocks without wording, and only in colors corresponding to those of our system, so that they may be used in all countries in the Austrian monarchy. Order no more 82's, but rebuild the 79's into 82's. Purchase registers which are offered for sale from a bankrupt stock. These are to be had for a very low price.

Otto Heinze, Fourth prize, M. 20. Get up a calculation book showing the cost and selling price of all articles which we ourselves have made, together with measures and all particulars, as well as the names of the persons from whom we get them. Use corrugated cardboard for packing marble slabs and indicator glasses, etc. Make tweezers and electro screw-drivers here in Germany.

E. Knopfke, Fifth prize, M. 20. Return no notes which have been met by "Registered" letter, but simply cross them and have them void and then return them by ordinary mail. Provide for the ladies in the Typewriting Department a clothes rack, wash stand, a clock and one or two water bottles.

M. Knuth, Vienna, Sixth prize, M. 15. Make shelves out of the old check roll cases. Repaint the store hand-wagon ourselves. Supply agents with suitable screw-drivers, thus preventing them from scratching cabinets. Arrange the cylinder dating device on all German machines so that the day of the month appears before the month itself, as 24 July, instead of July 24.

Since the last prize distribution in Germany, 105 suggestions have been made, of which 37 were accepted. In Austria 30 have been made, of which 14 were accepted.

OTHER PRIZES.



Julius Lutzeweit, who was employed for nine years at our Dayton factory, and for the past five years at our German plant. He recently won a prize for suggesting an improvement on the No. 79 bell muffler.

“ Besides the foregoing prizes, the German organization offered a prize of M. 25 to the traveling mechanic who should sell the largest amount of supplies during the months of May, June and July. The prize was won by Mr. J. Lutzeweit, who sold supplies amounting to \$294.10. Mr. Lutzeweit is known to many of our people in Dayton, as he worked in our factory in different departments for nearly ten years. Mr. Lutzeweit has succeeded in years past in winning several prizes for mechanical suggestions in competition with all the workmen at the factory.

“ It gave me great pleasure to call upon the stage Mr. Hermann Heintze, of the Berlin Inspection Department, who won a prize of \$15 offered by the home Company a few months ago for a mechanical suggestion. I was pleased to see that Mr. Heintze has had his diploma neatly framed. He brought it upon the stage and permitted me to show it to the audience.”

PRIZES FOR SUGGESTIONS.

After January 1, the Company prizes for suggestions from the factory and office forces for landscape gardening and work of the Boys' Gardens, etc., will be in the form of educational trips to cities away from Dayton, and not in money.

In the case of factory and office suggestions, the extent of the trips will depend upon the value of the suggestions. Pay of employes will go on during the trips.

These trips will cost the Company a great deal more than the money prizes, but the benefit to the prize-winners will be greatly increased. This will justify the additional expense.

1903

ANNUAL DISTRIBUTION OF PRIZES FOR SUGGESTIONS FROM EMPLOYEES.

The annual distribution of prizes for suggestions from employes was held in the Victoria Theater, Dayton, on the evenings of January 12 and 13, 1903.

Vice-President Robert Patterson gave out the prizes. Likenesses of the winners of prizes, during the six months ending December 31, 1902, were thrown upon the screen, and the names announced by the Vice-President. As each winner received his prize he took his place upon the stage. The President stated that 2,300 suggestions had been made during the year. Of these 1,100 had been adopted.



Testimonial presented to President Patterson by the fifty prize-winners for the six months ending June 30, 1902.



Flashlight view of the audience at the Victoria Theater, Tuesday evening, January 13, 1903.

PRIZE-WINNERS OF TUESDAY NIGHT.

The list of prize-winners for the six months ending December 31, follows:

First Prize. C. E. Lilly, Screwmaking Department.

Second Prize. I. W. Smith, Inspection Department.

Third Prize. J. H. Miller, Inspection Department.

Fourth Prize. W. B. Newman, Final Inspection Department.

Fifth Prize. Wm. Oswald, Press Department.

Sixth Prize. Chas. Schmieding, Bindery; G. R. Pilate, No. 35 Assembling Department; Miss Marie Scheibenberger, Indicator Department; Thomas Macbeth, No. 35 Assembling Department; A. D. Gibson, No. 135 Assembling Department; A. Shaffer, No. 35 Assembling Department; C. W. Doyle, No. 35 Assembling Department; C. G. Wetz, Inspection Department; S. E. Webber, Lock and Drill Department; Theo. Bacher, No. 79 Assembling Department; M. P. Byriell, Stock Department; C. H. McCune, Inspection Department; J. H. Wolf, No. 35 Assembling Department; Miss Anna Schulteis, Typewriting Department; J. B. Phillips, Inspection Department.

Seventh Prize. E. E. McNeill, Inspection Department; C. H. Frost, No. 35 Assembling Department; A. Valiquette, No. 35 Assembling Department; J. E. Clarke, Order Department; Ed. Kelly, Mill Department; B. F. Reimold, Mechanical Inspector, Repair Department; G. Huhn, Mill Department; E. H. Schmieding, Sales Department; T. P. Kearns, Detail Assembling Department; John Bauman and C. E. Grobet, New York, N. Y.; Frank E. Burroughs, No. 79 Assembling Department; Frank Bartels, Mill Department; J. W. Whistler, Stock Room; R. B. Frazell, Tool Supply Department; Mrs. J. C. Carroll (widow of J. C. Carroll); O. D. Casterline, Tool Room; P. J. Weilhart, Inspection Department; W. E. Keller, Filing Department; J. B. Westbrook, Stock Department; D. C. Herby, No. 79 Assembling Department; Jos. Minnich, Drill Department; John Tapper, No. 79 Assembling Department; John Shook, Press Department; Fred Duerr, Punch Press Department; Albert Werner, No. 79 Assembling Department; O. G. Smith, Mechanical Inspector; G. E. Fay, Punch Press Department; J. W. Smith, No. 35 Assembling Department; E. E. Farnum, General Auditor's Department; R. Syhrre, Berlin, Germany.



Fifty prize-winners during the six months ending June 30, 1902.

One Dollar for Each Suggestion.

A New Plan for Awarding Prizes for Good Suggestions.

Beginning July 1, 1908, we will offer a cash prize of \$1 for each suggestion received which we adopt, these prizes to be paid once a month.

Fourteen Additional Cash Prizes to Be Awarded Each Quarter.

In addition to the \$1 prizes, fourteen larger cash prizes will, until further notice, be awarded at the end of each quarter for the suggestions received during the quarter which have saved us the most money or have otherwise proven of most value. These prizes will be awarded as follows:

One Prize,	-	-	-	-	-	-	\$75
One Prize,	-	-	-	-	-	-	50
One Prize,	-	-	-	-	-	-	25
Two Prizes, \$20 Each,	-	-	-	-	-	-	40
Four Prizes, 15 Each,	-	-	-	-	-	-	60
Five Prizes, 10 Each,	-	-	-	-	-	-	50
							\$300

In consideration of the above prize offers, the educational trips will be abandoned.

The Kind of Suggestions Wanted.

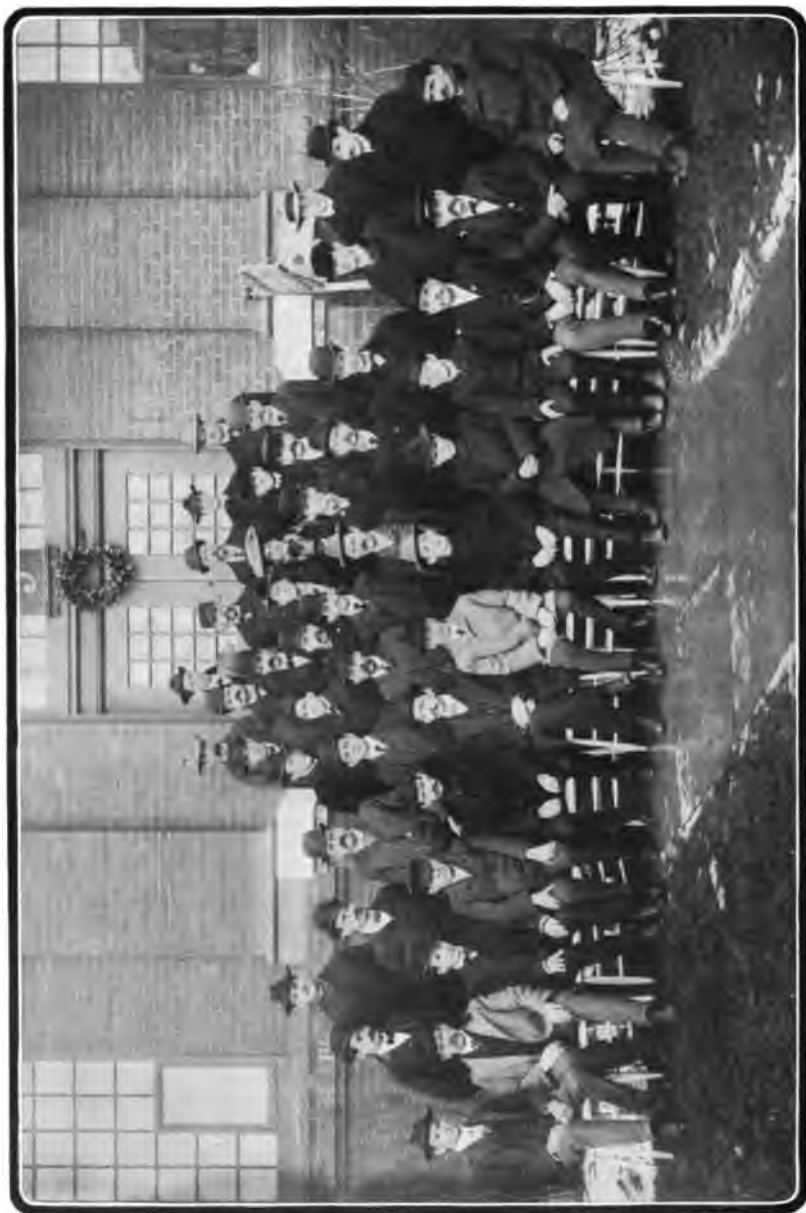
We want not only suggestions along the line of mechanical improvements, but suggestions of any kind which will help to increase our sales, increase our profits, increase our cash on hand, and decrease opposition to our methods. Wherever you think work can be done for less money we want you to let us know. Tell us where a saving on the pay-roll can be effected; where we are paying too much for the service we get; where the cost of manufacture can be reduced and the efficiency of our force increased. We also want to receive suggestions which will be of value to the management of our Employment, Promotion and Discharge Department.

Splendid Chance to Secure Promotion and Increased Salary.

Every person in the employ of the Company, with the sole exception of members of the Board of Directors, Factory Committee and District Managers, is eligible for the above prizes. All suggestions received will be regarded as confidential.

All suggestions adopted will be brought to the special attention of the management. Suggestions will be taken into consideration more than ever before in making promotions.

N. C. R. Company.



Fifty prize-winners during the six months ending December 31, 1902.

During the year 1903, 5,078 suggestions were received from employes of the factory and office departments. Of this number 1,569 were adopted. During the first half of 1903, \$2,000 were awarded and paid as prizes for sixty-four adopted suggestions; forty-nine coming from the making division, and fifteen from the office division. Here is a list of prize-winners, covering the first half of 1903:

OFFICE DIVISION.

FIRST PRIZE. Mr. W. B. Newman, Final Inspection Department.....	\$100
SECOND PRIZE. Mr. Archie Hamilton, Sales Department.....	75
THIRD PRIZE. Mr. H. G. Brentlinger, Treasurer's Department.....	60
FOURTH PRIZE. Mr. Walter Heckman, Order Department.....	50
FIFTH PRIZE. Mr. A. F. Seibert, Order Department.....	25
SIXTH PRIZE. Mr. C. E. Hendrickson, Shipping Department	25
SEVENTH PRIZE. Mr. E. J. Dodds, Treasurer's Department.....	25
EIGHTH PRIZE. Mr. W. R. Clevenger, Repair Department.....	25
NINTH PRIZE. Mr. H. W. Pearce, Treasurer's Department.....	25
TENTH PRIZE. Miss Charlotte Geering, Typewriting Department.....	15
ELEVENTH PRIZE. Miss Mary E. Heinz, Typewriting Department.....	15
TWELFTH PRIZE. Mr. C. K. McConnaughey, Sales Department.....	15
THIRTEENTH PRIZE. Miss Lillian Sixsmith, Typewriting Department..	15
FOURTEENTH PRIZE. Mr. E. G. Soward, Supply Department.....	15
FIFTEENTH PRIZE. Mr. O. V. Bell, Order Department.....	15
Total	\$500

MAKING DIVISION.

Ed. Hall, No. 35 Assembling Department, First Prize	\$200
R. A. Knizley, No. 135 Assembling Department, Second Prize	125
A. Shaffer, No. 35 Assembling Department, Third Prize	100
E. C. Bechtolt, Cost Department, Fourth Prize	75
F. W. Fricke, Mill Department, Fifth Prize	50
L. G. Mougeville, Punch Press Department, Sixth Prize	50
Rosa Stuckey, Indicator Department, Seventh Prize	50
Ira Brooks, No. 79 Assembling Department, Eighth Prize	50
J. H. Miller, Stock Department, Ninth Prize	50
C. C. Mendenhall, Inspection Department, Tenth Prize	25
W. E. Newkirk, Mill Department, Eleventh Prize	25
R. B. Frazell, Tool Supply Department, Twelfth Prize	25
J. A. Sigler, Brass Room, Thirteenth Prize	25
G. W. Bookwalter, Drill Department, Fourteenth Prize	25
D. M. Zile, Final Inspection Department, Fifteenth Prize	25
Wm. Oswald, Press Department, Sixteenth Prize	25
F. E. Miller, No. 35 Assembling Department, Seventeenth Prize	25
Carrie Herberger, Indicator Department, Eighteenth Prize	25
John Shook, Press Room, Nineteenth Prize	25
George Long, Stock Room, Twentieth Prize	20
P. Pohlman, Inspection Department, Twenty-first Prize	20
Chas. Schmieding, Bindery, Twenty-second Prize	20

SUGGESTION SYSTEM.

Geo Pilate, No. 35 Assembling Department, Twenty-third Prize	20
J. B. Phillips, No. 135 Assembling Department, Twenty-fourth Prize	20
Harvey Phillips, Engineering Department, Twenty-fifth Prize	20
Thos. Horobin, Photograph Department, Twenty-sixth Prize	20
L. Slaiter, Mechanical Inspector, Twenty-seventh Prize	20
Ernest E. Leas, No. 79 Assembling Department, Twenty-eighth Prize	20
E. E. McNeill, Inspection Department, Twenty-ninth Prize	20
Catherine Delsecamp, Bindery, Thirtieth Prize	15
James Guilfoyle, Drill Department, Thirty-first Prize	15
John Fogle, Lock and Drill Department, Thirty-second Prize	15
John Ensley, Brass Room, Thirty-second Prize	15
Jos. L. Batter, Punch Press Department, Thirty-fourth Prize	15
Madge Fretz, Indicator Department, Thirty-fifth Prize	15
A. B. Holston, Final Inspection Department, Thirty-sixth Prize	15
Stella Ringer, Lock and Drill Department, Thirty-seventh Prize	15
W. D. Francisco, Inspection Department, Thirty-eighth Prize	15
Thos. C. Portsmouth, Slitting Department, Thirty-ninth Prize	15
O. G. Tasch, Punch Press Department, Fortieth Prize	15
John Boss, Woodworking Department, Forty-first Prize	15
Geo. May, Inspection Department, Forty-second Prize	15
Mike Miller, Drill Department, Forty-third Prize	15
Jas. Daggert, Tool Room, Forty-fourth Prize	15
L. Rayburn, Stock Department, Forty-fifth Prize	15
H. M. Hoel, Stock Department, Forty-sixth Prize	15
Herman Heintze, Mechanical Inspector, Berlin, Germany, Forty-seventh Prize	15
C. H. Barton, Repair School, Forty-eighth Prize	15
Geo. Boden, No. 79 Assembling Department, Forty-ninth Prize	15

During this last half of the year, we awarded to the office division in dollar prizes, \$196; to the making division, \$638, making a total of \$834. In addition to this, was distributed \$600, being the quarterly prizes, making a grand total of \$1,434 distributed for the last six months of 1903.

**LIST OF PRIZES AWARDED FOR THE QUARTER ENDING
SEPTEMBER 30, 1903.**

OFFICE DIVISION.

FIRST PRIZE. Mr. J. V. Skane, Mechanical Improvement Department...	\$20
SECOND PRIZE. Miss Anna Schulteis, Typewriting Department.....	15
THIRD PRIZE. Mr. H. B. Ulm, Shipping Department.....	10

MAKING DIVISION.

C. H. Barton, Repair School, First Prize	50
O. A. Benham, No. 35 Assembling Department.....	25
W. H. Holmes, No. 79 Assembling Department.....	20
B. B. Frazell, Tool Supply Department.....	15
Fred Mueller, Mill Department.	15
Dan Zile, Final Inspection Department.....	15
A. G. Van Ausdal, Cost Department.....	10
A. B. Morris, Bench Department.....	10
A. W. Barr, No. 35 Assembling Department.....	10
Nellie Shellhouse, Indicator Department.	10
 Total.....	<hr/> \$300

QUARTERLY PRIZES FOR ADOPTED SUGGESTIONS.

October 1, 1903, to January 1, 1904.

OFFICE DIVISION.

FIRST PRIZE. E. C. Hendrickson, Foreign Department.....	\$50
SECOND PRIZE. H. J. Buhl, Supply Department.....	15
THIRD PRIZE. Miss Lillian Serrer, Typewriting Department.....	15
FOURTH PRIZE. D. C. Beckett, Sales Department.....	10

MAKING DIVISION.

E. C. Rhonemus, Tool Room.....	75
D. M. Zile, Final Inspection Department.....	25
D. D. Hendrickson, Repair School.....	20
Geo. W. Bookwalter, Drill Department.....	20
Fred Duerr, Punch Press Department.....	15
Ed. Aufuldish, Screwmaking Department.	15
C. E. Berry, Screwmaking Department.....	10
Miss Amy B. Rawson, Stock Department.....	10
Gustaf Adin, Detail Assembling Department.....	10
P. J. Weillhart, Inspection Department.....	10
 Total	<hr/> \$300