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CIRCULATES IN EVERY PROVINCE IN CANADA

# The CANADIAN MANUFACTURER

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## OFFICE EDITION

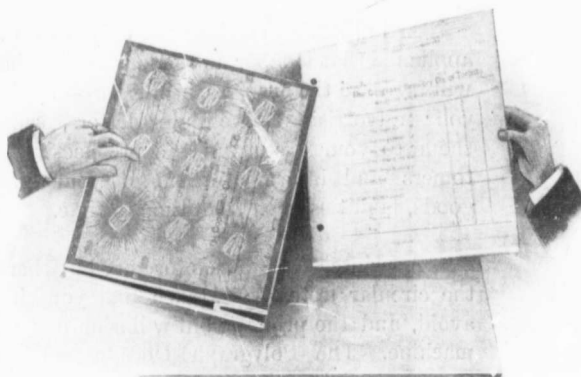
DEVOTED TO OFFICE WORK AND SYSTEMS

Vol. 57. No. 14.

TORONTO, NOVEMBER 13, 1908.

New Series—Vol. 1. - No. 10.

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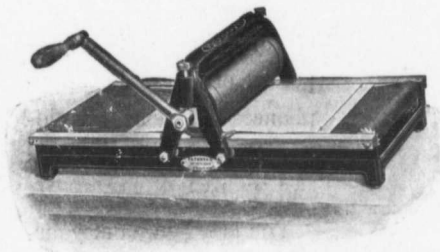
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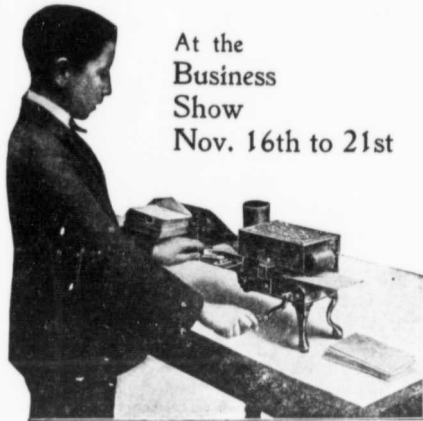
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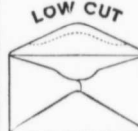
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511 McKinnon Building

TORONTO

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 B Soft and black } for  
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H Hard  
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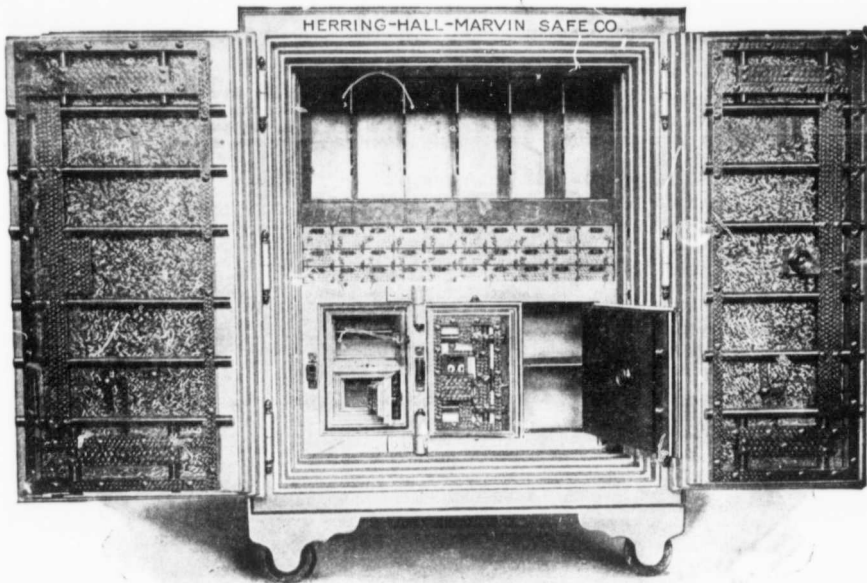
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**G**EORGE Westinghouse, the famous inventor of the air brake—so the story goes—gained the wonderful idea of applying compressed air for the stopping of trains from a magazine article about Alpine tunnel drilling with compressed air.

His subscription to the magazine was purely incidental—the result of solicitation by a little girl one summer day. The magnitude of the result all the world knows.

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Each month you will see here on this page an announcement of some kind about our Office Filing Systems and cabinets.

If—in this space—you discover one single valuable idea about Office Filing Methods; if—through illustration or description here—you find one single piece of "Office Specialty" Filing equipment that will reduce effort and expense in your office, you will indeed have been well repaid for the minutes spent in reading what we have to say.

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A stack of Sectional Filing Cabinets lends dignity to the private office and places within arm's reach the records vital to the work of the individual. The cost is small compared to the saving in time and effort.



Make your Office inviting. We can show you how to make your Office more attractive to your customers and yourself, and more than that—our suggestions may accomplish a more orderly arrangement and systematic conduct of your business records.



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# The Buying End: Creative Supply Man

A Graphic Story of the Development of the Purchasing Department of a Manufacturing Concern, and the Methods Followed by the Purchasing Agent. Reprint from Saturday Evening Post, Copyright by Curtis Publishing Co.

BY JAMES H. COLLINS

One of the ablest purchasing agents in this country is at the head of the supply department of a large corporation in the electrical field. His methods of purchasing are so broad and human that it is worth while to go back and see where he started. When this supply man entered the company's service as a youth, nearly twenty years ago, it was just struggling into its own, after a long, doubtful period of experiment and missionary work. Fifteen years before that the invention upon which the company is based had been a scientific marvel, and nothing more.

"Very interesting," people said; "but what can you use it for?"

Then it was developed into a scientific toy, exhibited alongside the living skeleton in dime museums, and was not much more practical commercially. Then some promoters broke their hearts trying to finance it, likewise their stockholders, until the thing had been brought to a point where the very rich could afford it as a luxury—about the same sort of luxury as having a living skeleton do the chores. Presently the very rich found this invention genuinely useful, and the merely-rich wanted it, and then the well-to-do, and so on, until, by steady experiment and improvement, it began to grow into an every day necessity at an every-day price. And then, suddenly, the public swept down upon this corporation with a demand that turned its organization and methods upside down—or perhaps right side up would be a better way of putting it.

Until then the company had drawn its men from other industries. One department head was an old telegrapher and another an ex-railroader. Each worked pretty much his own way. Some held jobs through stockholder's influence. Few of them realized what a vast potential industry they had got into.

By the time the real public demand began, however, the company was getting graduates from the technical schools, specially trained in that industry, while other youngsters coming up in its own organization were beginning to crowd out the old generation. It was about this time that our future supply man entered the company's service as a clerk.

Out in the warehouse there was a little boxlike office in charge of a cantankerous old fellow, Uncle Bill Upright. That little box was the supply department. Uncle Bill was the purchasing agent, and his queer storeroom of those early days is still remembered by officers of the company. Rows of brooms, mops and buckets hung from the low ceiling, while in some neglected corner would be piled the whole stock of insulated wire—about enough to last the company one working-hour to-day.

## THE DOWNRIGHT HONESTY OF UNCLE BILL.

Uncle Bill considered insulated wire a nuisance, and



Uncle Bill Said, in His Haste, All Men Are Liars

hoped that the business would eventually outgrow it. His heart was in the purchase of buckets and brooms. Shrewdness and old-fashioned honesty were his chief characteristics. All his bargains were conducted in suspicion, and he regarded everybody with goods to sell as corrupt. Uncle Bill said, in his haste, that all men are liars. And very properly. For he was so ostentatiously honest, and so dryly shrewd and his ways of buying were so devious and unpleasant, that really nobody but a liar or sycophant could do business with him at a profit.

Now, the purchasing situation of this company was peculiar, for nothing that it buys itself is ever sold to the public. Just as a railroad buys enormous quantities of physical property and sells only transportation, so this electrical company bought apparatus and sold only service. When the public woke up to the value of this service its plant had to be doubled almost early. That put high pressure on the engineers and construction men. They had to devise new apparatus and solve hundreds of technical problems. The engineers, in turn, brought pressure on the purchasing department. Instead of brooms and buckets, there was complicated electrical machinery to be built on their specifications. The purchasing department, again, brought pressure on manufacturers of such apparatus, and had to be widely informed about concerns capable of building it. The supply men also needed comprehension of the engineering department, and sympathy with its point of view.

Uncle Bill regarded the engineers as a lot of pests, and had no friends among progressive manufacturers. So, like many another shortsighted man who has blundered in on the ground floor of a vast new industry without realizing where he had got to, Uncle Bill blundered out again. They dropped him into an easier job, and the clerk who is still the supply man of that company was given his opportunity.

The youngster started purchasing with little more than a well-developed bump of curiosity concerning men and methods. He was just the sort of chap who could smoke a cigarette with the president's son and talk football, or smoke a pipe with Pop Thomas, the time-keeper, and listen to a description of the battle of Gettysburg. He could hold the hand of the shallowest girl at a porch party and drink in her chatter, and this same fine gift enabled him to wind up a trade with a salesman by saying, "Well, now, tell me something about yourself."

During his first year in that work he could not have distinguished the insulation of a multiple cable from its electrostatic capacity, nor told the difference between a magneto and a lightning-arrester. But he didn't need a knowledge of electrical engineering to comprehend the engineering department. That was just a human pro-

position. He began his study of technical problems by listening to their troubles.

Uncle Bill's method of buying had been based on secrecy. Bidders were pitted one against another. Then the cheapest man was told privately that he would have to meet a price still lower—a purely fictitious figure which he believed a real quotation. When it came to trimming prices, Uncle Bill could pull the last tail-feather off the eagle on a dollar. But Uncle Bill's successful bidder was usually the yellow dog in his line, with indifferent manufacturing facilities. Quality would not be maintained. Deliveries would be delayed, causing costly suspension of the company's construction work, and loss of revenue from customer's waiting for service.

When the new man took charge of the supply department he found that most of the progressive manufacturers of electrical apparatus had been alienated, and no longer entered Uncle Bill's guessing contests.

The new man dealt in absolute openness from the outset. There was only one detail in purchasing, he found, that really called for secrecy—that was price. He quickly learned, however, that prices must be subordinated to quality of apparatus and certainty of delivery. The manufacturer who could be screwed down to the lowest bid was rarely the one who could deliver high-grade apparatus at the time promised.

#### WHEN CHEAP THINGS ARE DEAR.

To be in position to buy the best stuff, laying it down when the company needed it, he went to the leading manufacturers, got acquainted, invited their bids. Manufacturers and salesmen were transformed into personal friends. He read the trade press, visited factories, followed processes to learn how things were made, got acquainted with superintendents and foremen, felt the temper of each organization, and formed his own estimates of a factory's facilities for turning out work. Thus, when bids were opened, his knowledge of the lowest bidder's plant might lead him to place a contract elsewhere at a higher price. The lowest bidder might promise, in good faith, to deliver supplies on time and up to specifications. But he was promising what he could not perform, and the supply man knew it, and considered even the risk of delay worth insuring against by paying a slightly higher price. Those were piping times of expansion in that industry. The price paid for apparatus had nothing whatever to do with the possibility of getting it when promised, for the best manufacturers were working night and day, and had difficulty in securing sufficient raw materials.

Open dealing on quality and delivery soon led him to be entirely open concerning prices. For example, several large manufacturers were bidding for an important contract. The supply man sent for the representative of one of them.

"Your people can make this stuff to our satisfaction," he said, "but I want you to go over your prices again."

"Not low enough?" said the manufacturing man in surprise. "Why, we made up those figures with unusual care. We want this business. Our folks say they are the lowest prices anybody can give. But if it's possible to figure it out we'll give you a still lower—"

"I'm not asking you for a lower bid," said the supply man. "Your prices are the lowest already. You're going to get this contract. The trouble is, your prices are too low. You've made an error somewhere, and I want you to put in a new bid, for if you take this contract at a loss there will be no inducement to push it through your works."

When the manufacturer looked into his figures again, however, he decided to let the original price

stand. But at the suggestion of the purchasing agent strict cost records were kept of factory operations, and those records showed, sure enough, that the contract had been unprofitable. Here was a case where the supply man had to choose between trimming prices still further by a cheap trick or making a friend by decent, open dealing. He took the latter course, and that has always been his policy.

A capable salesman left the road about a year ago, taking an executive position in a New York house. At home he has several notebooks filled with names and addresses. There must be five thousand of them, and they are names and addresses of people to whom, at some time during ten years' traveling, he has sold goods that give satisfaction, as he said they would. What if tomorrow some emergency threw him out into the world? He might start afresh with only those names, looking up his old customers and selling them again.

#### DIPLOMACY A BUSINESS ASSET.

Our supply man, by fifteen years' open dealing in his purchases, has built up a similar constituency among makers and sellers. He knows all the manufacturers, big and little, and their facilities, and they know him as a good man to do business with. The average purchasing agent, bent on making a fine yearly showing in economy, often takes very small advantage, crowding the seller in misfortune. This supply man, however, has worked chiefly to build up a steady relation, foregoing sharp practice to make friends. That counts as much with sellers as with purchasers. To-morrow our supply man, thrown into a new industry, could probably make a better showing in dollars and cents, through his manufacturing friends, than could the shrewdest purchasing agent depending on sharp practice.

He has worked just as closely in co-operation with the company's engineers, finding out what they were trying to accomplish, getting the technical men's broad outlook into the future, and their detached, professional way of looking at solidity of construction. He has read their proceedings, attended their conventions, and acquired enough engineering knowledge to be able to correct them occasionally.

The company's engineers designed a new switchboard and sent specifications to the purchasing agent. The engineering department had all the creator's pride in those specifications. They not only embodied new ideas in theory and practice, but called for the largest switchboard ever built up to that time.

The contract was let. When construction was under way the manufacturers came to the supply man, as a friend, and explained that they were likely to lose all their profit on the job because of an unforeseen difficulty with certain tiny insulated wires. Those manufacturers would never have looked for help from Uncle Bill Upright. If they had Uncle Bill would have said: "Rot! Carry out your contract—it's in black and white, ain't it?" This supply man visited the factory and investigated the difficulty. It was found that in any one of three separate operations on those tiny wires the metal might be weakened or broken inside the insulation. Granted that the switchboard could be built successfully, it would still be defective in operation. Breakages in those wires would entail constant repairs and frequent interruptions of service.

Back came the supply man to the engineers.

Now, after the chief engineer has read an institute paper on "Modern Switchboard Practice," and his juniors have written on the same topic for the professional journals, it isn't agreeable to be asked to eat one of his pet ideas.

The supply man knew that. He threw the burden of failure, not upon the engineers, but upon the manufacturers. That design was precisely what the engineers ought to expect to have built to specifications in an ideal industrial world, he told them. But unfortunately, you see, it was too far advanced beyond current manufacturing conditions. So the engineers handsomely made allowance for imperfect manufacturing conditions and drew new specifications embodying larger wires. Thus, in a perfectly agreeable way, the company got a monster switchboard that would be efficient in operation and cause very little trouble through breakdowns, while both the manufacturers and the engineers took credit to themselves. As for the supply man, if he had any notion that the credit was due him he said nothing about it.

#### THE ECONOMY OF LOOKING AHEAD.

By a common-sense technical knowledge of both engineering and manufacturing conditions, and a wide acquaintance among the many departments of his own company, this purchasing agent has worked important economies. Almost his last resource in saving the company money, however, is that of close manoeuvring for low prices on the first cost of supplies. What he has always in mind is service and low cost of repairs.

One year a parsimonious director complained of the constantly increasing cost of certain supplies, showing by statistics that the price per pound, per foot, per unit, had steadily advanced during several years. The purchasing agent's explanation of that might have been a table of contrasting figures, proving that there had been general market advance on such supplies. But, instead, he submitted a statement showing steady reductions in cost of repairs—savings that doubly offset the larger outlay in good materials.

Other important economies were brought about by a little pressure on the company's departments to make them look ahead and anticipate their needs in supplies. It had been the custom to run pretty much by rule-of-thumb. The construction gangs strung wire zealously, perhaps, drawing on stock as though some invisible connection existed between their storeroom and a big wire factory. Suddenly the wire ran out. In came a requisition for more marked, "Rush! Rush!! RUSH!!!" That threw the supply man into the market for wire under unfavorable conditions. He might have to purchase doubtful quality to get immediate deliveries. As soon as his order was placed the construction department began to say, "Rush! Rush!" to the manufacturer of its own accord, causing confusion. Frequently the construction department took a little shopping tour of its own in search of wire, and got deliveries of small quantities. The bills for these independent purchases then came into the supply department and were returned to the seller unpaid. The supply department knew nothing of the transaction.

In the end, all this trouble was done away with by a system of daily supply reports in each department, showing what stock was on hand every night, and the rate at which material was being used up, and about when the supply man ought to go into the market for more.

These daily reports accomplish something else. They enable the various departments not only to have adequate stocks on hand at all times, but also to run on a moderate stock. That diminishes supplies necessary to have on hand, and affects great economies through the whole organization. For supplies piled in warehouses, waiting to be used, represent, with a company of this magnitude, large amounts of capital tied up, loss of interest, loss through depreciation, cost of storing, handling and insurance.

Moreover, the company is to-day so large that its stocks of supplies are carried in several branch storerooms, each complete in itself. From one of these branches comes to-day, to the supply department, a requisition for material worth twelve to fifteen thousand dollars. A report from another branch shows that sufficient of that material to fill these requirements has lately been taken out of service in reconstruction work, and has been put back in stock. So no purchase is necessary. There are supply departments run so loosely, though, that such a purchase would be made for one department, and the material on hand sold for junk by another.

These daily reports might, in many lines of business, serve as a valuable market guide to the purchasing agent—as in a manufacturing industry where quantities of raw material were being made up into goods for sale. With an accurate daily gauge on needs, the purchasing agent could sometimes buy on favorable fluctuations of the market.

This supply man has found by experience, however, that playing the market in the purchase of his own class material is only a hazard. If persisted in as a policy it results in about an equal balance of losses and gains. So his contracts for materials subject to fluctuations are made on basic prices, with an arrangement whereby variations can be adjusted between himself and the manufacturers as the market rises or falls during the life of the contract. This plan has two marked advantages. First, the purchaser gets his supplies at the market price, whatever the variations. Second, the seller cannot lose the profit on his contract through an unforeseen rise in the cost of his own materials. Thus, if prices go up the manufacturer will not be tempted to delay delivery of goods while he runs his plant on more profitable orders; nor, on the other hand, will he slacken manufacturing in hope that a drop in materials may give him a larger profit than he anticipated.

#### WHAT ONE BUYER ACCOMPLISHED.

There came a time in the development of the supply department when its chief found it advisable to become a manufacturer himself in a small way. Much of the apparatus in every-day use came in for minor repairs—adjustments, new attachments, cleaning, replacement of missing parts. Until then it had been permitted to accumulate for shipment in lots to the manufacturer, who made repairs and shipped it back. A small repair department in the storeroom, however, saved delays, and shipping charges, aided the construction men, and affected other economies. To-day each branch storeroom has its repair department.

About that time, too, the supply men became a salesman. As the company's business grew, and improvements in plant were introduced, much old apparatus had to be discarded for better types. It was by no means worn out or obsolete. Most of it could be used by smaller companies throughout the country. So the detail of selling it was given in charge of a subordinate, who sought the best markets through advertising in electrical journals and correspondence. What was formerly disposed of as junk now brings in several hundred thousand dollars yearly.

From the original little old storeroom, run by Uncle Bill, this supply man has built a department with nearly three hundred people under him—assistant buyers, storekeepers, repair men, clerks, messengers, inspectors. As the department has grown, each new man added to the actual purchasing staff which now numbers half a dozen assistant buyers, has been a man valuable not for shrewdness or trickery in his dealing, but a man with technical knowledge, able to estimate with the manufacturers and to

check the specifications of the engineering department. All the results accomplished by sharp practice in other purchasing departments are achieved by the open policy. There is a solitary clerk who files catalogues, price lists and every other scrap and information bearing on prices and deliveries, and these records are consulted in placing orders. The company's reputation for square dealing and progressiveness, on the other hand, brings to the supply department from outside everything in the shape of improved material, unusual discounts and favorable rates of delivery. If a manufacturer is pressed for money and willing to offer favorable concessions to keep his plant running, this company is naturally his first resource. He comes to its supply department in frankness, knowing that its head will not take petty advantages of him while he is working under difficulties.

No amount of sharp practice in screwing down prices or manoeuvring for discounts could ever have effected for this company the economies that have been brought about by the one item of intelligent interchange of information between its own departments.

This exchange of information is now reduced to a routine system taken care of to a large extent by forms and reports. But it originally grew out of the supply man's prime qualities as a "mixer." The engineers, the construction men, the clerical and financial departments, the men who operate the plant, formerly worked in blind disregard of one another. Some ran on stocks of supplies that were too slender, while others were overstocked. Some failed to anticipate important improvements in apparatus, and were caught one fine morning with a lot of obsolete stuff. Others put too firm faith in some new device that lacked permanent worth, and built too much of it into the plant. All purchased supplies on their own account, from time to time, because they assumed that they could do it to better advantage than the supply man. These purchases were fairly certain to be made with the idea that a low price is the chief thing, and so the quality was inferior or the delivery slow. But the supply man has changed all that. Practically every purchase, large or small, is to-day made through his department, because he has impressed upon other departments the value of co-operation; and, finding co-operation excellent inside his own organization, he saw no reason why it should not also be beneficial outside as well.

Selling is all positive and affirmative, and because it is so many purchasers assume that buying should be just the opposite. Because one is aggressive, it is supposed that the other must be negative and defensive. Never a salesman walked in shoe leather, however, who was more affirmative than this purchasing agent, and he holds that it is contrary to the principles of true buying to think for a moment that the purchaser must ever resort to smallness or trickery or secrecy. Frankness of speech, liberality of spirit, truthfulness of utterance are the only weapons needed in a successful purchase, he maintains. Press price too hard here, and it is certain as Fate that the seller will find compensation in some more vital essential.

### Reading Him the Riot Act

Although a soft tongue may often turn away wrath, smooth words do not always win for a salesman a large order. In fact, efforts to conciliate a grouchy buyer by smiles and pleasantries are not always crowned with success as the experience of numerous salesmen proves. Sometimes it is necessary to read the riot act to the buyer to force him out of his shell. This method of gaining a profitable audience is effectual at times when dealing with the periodical grouch, as the following incident will show.

While on one of my recent trips I called upon one of these grouchy specimens, who was the head of a medium-sized firm. He had never bought a dollar's worth of goods from our house and I had come this time determined to find out definitely the reason for his refusal to turn a trial order my way.

By the sheerest good luck I managed to break into his private office, and there we had our pitched battle of words after I had bowed a good morning and asked him point blank for an order to bring the matter quickly to a head.

"I am not looking at goods this morning," he growled, "and furthermore, your concern never seems to carry anything we want, so don't trouble yourself to take out your samples.

He was not the kind to be smoothed over with a soft answer and I resolved to read him a few rules.

"Now, Mr. Scott," I came back, "what kind of consideration is this to accord to the salesman of a reputable firm? You are the employer of a large force of salesmen who go out into the business world daily to meet men whose time is just as valuable as yours.

"How would you relish having one of them treated in this fashion? Even a live salesman does not mind being turned down occasionally for good and sufficient reasons, but he does resent discourtesy as you have shown this morning. I can see no excuse for it whatever.

"You want your representatives to be treated with common decency at least. Put yourself in the salesman's place. Then ask yourself how you would like to be out on the road and meet such a frost as was just visited on me."

Instead of going into a rage, the man changed front entirely after this volley. He smiled rather sheepishly, admitted he was at fault and pleaded ill-health as an excuse. He ended by giving me a \$200 order, and on all my visits since has received me very cordially, never once refusing to listen to my selling talk.—System.

### Anxious to Understand

Ironmonger (to customer, just entering): "Good morning, sir."

Customer: "I want one of those things that you fasten on a door to make it shut itself."

Ironmonger: "Oh, yes; an automatic door-closer?"

Customer: "That's it; and not too high-priced."

Ironmonger: "Yes, sir; a cheap automatic door-closer."

Customer: "And not too complicated, either."

Ironmonger: "I understand. You want an automatic door-closer of simple design and small cost?"

Customer: "Exactly. But not one of those confounded things that slam the doors to with a bang."

Ironmonger: "That would be a nuisance, of course. You want an automatic door-closer of simple design, small cost, and with an easy spring?"

Customer: "That's right. But I don't want it to close the door too slowly, either."

Ironmonger: "Briefly, what you are looking for is an automatic door-closer of simple design and small cost, that is neither too slow nor too fast?"

Customer: "That's all right. And, besides, it mustn't be like some I have seen, where a man needs the strength of an ox to open the door."

Ironmonger: "Now, let us understand each other. You want to buy an automatic door-closer, simple, cheap, neither too slow nor too fast, and easily operated?"

Customer: "Correct. Show me one."

Ironmonger: "I'm very sorry, sir, but I don't deal in automatic door-closers."



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**WHEN THE SYSTEM SPECIALIST CAN HELP.**

One of the chief reasons for the adoption of a well defined system in the office or factory is the recurrence of mistakes which impair the quality of product, add to the cost of making it or cause delay in deliveries, any of which are bound to cause annoyance to customers.

These mistakes force themselves upon the attention of the manager or superintendent. He probes the matter to the bottom and finds that the mistakes are due to lack of definite orders or understanding between various departments.

To place responsibility for mistakes on the proper shoulders, to ensure harmony and understanding between different departments and to see that neither time, labor nor materials is lost, system is necessary. This system must be comprehensive yet so definite that each person affected will receive full and accurate instructions regarding his share in the duties involved.

The owner or manager of the company might devise a system to cover the needs discovered, but in nine cases out of ten he will arrive at the conclusions desired more quickly if he calls in for consultation the system experts employed by one of the companies which make a specialty of this work and whose experience has probably covered a need very similar to that under consideration.

It is not advisable to let the system expert have too much authority. He is of greatest value as a specialist whose advice is to be carefully considered and adopted if it covers the full range of needs exposed when the mistakes under the old methods became apparent. If, however, the owner or manager of the company is not willing to take the time to fully investigate the cause of these mistakes he should give the system specialist full authority to probe into the matter. Then when the remedy is proposed, a conference between the foremen affected,

the superintendent, the accountant and any others interested should be held. Such a consultation will bring out any defects in the system proposed and in a subsequent talk with the expert the owner or manager can secure such amendments to the system proposed as will secure the results desired.

**THE CONTENTS OF THIS EDITION.**

The men for whom we are building the OFFICE EDITION are managers of large and small concerns, superintendents of manufacturing plants—practical men—office managers, purchasing agents, sales managers.

In this issue there is something of intrinsic value to every one of these men. For the manager, whether of a large or small business, practically everything in the issue is of direct or indirect value. If not in his own particular work, in the work of the departments under his control.

For the purchasing agent, the article "The Buying End" will prove of absorbing interest. It is a story of the development of a successful purchasing department. The methods are very different from those employed by many purchasing agents. Perhaps there is a lesson in it for many.

For the factory superintendent there are two or more articles of direct value, one on the cost system used in a large Canadian machinery manufacturing plant, and the other a story of the search for and the finding of the flaw in the system of manufacturing and cost estimating in a manufacturing plant. The superintendent and the manager of the plant knew there must be something wrong but it took an expert to find out what. This article is called "The Quest for the Leak in Factory Costs."

The article "The Science of Office Salesmanship" is written specially for the sales manager. There are without doubt new ideas in this article for every sales manager; and if only one good suggestion is obtained, the time taken in reading the article has been well spent.

Such material as descriptions of new office equipment will appeal directly to the office manager. This issue contains several such articles.

Other articles such as "System in Contractor's Office," "Collecting Accounts by Form Letter," and "Addressing Shipments Accurately," are of general and specific value.

It will pay every one of our readers to go over this issue carefully; and in doing so we hope they will criticize to themselves, and afterwards to us in a letter. We would like to hear about the articles which are appreciated; and we particularly wish to know our readers ideas as to how we can improve.

**GO FORWARD OR FALL BEHIND.**

A business office equipped five years ago with the most modern and efficient equipment of that day but into which no new machinery had been added, would today be far from up-to-date. So many new devices are brought out, each making possible greater efficiency in the office, that the business man must continue to improve his equipment to prevent it becoming old fashioned.

# The Quest for the Leak in Factory Costs

An Elusive Factory Error Resulting from a Failure to Classify the Machinery and Labor. The Trouble was Duplicating of Operations in Several Departments which Resulted in Different Charges for the Same Operation

By C. H. STILSON IN SYSTEM

"Well, Downs, what do you make of it?" Brinsmade put the question impatiently. He and the chief accountant had just completed an exhaustive audit of the shop accounts for two years; the latter had footed up the last column. He handed the balance-sheet to his superior, whose eager eye instantly grasped the significance of the totals.

"Forty thousand dollars!" Brinsmade whispered, frowning with astonishment.

"Yes," the other assented. "As you suggested, I figured the profit we should have made on last year's shipments, assuming regular prices and deducting for all cuts. You have the results in these three columns," indicating their position on the sheet with a thin forefinger. "Here, in this column, you have the actual profits."

"I see, I see," muttered the manager, visibly disheartened.

Downs at his elbow, he went over again the discouraging figures before him. As the minutes passed, perplexity deepened the lines on his brow.

For two years he had directed all his energy towards developing a perfectly organized factory. So marked had been his success that a fortnight before increased dividends had seemed assured. Very little room for improvement in the organization he had built up was left, he felt. He had done his best—and his best was good!

Then came the hint, from Downs that the ledgers, on balancing up for inventory, indicated a serious deficit.

"Your books are wrong!" he had protested. "We'll go over them together and find the mistake."

He did so, in the week that followed. He walked the factory from end to end in eager search for the treacherous spot, the loop-hole through which the dollars were slipping away. To no avail. And now, the final survey of the books proved that elusive leaks threatened the life of the business.

From this analysis, he turned at last heavy-browed with determination. Pride was in the dust; the manager was uppermost; personal feelings were subjected to the welfare of the company.

"Downs"—his chagrin was evident—"I'll have to give it up. The trouble's in the factory, but I don't seem able to find it. We must have expert help from outside."

## II.

"Where do you think we're wrong?" Prescott, the smart junior of a firm of production engineers, smiled at the manager's anxious question.

"I'm here to learn, Mr. Brinsmade," he parried. "If we could have made a long range diagnosis of your trouble, you would have saved three-quarters of our fee. Give me a week and I think I'll have the answer."

"However,"—the manager's face had lengthened—"from what you wrote us and from what you've told me here, I'm quite sure that it's not lighting of details that has caused your losses. More likely"—he paused, but went on quietly—"it has been disregard of some basic principle of production or organization."

Brinsmade flushed as he met the other's eye. The

suggestion that he lacked complete knowledge of the essentials of management was not pleasant. After a moment's silence, however, he smiled at Prescott.

"I almost resented that statement," he acknowledged, rising and taking his hat from its hook. "Let me show you over the plant."

In the walk through the shops, Brinsmade pointed out with pride each detail of the organization which he had wrought from confusion with such care and personal interest.

An hour or so later found them seated elbow to elbow at the manager's desk, Prescott listening with knit brow and thoughtful eye to the other's rapid and comprehensive description of the cost and order systems used in the shop.

"You have a splendid organization," Prescott said at last. "But I'll need to spend a few days looking about, before I can say definitely where the trouble lies."

## III.

For five days Prescott haunted by turns the offices and the factory. No fault was to be found with the accounting. Each shop and department had a separate account under which was recorded weekly the total of productive and non-productive wages; and all expenditures for maintenance and repair.

The strictly non-producing departments had their separate accounts as well, which allowed an accurate calculation of the ratio between general expense and legitimate production expense. No item escaped, no expense failed of proper recording.

In the factory, the general shop conditions were excellent. Economy in the use of floor-space was everywhere apparent. Individual motors in each sub-department pointed to efficient power transmission. Modern coal-handling equipment in the power house eliminated all chance of losses in power generation.

The atmosphere of good feeling and contentment among the workmen, easily recognized by Prescott as he passed through the departments, assured good workmanship and generous production; while a careful inspection force made certain a fixed standard for finished product.

Ordinarily, in such investigations as this, Prescott was able to pick out, at once, a number of weak spots contributing to the general loss. But here he found an efficient accounting system, and, at first glance, an admirably organized factory. It was hard to believe that disease existed anywhere in such an organization.

In a quandary, he turned to the records of actual and estimated costs. Here he found enough to convince him that he was on the right track. Further comparison of estimates and actual outlays gave proof that he had, at last, discovered the subtle cause of the year's losses. This new development in mind, a swift survey of the various departments confirmed his decision.

Brinsmade had failed to classify his work and machinery.

## IV.

At once he sought the manager's office, stopping for Downs on the way. Together they entered the office. "I have found the trouble," Prescott announced to Brins-



made. "As I suspected, you've overlooked one important principle."

"What principle?" Brinsmade demanded, intently.

"Classification," answered Prescott. "To get results you must classify machinery and labor. You carried neither far enough."

"Just what do you mean?" asked the perplexed manager.

"Every department in your plant is a little, independent factory," the engineer answered. "In your largest room, I notice, you carry out a dozen operations that are duplicated in other shops—blanking, sorting, assembling, knurling. In fact, I don't remember a single class of work which that room has not tackled within the last three months. In lesser degree the same thing is true of the other departments."

"Yes," Brinsmade granted, "what of it?"

"I am going to show you,"—the other glanced at a tablet in his hand—"that your errors have come from this scattering of operations, this failure to limit each operation to one machine or series of machines. The percentage ratios between departments, productive and non-productive expenses have been accurately figured, yet your failure to classify your work renders these percentages, although accurate, unsafe to use. Let me illustrate. What is the percentage for overhead charge in your big room?"

"Ninety-five per cent," he replied.

"Just so," Prescott hurried on, "and for every dollar paid to the productive help in that room, you charge the customer an additional ninety-five cents, whether the work be running eyelet-machines, or piercing tin washers on a foot press?"

The manager nodded his assent.

"Has it occurred to you," the young man put the question directly, "that ninety-five per cent. was too low for eyelet-machine work, and too high for foot-press work?"

"I can't say that it has," admitted the other reluctantly. "In figuring prices I have simply added to strict production costs the percentage for the room in which the work was done."

"And in consequence," Prescott countered, "you have about as many prices for a single operation as you have departments in the plant. I found several instances of it in these estimates." He picked up two from a number he had brought in with him. "Both of these involve the operation of 'blanking and forming.' In one case you use a non-productive of 95 per cent., in the other 230. Here is another: 'buffing'—65 per cent. on one, 175 on the other. Both prices can't be correct. Whether either is correct remains to be seen. You get my point, I think."

"Yes, I see the logic in what you say," admitted Brinsmade, his eyes dilated by the breadth and newness of the problem.

"Your only course," the young man hurried on, "is to immediately re-arrange your factory departments. Put all your blanking-presses, all your cutting machines together—have all your blanking and cutting-up done in one department. Have all your sorting done at one place."

"Gather all your tool-makers and machinists, now scattered here and there in the different rooms, into one large machine room."

"Then," he swept on, "the non-productive percentages you obtain from the departments so arranged will be true for the class of operations done therein."

The manager nodded comprehension.

"You're right; no question about it," he admitted. "It means tearing the factory to pieces, but there's no

other way. Come on out into the shops and we'll get our bearings. Then we'll work out our programme of change before we move a machine."

## V.

Reorganization of the factory was no mere matter of classification, calculation and millwright work. The human element, the reluctance of foremen and job foremen to surrender their virtual independence, promised to be the stumbling block in the way of Brinsmade's programme. Prescott, at the first conference after their joint survey of the shops, suggested as much.

"This must be your personal affair," he told the manager. "For me to mix in it would simply embarrass the work and stir hostility among your bosses. You know them; they have confidence in your judgment and friendship; while I'm an outsider and therefore a theorist and a meddler. So we'll lay out this thing to be done and I'll hike back to town. It's up to you to carry out the changes we decide on."

The second day sufficed for the rearrangement of the shops on paper. When the last pencil sketch of the floor plans had been completed, Brinsmade was master of every detail, had foreseen well nigh every contingency with which he must deal. Prescott's train had hardly started before the manager was facing a meeting of foremen and assistants.

The interest which his account of the discovery of the deficit, the summoning of Prescott and the expert's investigation evoked turned to apprehension as he explained how the cause of the losses had been found and the remedy determined. Opposition he had foreseen; tact and diplomacy, he knew, must mark every step of the reorganization if he was to prevent disorder, confusion and ill will.

"I want you all to feel," he urged, "that you've got a family interest in the changes we are going to make. If the factory can't be put on a sound, paving basis, the company, of course, must close it down. That means no jobs for any of us. I know you've been satisfied with conditions here, and I want to keep you satisfied."

"Give the new plan a chance, help to make it a success. Put your shoulder to the wheel and help us out of the rut we're stalled in. We'll win out, all right, if we just boost together."

A blanking room was the first innovation. It was placed on the ground floor because of the weight of the machine; near the store rooms in accord with his plan to make manufacturing a continuous process, without retrograde movement, from raw material to finished product. Every department was stripped of its punch presses; all were gathered together and a job foreman promoted to boss the room. In the same way, the foot and dial presses were withdrawn from the various shops and concentrated in one place; in turn followed the buffers, the milling and screw machines, the drill presses.

Chagrin followed each of these withdrawals and the shifting of foremen consequent on the establishment of the new rooms, the gradual disintegration of the elder departments robbed of machines and men. Chapman, the brusque, but capable foreman of the largest shop rebelled when his eight tool makers were ordered to the consolidated tool room.

"You may see some sense in all these changes," he complained bitterly, but for my part I think you'll ball things up."

"How's that?" asked the manager.

"Why," gave back the other impetuously, "how do you expect me to turn out goods as I have in the past, when a half-dozen other men, who know nothing about them, are making most of the parts for me? I know

exactly how to make the tools for each part; now some other fellow has got to learn it all over again. And look at the delay there will be waiting for parts.

"Besides," he concluded, with emphasis sufficient to indicate that this was his chief grievance, "you've taken all my tool-makers. How do you expect a man to make any suggestions for special tools when the tool-room foreman will get all the credit?"

Brinsmade was confronted by many such complaints. That justice would be done he assured each and persuaded him to work in harmony with his design.

In three months the entire factory was working on the new basis. Impatiently, he waited for a complete list of the new department percentages; he wanted to compare them with those of the old regime.

Each department now contained only the non-productive help absolutely necessary to conduct the one line of work undertaken therein. The ratio between producing and non-producing expense in the sorting room, for example, would now be the true ratio for sorting; in the buffing room, for buffing; likewise in other departments.

When Downs handed him the list of percentages, however, surprise preceded enthusiasm. Comparison with his old records showed how widely his old standard costs had departed from actual costs. Prescott had indeed been correct. Loading the average percentage of non-productive expense in a room where many different classes of work are undertaken on each article produced is dangerous practice. Operations which require little attention from a tool setter bear an unjust share expense of operations requiring constant attention from a tool setter or tool maker. For the same reason, these latter operations escape part of their just burden of expense.

Comparing the old and new percentages, he found variations so wide that for his own information and for the convincing of his department heads, he drew up a table covering some of the more important processes, the old percentages in parallel columns with the new. With this result:

Operations	Former Percentages for Various Rooms		New Percentages Consolidated Rooms	
Assembling...	95%	150%	50%	106%
Blanking....	50%	95%	70%	153%
Buffing.....	60%	95%		72%
Forming.....	95%	70%	125%	56%
Knurling....	95%	125%		70%
Painting....	30%	95%	50%	30%
Piercing....	95%	70%	125%	53%
Setting-up...	95%	125%		53%
Sorting.....	35%	70%	125%	60%
Stamping....	30%	85%	95%	135%

In some cases the revised percentage was almost an average of the old ones. On all the simpler operations, however, like sorting, setting up and packing, he perceived that the margin of error had been so large that the calculated cost was farther from reality than the wildest guess work, though involving no money loss to the company. While on operations involving tool work, the departure from the real cost had been so wide that losses had attended every contract undertaken. Percentages of 50, 70 and 95 had been employed when the actual figure necessary to insure a profit should have been 153 per cent.

Brinsmade smiled grimly as he finished his analysis. To have used three such divergent prices for the same operation was inexcusable; but that all should have involved serious losses on every job turned out made his management seem farcical.

Resolutely he folded the scribbled sheet, tore it across, again and again, then flung the fragments into his waste basket.

"That's done," he said aloud "spilt milk churns no butter." Then, into the telephone as the sales manager answered:

"O Parker, come in. I want to talk to you about the Whibley and the Gross and the Taylor jobs. We've got the factory where we can go after that business again—and quote prices that will land it."

## The Mission of the Catalogue\*

The Catalogue Must be Your Personal Representative, Duly Accredited,  
Backed Up by Your Word, and Vested With the Authority of Knowledge

BY CHARLES W. BEAVER

It has been said that "Men are like stone pitchers—you may lug them when you like by their ears." The main trouble, however, is, that this is a short-eared generation.

Now, one of the uses of a catalogue is to get a man's ear. Its written words must take on life and color to bear the significance of a spoken message.

There's a current understanding that the world learns very, very slowly by argument, but quickly indeed by experience. Now the mission of the true catalogue is not so much one of argument, as one of experience—what things will do; not always why.

This is an age of try and buy—satisfaction or your money back. While the catalogue is a listing of classes and kinds and prices with the necessary description and technical data, it can be a great deal more.

\* Extracts from an Address by Chas. W. Beaver, before the New York Advertising League. Reprint from "Brains."

A catalogue can be a monument to the stability of a house. A record of its achievements, its willingness to put into irrevocable print, purposes and claims of merit. It must go further, however. It must be an educator.

When a government is established, ministers and representatives are appointed to the various nations throughout the world.

Any business is a government on a small scale. Mr. Manufacturer must secure the service of an ambassadorial staff to represent him to the public at large.

Now right here is where the catalogue comes in. Not a mere price book, but a catalogue. It may be interpreted at the hands of a large travelling sales force, or it may be sent out into the highways and byways alone. In either case, it must be your personal representative duly accredited, backed up by your word, vested with the authority of knowledge, and lacking none of the polish essential to the most profound courtesy.

I don't approve of the universal likening of a selling campaign to a battle with its scouts and skirmishes and action, its musketry and its heavy artillery. War at best is little short of Hell. Selling campaigns are not successfully built on that basis, unless those of the Baxter Street shop, which knocks a man down, and drags him in, if he won't buy any other way. The up-to-date selling campaign is a masterpiece skillfully blending equal portions of diplomacy, courtesy and common sense.

You expect your catalogue to get business whether posting a travelling sales force, educating an army of retailers, crystallizing the ideas of a body of college students or selling straight to the user. You expect this silent little messenger, unaided by the magnetism of the human voice—unable to put on a cheery smile, to get business. Its cold type must be infused with a message so intimate, so true, and its every page so suggestive of uses and applications, that the prospect is made to see each article his own. It is expected to be broad enough to fit the peculiarities of a thousand different kinds of men, and narrow enough to mean a business proposition to each of those men. There is one way to make a catalogue do all this. That is to make it a condensation of your eighteen-carat selling points, with occasional gaps for the customer to use his imagination. Make it more than a mere price book.

Tell your story in an optimistic way, but stick to the truth. If it is dangerous for a salesman to exaggerate how much more dangerous is exaggeration when printed and ready for comparison at any time?

A salesman can study his customer, bring into play the magnetism of a personality, be forcible or tactful as the moment may decide, withdraw to advantage, or prolong the interview, as his judgment may indicate.

Not so with a catalogue. It must extend your personal greetings, associate itself with your customer's needs, impress itself on his mind and create in him a feeling of indebtedness, all in the space of a few moments. The real secret of success, however, is the strong evidence of reserve power. This in most cases is the real reason that keeps it out of the waste basket.

Then again, a catalogue is going to indicate to your customer your extravagance or frugality. The happy medium—a prosperous-looking book neither cheap nor overdone—is the one worth while.

We don't write catalogues to give some printer a chance to display his high art ideas, striking cover designs or unique display effects. These are merely incidentals—all after considerations.

Clothes make a whole lot of difference in a man until he opens his mouth.

Just so with catalogues.

A great many catalogues are like the fellow with the good tailor, they are masterpieces when it comes to the printing, but the copy is the limit. It's prepared in a perfunctory, do-it-because-the-other-fellow-does-it, sort of a way, or some high-browed young man just out of college is put on the job.

The average beginner decides that this is a great literary stunt, an opportunity to display rhetorical beauties and grammatical fitness.

What is the result?

A lot of good paper is spoiled, waste baskets are glutted, and a good many people don't get the chance to realize the possibilities of a correct catalogue.

There is just one thing which is worse than the exaggerated over-descriptive and lying catalogue. It is the loosely written pretty book, good publicity only for the printer who made it. You know that all catalogues start as dummies. The sad part of it is that some of them never get to be anything else.

There is getting to be so many kinds and methods of

publicity that it is confusing. Thus a good many people overlook the relative importance of the catalogue in the general scheme of publicity. I want to say right here that the catalogue is the foundation of the whole scheme. On it are builded all the other phases of advertising.

There are two things we need more than anything else. First: to realize that advertising is a profession, requiring the most careful study just like law or medicine. Second: boldness, diligence, and originality on the part of those who are giving their time to this study. The very fact that so many men are going into the field as advertising specialists and publicity engineers, indicates that special knowledge along these lines is fast becoming recognized as the one main thing to compel success. The fact that so many advertising clubs are springing up in all parts of the country, further indicates the thirst for special knowledge of this character. It's getting so that each man realizes that his own case must be studied on its merits, and that because some other fellow has made a success by some particular publicity method, is no sign that he is going to reap success by following suit.

### How the "Big Contract" was Won

The contract for furnishing the exterior granite work for the new Wisconsin State Capitol is the largest of its kind in the history of the cut stone industry in this country, and its award came as the result of a long battle in which the arts of salesmanship and perseverance had full play.

About a year ago, when it was first announced that bids would be opened for the granite work for the new capitol, stone dealers throughout the country began to sit up and scheme. At the daily conference of the heads of departments of the company, one of the chiefs spoke up: "We must have that contract, and Hardwick white granite is the material in which we want it. Joe had better go out to Madison and look over the ground."

The next day "Joe" went. His full name is J. B. Reinhalter, and he is the western representative of the company.

His first telegram when he reached Madison was: "The commission favors Georgia marble. Shall I fight?" The response came from the general manager's office in Vermont: "Stay there till you win!"

Six months went by, and Reinhalter was still on the ground, meeting the commissioners daily, and submitting samples and analyses and testimonials, and practising all the arts of an experienced salesman. Finally he wired to the home office: "Commission leaves to-morrow for an investigation of the eastern quarries. What shall I do?" "Go with them! Stick to it till you win."

One month later the salesman wired for help, and the general manager went to Madison. Another month dragged by. The commission had opened the bids and then adjourned from time to time. One day it was decided to hold no more meetings for two weeks, and the representatives of the other stone firms who were fighting for the contract promptly left for home.

That evening the late Senator Vilas, one of the commission, came across two determined looking men sitting in the hotel lobby at Madison, waiting. He recognized them as the granite general manager and salesman.

"Why, I thought you fellows would have left town three hours ago!" he said.

The manager looked up. "Senator," he said, "when the company goes into a fight, it fights to a finish; and we're here until that contract is awarded."

Two weeks later the company won, and the new Wisconsin State Capitol is now being erected of glittering white granite.—System.





# Science of Production Engineering

The Science of Industrial Organisation. A New Profession of Interest to Manufacturers and Others

By A. B. FARMER

In these days of stress and strain, many a wise business man has learned the value of retaining the services of a competent physician not only for treatment in time of sickness, but rather for that timely advice and warning that, if followed, will usually avert disaster. One who is constantly carrying his health or lack of it about with him, becomes accustomed to himself, he has little opportunity to make comparisons, and anyway too much introspection tends to make one morbid, while a specialist will readily observe the warning signs and perhaps correct the little mistakes of living that may lead to physical or nervous breakdown.

The same philosophy applied to business has in recent years led to the development of a new profession, which goes by the name of Production Engineering.

One definition of Production Engineering is the science of securing in productive organization the maximum possible output of a given quality at a minimum expenditure of time, material and labor.

The production engineer, by the above definitions, undertakes the study and control of all manufacturing problems. This is a big contract, and at first blush it would appear hopeless for one man to attempt to understand all the details of every branch of production. But, when we learn that a firm of this kind have a staff of men, all specialists in different lines, from the making of a brass casting to the development of an accounting system, the case begins to take another aspect.

Efficiency in the factory, the final measure of which is, of course, net profit, depends in the first place, on the efficiency of each machine and each employee; and the economical systematization of the work. In this, the aid of the practical mechanic, and the man familiar with the particular line of manufacture is required.

In the second place, efficiency depends on organization, the fixing of responsibility, and the elimination of the friction, ill-feeling, and loss of time that results from conflicting authority. It is absolutely essential that each man shall know to whom he is responsible, and for what. This requires definiteness of organization a necessity best met by an organization chart prepared by one conversant with many organizations in a variety of industries, and so in a position to adapt those features best suited to any particular case.

With regard to the office, the aim of the production engineer is to devise a system for each particular business that will most clearly reflect the actual condition of affairs, affording ready comparisons at stated periods with previous periods. It must also show clearly and accurately the total production of each branch, and the total cost of production, with all essential details.

The injury that is done to business by the lack of efficient cost systems is inestimable. Nothing facilitates trade more than a sure knowledge on the part of both buyer and

seller of the true value of the goods dealt in. All business talk has this one object in view—or should have. In the case of commodities generally, commodities where

which the "daily routine of the paper-buried desk" so often leaves the responsible brain too weary.

Of course every manufacturer has a more or less deep-rooted belief that his organization and system is just a little better than his competitor's. Of course it is always the other fellow who is cutting prices by unfair and ignorant competition. But the number is increasing who take a mirror to themselves, and among these the productive engineer is coming to be a regular and welcome visitor.

MATERIAL		TOTAL	REMARKS
BROUGHT FORWARD			
POUNDS CAST IRON			
POUNDS MACHINE STEEL			
POUNDS TOOL STEEL			
POUNDS STEEL CASTINGS			
POUNDS BRASS			
POUNDS BARBITT			
SCREWS, NUTS, GILERS, ETC			
SOLD TO _____ ADDRESS _____			
SERIAL NO.	DATE SHIPPED	VIA	
NET PRICE	INVOICED	INVOICE NO.	
LABOR COST	MATERIAL COST	TOTAL COST	
WAGES .....	MATERIAL .....	LABOR COST .....	
Per Cent .....	Per Cent .....	MATERIAL COST .....	
TOTAL .....	TOTAL .....	TOTAL .....	

Fig. 3

the monopoly element does not enter, value is fixed in the end, by cost of production. If then, some fool manufacturer with the best of intentions perhaps, but lacking an efficient cost system, sells his product for less than the actual cost of manufacture, he spreads a false idea of the true value of the goods he sells, and apart from his own financial loss, he is a real hindrance to trade. He spoils the market.

One manufacturer, after an examination of his business by experts, found that the previous year he had made five thousand dollars in one part of his business, and lost three thousand in another. Asked later if he would be displeased at the same firm of production engineers overhauling the affairs of a competitor, he replied, "By all means do it. That fellow is selling below cost and doesn't know it!"

The man who ignorantly sells below cost injures not only himself and his competitor, but also the buyer, who, while saving perhaps at the moment, loses that correct estimate of relative values on which successful business must be based.

The production engineer is a friend of business. He has nothing to sell except his services. He is not necessarily bowed down to any particular system of book-keeping or organization. His one aim is results. Passing from one plant to another, studying mines, factories, insurance, even colleges and theatres, he becomes familiar with fundamental principles of organization in all their varied applications, and being free from administrative responsibilities he is able to take a comprehensive view of any situation, and devote to it that extended thought for

## A NIGHTMARE IN HARDWARE.

ANONYMOUS.

To-day I drove the pigs of lead  
Down where the tailor's goose  
Was drinking from the old spring-bed,  
As was its wont and use.

The sad-iron stood in sorrow by;  
The weight had lost its scales,  
But the harrow showed its grinning teeth,  
And the keg its tenpenny nails.

The auger cried, "Life's one long bore;"  
The plow said, "I've my share;"  
The copper whispered, "All is ore;"  
And the hair-spring tore its hair.

Though the monkey wrenched nut after nut  
From the rods that tried to bolt;  
Though the cross-cut saw bad-tempered got,  
Seeing the stop-cocks molt.

No game the chains put on their links,  
Where the planes were smooth as glass;  
A heaviness fell on the zincs,  
A dulness on the brass.

What strange, hardwaring sights there be;  
The jack-screw turned away,  
A heaving thought came unto me—  
I need not weight to-day.

The thing I could not understand;  
I turned my pigs of lead,  
And drove them with an iron hand  
Back to the smelting shed.

—Exchange.

## New Remington Visible Typewriter

Models 10 and 11 of the Remington Typewriter Comprise Many New Features, the Chief of which is the Adoption of the Front Stroke Typewriter. A Detailed Description of the New Models.

One of the most interesting developments in the typewriter world for some years is the production of a visible typewriter by the Remington Typewriter Co. Though these models have been on the market only a few weeks the demand for them has been such

ington company to be "the greatest advance ever made in the mechanics of the typewriter."

It is pointed out that the speed of the machine and its ease of operation depend upon the escapement more than on any other single factor. The importance of an im-



No. 10 Remington Typewriter.

that it is evident many friends of the Remington have been wishing that the company would put a visible typewriter on the market.

To all familiar with typewriters it is at once apparent that though the new models are front stroke machines they are built along the distinctive Remington lines. They have the spacious type well, forged type bars, pivot bearings, and solid general construction which have been a feature of Remington typewriters.

An important feature of the new model is the mechanism of the type bar, which had to be of such construction as to permit the use of a drop forged type bar up to the full standard of Remington strength. The type well is of great width and spaciousness and the forged type bars are of corresponding solidity and strength. This large type well, however, accounts for only a part of the space which is gained for the type bar mechanism. The really salient feature is the hanging of the type bars in a double row, so that twice the space is obtained for each bearing. The double row of type bars permits the retention of broad, pivotal bearings, a well-known Remington feature.

The new feature referred to as the single dog escapement, is considered by the Rem-

ington company to be "the greatest advance ever made in the mechanics of the typewriter." It is pointed out that the speed of the machine and its ease of operation depend upon the escapement more than on any other single factor. The importance of an im-

provement in this feature is at once apparent. Instead of a pair of dogs operating on one wheel the new model has a single dog operating on two wheels. It is not necessary to change any parts when altering the machine

from direct to reverse action. This is accomplished by altering the relation between the teeth on the two wheels, which is done by simply loosening the three screws which hold the wheels together. The two escapement wheels are so set that they cannot be disengaged while on the machine. Operators therefore can adjust the action of the machine to suit their own ideas. Another new feature is a mechanism by which the escapement can be "timed" for the most erratic operation. The improvement in speed and in lightness of action is surprising.

This new escapement, it might be noted in passing, has been introduced on the present under-stroke Remington models.

Another new feature, applied on the No. 10 Remington, is the column selector. This device (black keys in illustration) enables the operator, by the single touch of a key, to bring the carriage to any one of five different positions on the line, these positions being determined by means of a reversible rack.

This rack has four sides which permit the setting of the stops for no less than four different classes of work. The distinctive feature of the new Remington column selector is that the operator may bring the carriage instantly to any one of the columns, in other words, any or as many of the columns may be skipped as the operator wills.

To those who desire to use the typewriter for billing Model 11 is particularly designed. It has the complete Remington decimal tabulator built into the machine, forming part of it. The keys are operated vertically and, like the keys of the column selector, are so placed as to form virtually a part of the keyboard, although above and entirely out of the way of the letter keys.

The extension of the use of the typewriter for billing and other forms of tabular work renders some method for the automatic tabulation of figures an essential for every typewriter and this vital improvement in the tabulating mechanism of the Remington represents therefore a new factor of importance in the efficiency of the writing machine.

Several other improvements in typewriter mechanism are referred to in the booklet "The new Remington Typewriters," which will be sent to any typewriter user or operator who desires same.

## Addressing Shipments Accurately

A Description of the Diagraph Stencil Cutting Machine. Value of a New Stencil for each Shipment.

By A. B. FARMER

Business profits in these days of strenuous competition, depend a good deal on repeat orders, and repeat orders are influenced more than is often realized, on the neatness and accuracy of the work of the shipping room.

Most railways require that, except on parcels that are too small to make it possible, all packages of freight must have the name and address of the consignee clearly marked with brush or stencil. A

recent circular to shippers from a large Canadian railway omits to mention the brush as an alternative.

Possibly the omission is intentional, for brush addressing is at best rough, unfinished and requires a great deal of space, and it is often illegible and frequently makes work for the claims department.

The brass stencil has drawbacks, however, as serious as those of the brush. Each stencil costs about fifteen cents; a new



stencil is required if any slight change in name, address or route is to be made; and there is the difficulty of keeping track of a separate stencil for each of perhaps thousand



The Diagraph

and of customers and danger that the wrong stencil may once in a while be used.

These drawbacks to the brush and brass stencil methods of addressing shipments have created a demand for a more efficient method, a demand which is met by the "No Error" system used with the "Diagraph" which is sold in Canada by Wm. Stewart & Co., Board of Trade Building, Montreal.

The "Diagraph" which is shown in the accompanying illustration, is a machine for cutting pasteboard stencils in the office or shipping room. The machine is easily operated, is practically fool proof in construction, and in the hands of a small boy will cut forty stencils an hour at a cost of about one-tenth of one cent apiece. This makes practicable the plan of cutting a new stencil for each shipment direct from order or from the shipping tickets, insuring accuracy every time. A stencil may be cut for one package and the package addressed in about the same time a brush address would require, while where there are several packages in one shipment for the same destination, the saving of time is considerable.

The diagraph is made in two sizes, the "Regular," making a letter 2 inch high, and the "Baby" making a 1/4 inch letter. In all other respects the two machines are identical.

#### THE DIAGRAPH IN OPERATION.

The use of the "Diagraph" is well illustrated by the system in operation in a large concern, where from 800 to 1,200 orders are shipped every day.

After the order blank has been filled out with a list of goods and the necessary address and shipping instructions, and has passed all the checking and credit departments, it is given a number, and is placed in an order binder, which has on each of its eight corners the number or letter of a floor or department. The binder is inserted in a pocket at the end of a basket track, with the corner projecting which has on it the number of the floor to which it is to go for the first selection of goods. It goes from floor to floor and department to department in this way auto-

matically until the entire order has been filled.

The baskets are numbered, and if more than one basket is used, the number of each basket is entered on the order itself, so that they can be assembled by the packers without difficulty.

When the entire order has been filled, and the last basket stands on the elevator door, "P" shows on the corner of the order binder to show that its next move is to the packing room. The last basket, however, with the order binder in it is not sent at once to the packing room but is first shunted into a special runaway, where it passes the stencil cutters. Here are located three "Diagraphs" each operated by a boy who is capable of cutting 40 stencils an hour. The order binder is taken from the basket, a stencil for marking the goods is cut and placed in the order binder and put into the basket, which is then run into the packing room. The packers take the order and look up the other baskets, the number of each of which appears on the order, thus

furnishing a complete check against error. As fast as the goods are packed—and there may be a dozen boxes in a single order—each box is marked and the number of boxes packed is noted on the order by the packer. The stencil is then used and the box is carted away to the shipping room. When the order has been all packed the order binder is sent to the shipping room where the shipping clerk is able to assemble the boxes from the notations on the order blank. The stencil is destroyed at once.

It will be noted that there is a careful guarding against the possibility of error in every stage of the operation, by the system of numbering the orders, baskets, and boxes, and especially by the use of a special stencil cut for each order, which stencil goes with the order to the packers and is used by them on every box packed, and is then destroyed to prevent further use by mistake. The time when the stencil is cut is a matter adjustable to the system of shipping followed. It may be cut in the office and accompany the order from the beginning.

## Canadians Carry Off Prizes

Remarkable Record Shown by Canadian Contestants in Amateur and World's Championship Typewriting Contests at New York Business Show.

In the typewriting contests at the National Business Show, held at Madison Square Gardens, New York city during the third week in October, Canadian contestants carried off the laurels. In the amateur contest, L. Coombes came first, F. Jarrett second, and R. LePard fourth. All three are Canadians, all three being graduates of the

dians fourth, fifth and seventh. The contest consisted of one hour copying from difficult matter. The prize was a \$1,000 silver trophy, and there were as well gold, silver and bronze medals for first, second and third places respectively. The record of the test is as follows:

	Gross Words	Pen-Errs	Per-alty	Net Net	per min.
Rose L. Fritz....	5838	119	595	5243	87
Emil A. Trefzger .	5818	126	630	5188	86
H. O. Blaisdell ...	5900	223	1115	4785	80
F. Jarrett.....	4802	74	370	4432	74
L. Coombes.....	4800	80	400	4400	73
Adella M. Fowle..	5073	149	745	4328	72
R. LePard.....	4676	187	935	3741	62
Edith Varian....	4720	216	1080	3740	61
O. G. Wechsler . .	4364	151	755	3609	60
Carl W. Schwenk..	4900	329	1645	3255	54
M. A. Lang.....	4710	327	1635	3075	51

Rose L. Fritz, the winner of the trophy, is a Canadian, as are also Jarrett, Coombes, and LePard, the three winning first, second and fourth places respectively in the amateur contest. All four are graduates of the Kennedy Shorthand School, LePard having had only one year's experience. It will be noticed that Jarrett made the least number of errors, and Coombes came second in this respect.

#### COULDN'T LOSE HIM.

A "Big Indian" strayed away from his camp and got lost. Inquiring the way back he was asked: "Indian lost?" "No," said he disdainfully, "Indian no lost—wigwam lost." Striking his breast, he exclaimed, "Indian here!"



Rose L. Fritz, a Canadian, Winner of the \$1,000 Silver Trophy in the World's Championship Typewriting Contest.

Kennedy Shorthand School, Toronto. The prizes in this contest were gold, silver and bronze medals.

In the contest for the championship of the world, a Canadian came first and Cana-

# CAPTAINS OF INDUSTRY

Opportunities for Business. News of Building or Enlargement of Factories, Mills, Power Plants, Etc.—News of Railway and Bridge Construction—News of Municipal Undertakings—Mining News.

## BUILDING NEWS.

### Ontario.

**HAMILTON.**—The Banwell Hoxie Wire Fence Co. here are preparing for the erection of an addition to their plant to cost \$5,000.

**HAMILTON.**—A large concrete warehouse will probably be erected here by the Government on the proposed concrete dock.

### British Columbia.

**FERNIE.**—The Canadian Pacific Railway are taking tenders for a new station and freight sheds.

### Quebec.

**RICHMOND.**—A three-story brick warehouse will be erected here by the Richmond Furniture Co. W. A. Catton may be addressed.

**MONTREAL.**—Fire broke out in the dry goods store owned by Jette & Lemieux and did considerable damage to the dry goods, the damage amounting to \$15,000.

**MONTREAL.**—An observation ward will be added to the Alexandra Hospital. Messrs. E. & W. S. Maxwell are the architects, and Reid, MacGregor & Reid are the general contractors.

**MONTREAL.**—Mr. Isidore Crepeau, New York Life Building, will erect an apartment house on the corner of Park Avenue and Young Street, at a cost of about \$20,000. Mr. C. Bernier, 70 St. James St., is the architect.

**MONTREAL.**—The Morgue, recently burned, will be replaced by a modern and up-to-date one which Mr. L. Theriault will erect at 24 St. Urbain St. The matter is in charge of the Hygiene and Statistics Committee.

**MONTREAL.**—It is reported that James A. Ogilvy & Sons, dry goods merchants, will erect a new building on the Prevost property corner of Montcalm and St. Catherine Streets, which they purchased recently for \$227,500.

**MONTREAL.**—The Mount Royal Spinning Co. will erect a bleacher building at their works at Cote St. Paul. Contract for concrete foundation has been let to O. G. Loomis & Sons, Montreal. Messrs. Finley & Spence, Montreal, are the architects.

**THREE RIVERS.**—Tenders are being called for the erection of a new market building. All information may be obtained from Messrs. Daoust & Lafout, Three Rivers, Que.

**MONTREAL.**—A presbytery for the St. Thomas Aquinas Church will be erected soon. J. A. Karel, 17 Place d'Armes Hill, is the architect.

**MONTREAL.**—G. S. Manny & Co., Power Bldg., Montreal, have been awarded contract for heating 35 dwellings at the corner of Sherbrooke and St. Denis Streets, which are being erected for Dr. Ed. Dinbeau.

### Saskatchewan.

**SASKATOON.**—The Saskatoon Tent & Mattress Co. will erect a warehouse to cost \$8,000.

### Manitoba.

The Scottish Co-Operative Society, Glasgow, have decided to erect six new grain elevators in Manitoba along the Grand Trunk Pacific Railway to handle wheat for their Glasgow mills.

## BRIDGES AND STRUCTURAL STEEL.

### Ontario.

**OTTAWA.**—The City Solicitor have made an application to the Railway Commissioners for the extension of the Preston Street bridge.

**STRATFORD.**—The City Council have accepted the offer of the Grand Trunk Railway to straighten the Erie Street bridge by the addition of steel supports.

**TORONTO.**—A new bridge has been recommended by city engineer Rust to replace the present structure on Winchester Street and a new steel or concrete bridge at Crawford Street.

### New Brunswick.

**KESWICK.**—Tenders will shortly be taken for the rebuilding of the Keswick bridge here.

## WATERWORKS, SEWERS, SIDEWALKS.

### Ontario.

**OWEN SOUND.**—Owen Sound will vote on a by-law to expend \$100,000 on the extension of its waterworks system.

**NEW LISKEARD.**—Mr. H. Hartman, town clerk, wants bids for the purchase of \$15,000 bonds to be used for the extension of the waterworks.

### Quebec.

**MONTREAL.**—J. R. Barlow, city surveyor, is receiving tenders for a sewer on Notre Dame St. East to cost about \$2,430.

## POWER PLANT OPPORTUNITIES.

### Ontario.

**ORILLIA.**—The Town Council here have decided to heat the power house at the Ragged Rapids by electricity, the electric heater to cost \$1,000.

**PETERBORO.**—The electric wiring is being done in the new armories here according to the improved plans. A large switchboard will be installed to control the lighting in the whole building.

**OTTAWA.**—A project to connect Ottawa and Morrisburg by an electric railway, which will use about 20 miles of the present line of the Ottawa & New York Railway.

## MILL AND FACTORY EQUIPMENT.

### Ontario.

**ALTON.**—The Beaver Woolen Mills here were totally destroyed by fire, the loss being estimated at \$20,000.

**SUMMERTOWN.**—The Royal Cheese Factory owned by H. N. McLaren, has been totally destroyed by fire.

**PEMBROKE.**—Fire caused a loss of \$500,000 in the business district of this town, the loss including the National Manufacturing Co., a brick factory and the Wright tannery.

**DESERONTO.**—The smelting works owned by the Deseronto Iron Co., which were struck by lightning and burned down last September, are being built up again. The company expect to have the works in full operation by April next.

### Quebec.

**MONTREAL.**—The General Fire Extinguisher Co., 620 St. Paul St., will erect a factory on McCord St., at a cost of about \$17,500. Robt. Findlay is the architect and Chas. Thackeray & Co., are the general contractors.

**MONTREAL.**—H. C. Stone, architect, is preparing plans for a carriage factory in Delorimier municipality for the E. H. Heney Co., Limited. A bonus has been voted by the council for the company.

## COMPANIES INCORPORATED.

### Ontario.

**MILLBANK.**—The Millbank Cheese & Butter Mfg. Co., Limited, have been incorporated with a capital of \$3,000, to carry on the business of manufacturing buying and selling and dealing in cheese and butter. The provisional directors include D. W. Chalmers, W. H. Henderson and G. C. Rannie.

**MARKHAM.**—The Ontario Yarn Co., Limited, have been incorporated with a capital of \$40,000 to carry on the business of manufacturing and dealing in wool, silk and cotton. The provisional directors include H. D. Petrie, H. G. Ogg and G. C. Ellis.

**TORONTO.**—The McKillop Logan & Hibbert Telephone Co., Limited, have been incorporated with a capital of \$1,500, to carry on the general business of a telephone company. The provisional directors include W. W. Sadler, David Bruce and James Norris.

**TORONTO.**—National Press, Limited, have been incorporated with a capital of \$40,000 to carry on the business of general printers, lithographers, etc. The provisional directors include W. D. Wilson, W. S. Scott and H. J. Prescott, all of Toronto.

## Typical Filing System Installation

A View of the Office of Crane & Co., Wholesale Hardware Merchants, Vancouver, with Description of Filing System Installed.

In the accompanying illustration is shown one of the cheeriest and best arranged business offices in Vancouver. The location of desks, filing cabinets, not only presents an attractive appearance in the large, well lighted room, but facilitates the work of each individual to the greatest degree.

The desks, which were imported, are much similar to those in common use, the one new feature being the disappearing inkwell. In the business desk in centre and to the right of illustration the inkwell is closed, leaving a flat surface, while in the desk next this the back of the inkwell can be seen. As it stands thus it is ready for use.

At the back of the view may be seen the full complement of sectional filing cabinets installed by the Office Specialty Mfg. Co. On the left are shown three stacks of filing cabinets for general correspondence, the filing system being according to geographical location of correspondents. The vertical tray in the centre of background is used for filing statistical reports and stock records.

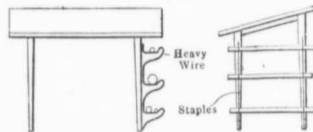
On the right hand side are two stacks, the first is made up of a base, four one letter size, one legal size and one bill size cabinet, one book-case section and a top, and is used for filing catalogues. The index cards to the catalogues are contained in the small tray shown on the desk in front of the stack.

other branches. These cabinets are all made in sectional construction, and other sections can be added to each of the stacks by simply removing the top and placing the section in position.

### Table Rack for Drawings

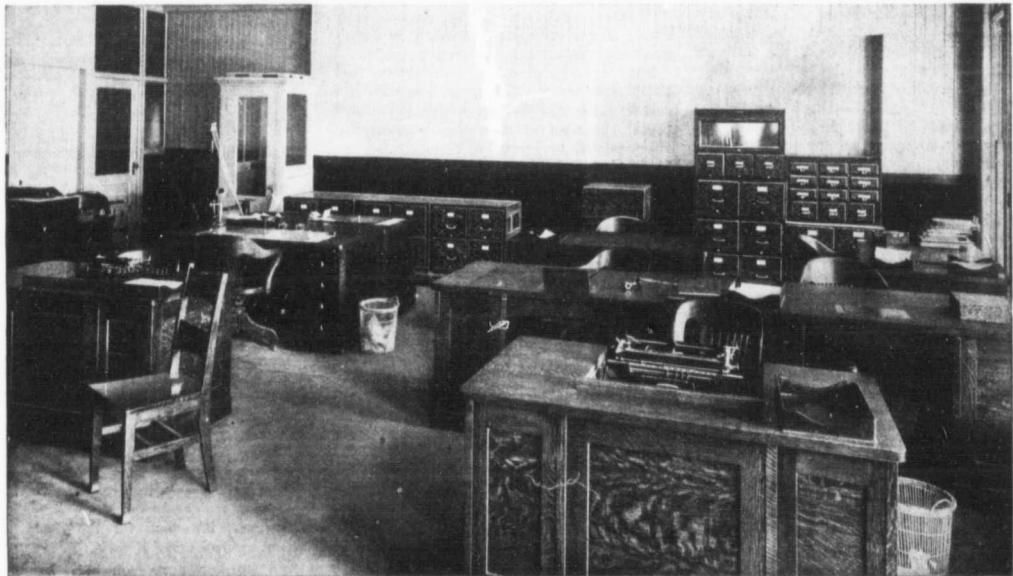
By A. K. READING.

The appearance of many small drawing rooms is often marred by carelessness in scattering around prints and layouts, which a draftsman needs for reference, but which are not in constant use, making it necessary to pile them on the floor if the size of the drawing table is that which is usually found. A handy device to overcome this trouble



A TABLE RACK FOR DRAWINGS

can be made easily with some heavy wire and a few staples, by bending the former into



View of the Office of Crane & Co., Vancouver.

The second stack consists of a base, three letter size vertical sections, for filing correspondence and reports relating to costs and quotations; one 8x5 card index section for cost cards; one legal size Shannon section, for bulletins from Home Office and

a series of large hooks and stapling the wire thus formed to a leg of the table. Two legs so equipped make a good substantial rack, on which reference prints and drawings can rest within easy reach of the draftsman. —American Machinist.

### THE VALUE OF A SMILE.

A smile is the visual language of the genial. It radiates warmth of the heart.

It is the trade-mark of dealers in the spirit of doing unto others as if you were the others.

Yes, and that trade-mark is protected by a natural copyright; for the commodity can not be made, it can not be adulterated and offered to the consumer as "just as good."

Like flowers it is sometimes produced in imitation, but it lacks the fragrance of the genuine, and is perceptible to the discerning a little way off.

Like a bottle that once contained the accepted standard article, men, empty of the genial spirit, frequently fill themselves with something of their own manufacture, and in the end bring retribution in the frown of contempt.

Smiles beget smiles.

The unweiled frown, or the frown clothed in a smile spread their pollen like ragweed and in the garden of life they sap the strength and fragrance of the flower of smiles.

Frowns beget frowns.

The real smile is the winged seed of good cheer. It sows itself round about and brings forth many-fold to enhance the environs of its origin.

Frowns fill our paths with thorns and make life about us like unto the weed-patch in the city's purlieus, where every day is dark and nothing useful grows.

Smile on life and it will smile on you.

Smile on those who frown upon you. To frown upon your enemy is to fall under the weapon of revenge in the hand of hate.

The habit of smiles is the armor-plate to resist the petty annoyances that make life a weary way of worry.—Silent Partner.

## The Science of Office Salesmanship

"A Correspondent Who Does Not Realize the Importance of His Position, and Who Writes Letters That Do Not Possess that Come-Hither Spirit, May Ruin a Million Dollar Institution"

BY ROBERT G. RUXTON

### THE SPIRIT OF CORRESPONDENCE.

Did you ever write to a man and receive back a reply that individualized him in your eyes—if you have, carefully note his method, for that man is a correspondent—not a letter writer, but a correspondent. He got right up against you, met parry with parry, wit with wit, logic with logic, sword thrust with sword thrust, praise with appreciation, blame with vindication, paradox with aphorism, aphorism with epigram—in short you realized quickly that you were crossing swords with a swordsman and at once felt an added respect for your opponent in the friendly business battle.

And this is what I want to talk with you about. Catch the spirit of your correspondent and he feels the same joy as the wrestler or a swordsman feels when he meets "a foeman worthy of his steel." Some letters are individual—the man stands right out and shakes hands with you with a good hearty, friendly grip. Don't send him back an epistolary handshake of the flabby, "I'm half-dead" kind. Return his "shake" with interest.

If you're a correspondent you will study your correspondent, but if you're a letter writer you will send him back one of those half-frozen messages that leave him wondering what sort of a dummy was at the other end.

If you want to make an impression get some ginger into your finger tips and make your letter as individualistic as the one you receive. Let it be a reply, hot with anger, vibrating with indignation, incisive with sarcasm, cutting with wit, warm with friendship, pregnant with logic, buttressed with reasons, or tingling with praise, but make an impression—make the recipient fairly tingle to write you again—make an enemy if you must, a friend if you can, but, in the name of personality do something to get away from writing the class of letter that reminds the recipient of getting into a damp and soggy suit of clothes.

The fact of the matter is, the good correspondent is a man who is alive. His mind is as responsive to praise or blame as the harp strings to the fingers that manipulate them. He enjoys getting a gingery "rouse up" kind of letter and flashes back "a Roland for an Oliver" in double quick marching time.

Such a man studies each letter he answers, catches the view-point of the man who wrote it, and lets him see that he does catch it. If a word of praise is sent a word of appreciation goes back, phrased so as to make that man feel that hereafter, between the two, there exists a friendship—this is the very best kind of an impression to make.

Praise is a rare commodity, and when it is given the giver should know that it has been appreciated; a man that takes the trouble to write something nice about yourself or your

goods knows that he is doing something that on the whole is rather gracious and courteous, and he likes, we all like, to have our courtesy recognized. To answer such a man's questions, and ignore his commendation is not alone unpollitic, but is in the highest degree ignorant and boorish. Even if you do think all he said is hardly good enough—even if you do think he has only voiced the opinions that thousands should voice—remember that he is the one man among thousands who has warmed up sufficiently to you to give you that very rare and grateful cordial—a kindly word of encouragement or commendation.

### STUDY YOUR LETTERS.

Study your letters. Here is a correspondent that flashes at you a spark of wit. Catch it. Acknowledge it. Match it if you can, but let him know that an appreciative reader exists at your end and your letter will go far.

So many men are deficient in this. Send them a witty, incisive, or logical letter and their reply indicates that, metaphorically, you have "thrown pearls before swine." What a joy to find a man who "flashes back!"

As I write this article I have a letter before me evidently written by a man of wit, intellect and education. He opens it generously:

"I was much pleased to receive your letter, simple in dictation—plain in statement—correct in principle, large in scope."

Now isn't that generous, appreciative, cordial? How many correspondents will tell you that, though you reach them by thousands? Shouldn't that cordial handshaking little opening be recognized?

Of course! The common courtesy by which society is governed demands an exchange of compliments here even if a more generous feeling does not dictate it.

Then the correspondent flashes a little "bon mot" that evidences a man of wit and culture:

"I find influence in Promotion is just as valuable, and just as variable, as Beauty in matrimonial work."

Good! distinctly good, as every one who knows finance will immediately recognize. An exceedingly apt comparison, wasted if it falls before a clod.

"I would like to confine myself to high grade promotion work based on knowledge reverent with age and active with youth."

Epigrams fairly glisten through this correspondent's letter—how many men will he strike who will recognize them, respond to them?

Some men will write back and leave that man "cold"—his wit ignored, his kindness floated by silence—he probably won't do it again.

Lillian Whiting, writing not on correspondence, but on psychic subjects, expresses the thought the writer is endeavoring to bring out, in the following words:

"Spiritual receptivity is not a negative attitude. It is not holding up languidly an empty cup, expecting that at some time, and

in some way, it will be filled without exertion on our part. The condition of the very highest receptivity is that of the very highest spirituality. When electricity flies from the static to the dynamic, and leaps across any gulf or through any obstacle, it is not because the object to which it leaps is inert, but rather because that object is in a highly charged state, which attracts the corresponding potency to itself."

That's it exactly. The correspondent should be a "live" electrical battery "charged" with life, appreciation, and the desire to get business. Then he will attract "the corresponding potency to himself" because it will be seen that he is appreciative of it—and of all things in this world people do like to deal with an appreciative man.

And so, all through the mail. If a correspondent hits you, hit back. If in a logical incisive letter he challenges you to a game of fence let your steel meet his, mind cross mind; then, after a good and hearty bout at fence, when you both have a hearty respect for each other's powers, you may shake hands, and you, the correspondent, may record the order.

And now I want to talk to you about another subject—the use of "form" letters, and "form" paragraphs, which I explained in an earlier paper and which I have reason to believe received deep attention at the hands of numerous readers.

### THE CURSE OF ROUTINE.

The "form" book is good in its place, but for heaven's sake don't place it in the hands of a lazy letter writer, nor subject a real correspondent to its enervating influence unless he has a strong will.

Here is a letter to answer—it requires the personal note—the correspondent should answer it personally, but if infected with the form letter virus he'll write, "No. 10, Paragraph 8," and let it go at that.

Using "forms" when good, hot, original stuff is required, is one of the quickest ways to bankrupt a business I know of. One use of the "form book" is to know when a "form" is not to be used—and then refuse to use it but to sit right down with the more or less pretty stenographer and send the man that needs it a real reply—a real answer to his questions—not the mummified paragraph that you have dug up in your series of "forms" and which you delude yourself will, by some possibility, answer.

If an answer to a question is not in the "form book," why write it, or dictate it, but answer it—there is nothing quite so exasperating in correspondence as to write, and write, and write—to an "inveterate" form user, and receive back those classical sentences giving such beautiful explanation of something else, anything else but what you have asked.

However, it's good for the lively competitor.

And he knows it—you bet. You'll see him studying the replies for the personal note which, if he catches, he knows will lever the waiting dollar into his capacious pocket.

It's a great game, the game of business, and it calls for men with good red pulsing blood in their veins to play it.

Sometimes—if you happen to be the recipient of such crystallized stupidity you will come back hot and strong at the "corres-



pondent" temporarily causing him to realize that he is being shaken out of his "form" dream, but more often, in sheer disgust, you either lose interest in the form of goods, or write to some one else who has sufficient knowledge of business to realize that plain people like plain replies to plain questions.

The "form book" is good—in its place—but "ware" No. 10, Paragraph 8," when the man and the letter gets outside of the routine they embody.

#### EQUAL MONEY.

By JOHN A. WALKER.

There is an eternal flow of public opinion as to what a rich man should do with his surplus money. The bulk of these views are unfriendly to the rich man. He is squinted at as a mean sort of a fellow for having surplus money and he ought to do something with it, and the what to do with it usually in these views takes the form of some vague, nebulous charity. The rich man, these views say, should bestow his surplus somewhere. Now, how? Ah! there's the rub.

Take you, the reader, and I, the writer; we don't want any of any man's charity money. This being so, who does want it? Then why not also give credit to the next man for being as high minded as you are, and as refusing the thought of charity money from any source the same as you and I.

Now, the laws of money getting are like all other laws. More or less imperative in operation, and as long as differences in money-earning talents exist, so long will one man have ten dollars and the next man one dollar. Why, then, is it not best for all hands, big and little, younger and older, who express views, vague and nebulous, as to the rich man's money, to try to get some of it the other way—by cultivating assiduously his money getting talents; this would equalize affairs. Maybe the outcome of a generation or two of this practice would bring it about that instead of one man having ten dollars and the next man only one dollar, that the system would yield to this lawful pressure and the scale would get to be first, one man nine dollars, and the other two dollars; then next, one man seven dollars and the other

man three dollars, and the step then is easy to equal money.—Graphite.

#### TEN THOUSAND A YEAR SALARY.

A certain prominent lawyer of Toronto is in the habit of lecturing his office staff from the junior partner down, and Tommy, the office boy, comes in for his full share of the admonition. That his words were

appreciated was made evident to the lawyer by a conversation between Tommy and another office boy on the same floor which he recently overheard.

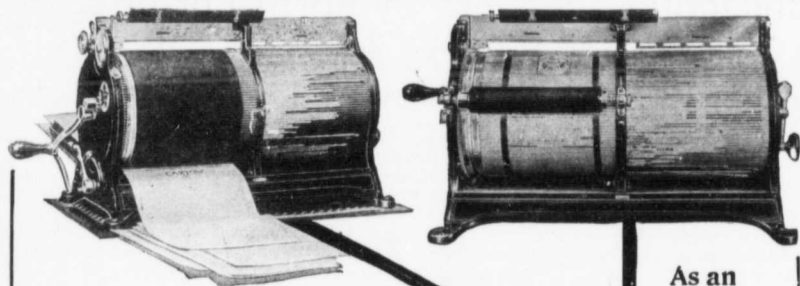
"Wotcher wages?" asked the other boy.

"Ten thousand a year," replied Tommy.

"Aw, g'wan!"

"Sure," insisted Tommy, unabashed.

"Four dollars a week in cash, an' de rest in legal advice."



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## Collecting Accounts by Form Letter

Where the Form Letter is Effective. The Sense of the Value of Credit. All Threats to be Fulfilled to the Letter

BY J. GEORGE FREDERICK

The credit department of any large enterprise is a problem upon which too much thought cannot be spent. It is the habit of some concerns to look somewhat resignedly upon a certain percentage of loss as inevitable. When, however, not only the loss is figured up at the end of a year, but also the expense of collection and the interest on the backward accounts, the figures will be formidable.

There is no need for putting as much cost into collections as is often done. Yet the accounts must be urged persistently if anything is to be got out of them. How is reduction possible?

### WHERE THE FORM LETTER IS EFFECTIVE.

By form letters. Of course, form letters are only advisable where there are a large number of the same general character of debtors—most frequently in the case of direct mail order selling to smaller concerns and individuals. But as there are a great many such businesses in the machinery line, the subject of collection by form letter is very pertinent.

The proper place to guard credit is, of course, before the transaction is put through. But the extensive development of the mail order business and the necessarily difficult task of getting a rating on small concerns and individuals, always leaves important work for the credit department to do.

As a matter of business principle, not always appreciated, debtors are hustled along toward payment far more effectively by snappy business methods than by coming down hard upon them after a period of indifferent dunning. In no other department of business is there more call for that study of human nature which is known by the unwieldy name of psychology, than in the credit department. It is certain that a very firm and very tactful campaign of form letters used from the very beginning of the due period of an account has a salutary effect on collections, because it remedies one of the main causes of delinquencies—not keeping firmly after the account. The more or less careless and inexpert language used by the average credit department in their dunning forms and hackneyed dictations, leaves no impression on the recipient, because he is dunned just that way by everybody. He knows that only some supernumerary clerk is behind it, and that his creditor is not concerning himself very much about his indebtedness. Therefore, he satisfies more urgent claims first.

### THE SENSE OF THE VALUE OF CREDIT

It must be realized that, in general, the intention of all debtors is to pay as per obligation. When they do not do so, the diplomatic as well as the practically correct assumption is that they are pressed beyond available funds. To treat the matter otherwise before a certain point in the campaign indeed, at any time, is a serious blunder, which is, nevertheless, made by some con-

cerns. The greatest lever which a credit department has is the debtor's sense of the value of credit, particularly if his business is one which must depend considerably on ratings. The lever is used most effectively when a form letter campaign is used, for it constantly reminds the debtor, at small cost to the creditor, of the ideas most effective in bringing about a settlement.

In the series of form letters reproduced herewith, which was used in a campaign to collect delinquent part payments on a machine sold on the trial plan, will be seen the tactful use of the psychology of credit collections. Without being one whit less

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Name _____ Ledger folio _____																			
Address _____																			
Date Shipped _____					Charged \$ _____					Paid \$ _____									

firm, these letters, nevertheless "leave a good taste" with the debtor—in other words, they are careful of the vanity and feelings of a debtor, even to the last resource. These form letters put the major effort of collection on the right spot—the words used. Mere routine dunning is not enough—it is what is said which counts.

We received your letter some days ago, promising to make a remittance in a short time, and immediately replied, stating that we would grant the favor.

We are surprised that we have not since heard from you. We believe that you certainly intend to keep your part of the contract with us, as we have our part with you. We trust that you will not force us to place your account with our legal department for collection.

Please let us have the promised remittance by return mail.

Thanking you in advance for same, we are,  
Yours respectfully,

Dic. H. L. B.

1

Some days ago we wrote you in regard to the washer which we recently shipped you. We asked you to give it a further trial, following our instructions, and if you still did not get satisfactory results to again write us.

As we have heard nothing from you we presume that you have had the same experience as others, that is, having become accustomed to operating this washer, you get satisfactory results.

We desire to get this account settled as promptly as possible, and if you will remit the full amount at once we will allow you to have this washer at the cash price. If

you cannot do this please send your first payment by return mail.

Thanking you in advance for the same, we are,  
Yours truly,  
Dic. H. L. B.

2

We have had no remittance on your account, concerning which we have sent you several statements.

We do not understand same, as we believe that you intended to pay this account as per the terms of your contract. We wrote you about fifteen days ago offering to still settle at the cash price, but as you have not done so, we must request that you at once send us your first payment without further delay. Your account is charged with \_\_\_\_\_

If there is any reason why you cannot begin payment, kindly write what it is. We have a legal department for the collection of delinquent claims. We trust you will not compel us to give your account to this department. However, unless we receive a payment from you within fifteen days we shall be compelled to do so.

Yours truly,

Dic. H. L. B.

3

As you have not remitted on your account, and we have taken every reasonable means of inducing you to do so, we yesterday placed the matter before our Board of Directors.

They instructed us to at once place this account with our legal department for immediate collection, with the proviso, however, that before doing so we would notify you of their action, and allow you three days in which to reply to this letter.

Yours very truly,

Dic. H. L. B.

4

We have been advised by our attorneys that you have refused to pay our account against you, and that they will now be compelled to bring suit.

We very much regret this, for we would rather settle this matter direct with you. If you will promptly remit the full amount or make some reasonable arrangement with us for doing so, we will withdraw the claim.

We are enclosing you a stamped envelope, and trust you will save further trouble and annoyance by letting us hear from you at once.

Yours truly,

Dic. H. L. B.

LEGAL DEPARTMENT.

5

We venture to call your attention to the fact that you have missed several payments on your account, and that you have ignored our statements sent in regard to same.

We feel that your failure to remit as per contract must be due to some misfortune rather than to any intention of defrauding us of our money, but we must insist upon a remittance at once. If you cannot send us a large payment, send us a small one. This will show us that you are doing the best you can, and will give us confidence in you.

Let us have your payment by return mail.

Yours truly,

Dic. H. L. B.

6

You recently commenced to again make payments on your account, thereby restoring our confidence in your integrity and the



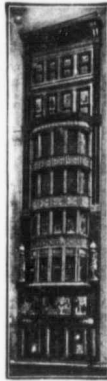
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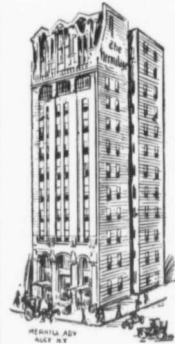
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¶ The OFFICE EDITION of The CANADIAN MANUFACTURER is designed to be of value to the OWNER and MANAGER of any business; the MAN IN CHARGE of the Office Work; and to the Office Staff.

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Look over this issue and the force of the above statements will at once be apparent.

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THOMAS C. IRVING, Gen'l Manager Western Canada  
 TORONTO.

honesty of your intentions in dealing with us.

We have, all along, felt that your failure to remit must have been due to a series of misfortunes rather than to any intention of defrauding us of our money.

Your payment is again past due, however, and we venture to call your attention to same. If you cannot send us a large payment, send us a small one. This will show us that you are doing the best that you can, and give us confidence that you will ultimately pay the account in full.

Let us have your payment by return mail.

Yours truly,

Die. H. L. B.

7

#### ALL THREATS TO BE FULFILLED TO THE LETTER

The keynote in the use of these forms is unflinching promptness. By keeping thoroughly alive to the obligations of the debtor and their due dates, and making persistent and systematic demands, the strongest possible inducement is made to urge the debtor to be equally prompt and equally mindful of his obligations. Debtors almost unconsciously take their cue from the way their accounts are treated by the creditors themselves, and when stringency occurs, they invariably pay those creditors first whom they know to be punctual and exact in their demands for payment.

Another principle which should be strictly observed in using this or any form letter collection campaign, is to invariably take the step you say or threaten to take, on the date mentioned by you. This is very essential, in order to secure confidence in your intentions. All qualification and leniency which it is intended to give ought to be frankly expressed in the letters, so as to get the fullest credit for them, as well as to give the debtor an exact understanding of what your course of action is to be. When you arrive at the date for the taking of any forewarned action, however, and do not take it, you lose a large part of the force of your collection effort.

These form letters are for part payment use; there can be a series for every extensive and uniform kind of credit offered by a firm. Each form being known by number, it is easy to have the head of the department lay out instructions for the sending of the forms to a particular client on set days, by means of a card system and date marker, as shown on the accompanying reproduction. The number of the form and the date is marked on the card by the mailing clerks, each time a form is sent out, and the date marker is set ahead according to instructions, so that at the right time the card will come up for the next form, unless a settlement is affected in the meantime.

In the particular business in which this system is used, the percentage of dead loss is less than one-half of one per cent., and accounts are practically never given up. It has been found that it seems always to pay to send out yet another form, even after suit has been brought, and after the loss is seemingly certain.

Of course, there are routine and well-known ways of collecting accounts from houses of good or fair rating, other than form letters, but letters can be used to advantage,

when suitably worded, for even the largest business houses.

When well printed by typewriter process to match the office typewriter ribbon, and signed by the firm (an office of the concern personal signature is most effective) with the address typed in, these forms look neat and personal, and are absolutely as effective as any really individual letter. In the first

place, it is not at all easy to detect imitation typewriter process printing; and in the second place, it does not detract from the dignity of the letter at all, even if the recipient knows the letter is a form. What counts is the wording and the alertness of the system—two strong collection forces which the form letter system provides both cheaply and well.—Selling Magazine.

## System in a Contractors Office

Paper Read Before the American Public Works Association. Suggestions as to Best Way of Organizing A Contractors Office.

By F. B. GILBRETH, M.A.S.M.E.

Systematizing a department, an office, or a business, is accomplished by one, or both, of the two following methods:

1. By efforts of the members of the organization.

2. By efforts of professional systematizers.

For the original idea of system in our office, I desire to acknowledge my indebtedness to my friend, the late Wm. H. McElwain, the possessor of one of the master commercial minds of America. The success of his whole tremendous business was, to use the words of his own statement to me, "Due to having his entire system in writing."

Mr. McElwain's further advice was to carry the systematization of our business as far as possible by our own efforts before calling in the professional systematizer—that is, to use both methods suggested above in the order given. After system has been put in writing and perfected along simple lines by the men who have built up the business, it is easy for the professional systematizer to understand instantly the methods in use at the time he undertakes his task. He can then suggest changes and improvements, which can be adopted with no shock to the business.

When experts attempt to install system for a concern that has not been systematized by its own organization, a shock is bound to occur.

If it is desired to introduce expert advice before any attempt is made to systematize by the organization itself, there is no such protection against shock as to take the precaution of carrying on the old system in the same time that the new system is being installed and tried out. Keep the old system in a separate building if necessary, but keep it in operation until the new system has proved itself, by actual use, to be superior to the old. The expense of temporarily maintaining a duplicating accounting department, for example, is very little compared with the protection, speed, order, rivalry, and value of actual comparison.

As a result of our own experience, we believe that the best way to systematize a contractor's business is along the lines suggested by Mr. McElwain. We believe that

the fundamental laws governing systematization are clearly defined. They can be used and adapted to any line of business by the man in that business.

The procedure in systematizing by the evolution method is as follows:

1. Have each member of the office put in writing a description of the way he actually does his work. Not at first of the ideal way that the work should be done, but of the real way, the way in daily use. If an attempt is made at first to write down the ideal way, the entire benefit of the scheme will be lost. The rules must be historical, descriptive, and no nearer perfect than are the members of the organization. The rules must be in such form that they can and will be obeyed without having perfect human beings to fill each position. These written descriptions should be put in the form of rules for the next clerk below, who needs description, instructions and guidance as to the work he is eventually to do.

2. After each member of the organization has submitted his rules describing the way he actually does each part of his work, have the entire collection typewritten. A complete copy should be handed to the head of each department for correction and improvement. The corrected copies should be then inspected by the general manager.

3. During the various inspections of the rules, it will usually develop that some members of the organization have not been able to express their ideas well. It will also develop that some one clerk has a talent for wording rules particularly well. Select this clerk to revise and arrange in proper order the entire collection of rules. If an announcement is made at the time the rules are first written that the clerk submitting the best set of descriptive rules will be made "System Clerk," better offerings from all employees will result, and a higher standard will be secured. The system clerk should see that each rule describes the easiest way to accomplish the act that it describes. Few people realize that a simple system that can be enforced easily is much better than an ideal system that is difficult to enforce. Only simple system is good system. Have the rules expressed in the simplest, most concise manner possible.

4. Have the revised rules typewritten again, and give a complete copy to each

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And the man who directs, either as proprietor or as an employe in an executive position is simply a salesman on a big scale. He is trying to build up a business, trying in a hundred ways to make more sales possible, sweating to make two dollars grow where only one has grown, striving to increase the MARGIN and the VOLUME of his PROFITS.

We can be of help to all such men, the men who are fighting the bloodless but heroic battles of business. We have lent telling aid to 33,500 already, and the Sheldon army keeps on growing by leaps and bounds.

Nearly a thousand concerns in the United States have increased their SELLING EFFICIENCY by encouraging employes to take the Sheldon Course.

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Great lawyers, great doctors, great scholars, soldiers, artists, actors, statesmen, are the result of a making process of years—a man-building development. Salesmen can be trained and developed just as other men are trained and developed. The "born" salesman who seems to achieve wonderful success, is simply following unconsciously some of the principles we have formulated. Eighty per cent. of our students are veteran salesmen. Successful salesmen gain proportionately as much from our science as the less experienced.

In every normal man there are the latent powers which, if drawn into action, would make him a business success. In you there are such powers, and the Sheldon Course will draw them out, will teach you how to "cash them" into a bigger income, greater profits. And if you are successful now, we say there are no limits set, and that you can be still more successful in proportion as you can master and use our Science of Salesmanship. If we can help such men as give testimonials on this page, might we not help you? If we can help a thousand of the best firms in America, might we not help your firm?

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member of the office force. Also distribute notices of prizes that will be given to those who suggest improvements that are adopted. We have found that one dollar for each suggestion adopted, and three special prizes of two, three and five dollars each for the best suggestions during the month will bring in many improvements. Clerks will use every effort to discover improvements, not only for the prizes, but also for the promotion that always rewards a clerk who can constantly suggest better ways of doing work.

Our experience proves that immediately after all the clerks have received a complete copy of all the rules governing all other departments as well as their own, all hands will discover and suggest eliminating rules requiring unnecessary labor. Suggestions for improvements will then come thick and fast. The \$6 boy will understand the work of the \$12 boy. He will consider himself lucky to fill the place of the \$12 boy above him for \$9. The \$12 boy will be able to do the work of the young man who is getting \$24 per week. It means a raise of pay and more earning power for every member of the office organization. This process will extend up to the heads of departments, who can spend their time more profitably on new work that requires judgment, leaving routine work to be handled by the clerks under them.

Too much stress cannot be laid upon the importance of receiving, rewarding and incorporating suggestions from any and all members of the organization. It encourages all clerks not only to make the best use possible of their own experience, but also to investigate what is going on in other organizations and to read magazines of "short cuts" in business. This reading brings the organization in sympathy with the best work of system experts and labor saving devices, and paves the way for the successful entry of the professional systematizer into the office. Such reading of short cuts and improved business methods also stimulates the interest in Motion Study.

This Motion Study is an object of particular interest to us, and is put into practice by us on all of our work, both office and field. It consists of observing and noting the motions used to do any piece of work, of eliminating the unnecessary motions, determining how the work may be done with the least possible number of motions, and, finally, of reducing the necessary motions to the shortest possible distance in feet and inches.

In the office this study involves the discovery of the form, methods, etc., that will save motions of each and every clerk.

In our office we make use of every device that we know of to save motions. For example:

1. "Eye-saving" devices.
  - a. Different forms, especially manifold sheets, made of different colored paper, the color showing to which special destination each copy of the form is to be sent. It is obviously quicker to collect or file, say, all the blue copies than to read the destination directions on each sheet.

- b. Distinguishing numbers or initials on the lower corner of forms—T. L. (Tool List), U. C. R. (Unit Cost Report), to save reading of the entire forms.

- c. On all typewritten letters a list of articles to be enclosed or sent under separate

cover is placed at the lower left-hand corner. This makes it needless for the mail clerk to read the entire letter to see what is to be enclosed.

2. "Hand-saving" devices.

- a. Printing on forms all wording that is in continual use, to save pen motions.

- b. Several phrases or sentences on such forms as telephone blanks, etc., all but one of which may be crossed out when form is used.

- c. General use of self-inking rubber stamps. These save the motions of inking on a pad. The place for the thumb is cut off flat to save the motions of turning the stamp right-side up, as well as to save taking the eyes off the work. It is attached to a weight that will carry it back into place when it is not in use.

3. "Foot-saving" devices.

- a. Placing all files and furniture so as to have the shortest possible distance, measured in feet and inches, for the travel of the clerk who uses them.

- b. A definite place for every piece of paper that is handled in the office, both before and after it is filed.

4. "Memory-saving" devices.

- a. Each file plainly labeled.

- b. All similar files labeled in the same sequence.

- c. Daily calendar made out ahead, an automatic memory of date of events, etc.

These are only a few of the many examples that might be cited.

It is impossible to go farther into detail in this paper. In our business the written system for the office work has grown into systems for the various departments. For work in the field, the written system has evolved into a field system, a concrete system, a bricklaying system, etc.

The general benefits that are sure to come from this evolutionary form of system are:

1. There is no general upheaval, nor the slightest shock to the business. The installation of the system has cost nothing.

2. All members of the organization are working understandingly toward the same desired end.

3. A corps trained on the duplicate plan system is evolved simultaneously with the system.

4. Clerks can be instantly shifted to accommodate the business to vacations, illness, promotions, immediate demands of any or all departments, and to sudden increase of business.

5. From its beginning the system will be popular with the clerks. Everyone of them profits by it. It reduces their labor. It fits them for constant promotion, and gives them continued opportunity to win prizes. It provides places for the advancing young man, also for the faithful routinist.

6. Competitive spirit is always active, yet "team work" is assured.

7. The resulting system is exactly suited to the particular office in which it is evolved, as it is the outgrowth of that office, and its particular requirements.

8. Growth is an integral part of the conception, and therefore the system will be elastic and adapted to great fluctuations in the amount of business in hand.

After the evolutionary system has been installed and is successful, it is time to call in the professional systematizer. There is hardly a business that is not large enough to warrant the advice of a system expert. This

expert, having made system a life study, will surely be able to bring from his experience and observations behind the scenes of the inside workings of fifty offices some points that will be of great value to the fifty-first. He will find in that office an organization to appreciate his study, and on the alert to receive his suggestions. His improvements will correct and improve the growing system with no resulting check to the growth.

This is the age of System Scientific Management. Such men as Frederick W. Taylor, Ex-President of the American Society of Mechanical Engineers, and his co-workers have done more than install systems. They have also installed entirely new methods of operation, founded upon life-time study of the fundamental laws of management. They are now ahead of their times, but the general awakening of the industrial world is coming. Their methods, which are the only solution of the struggle between capital and labor, will be generally adopted because they reduce production costs and increase wages simultaneously.

There are three obstacles which the man who undertakes to systematize his office must overcome.

The first obstacle is the fear one naturally has of being called theoretical instead of practical, of being called "a dreamer" instead of "a doer." When it is realized that that man who can manage the details of his work by putting in writing a description of the simplest and the swiftest routine is best fitted to handle large undertakings in a business-like way, all such criticism will die.

The second is, thinking that his system can ever be complete. By its very nature the system of a growing business is a growing thing. It must be constantly adapted, constantly increased, constantly improved.

The third obstacle is so-called "red-tape," and the fear of it. No good system is ever "red tape." In fact "red tape" is simply bad system, system that has never been tackled by all the individuals of a loyal and interested organization determined to answer the following questions:

1. How can we simplify?
2. How can we eliminate?
3. How can we condense?

The whole secret of success is in a constant endeavor to answer these questions. This constant attention can be given only by the organization itself. The innovations of an expert who can, necessarily, give his whole attention to the business for a limited time only, are not to be underrated. But the best man to keep a system going and growing is the man who is vitally interested in the business and who has brought it to the point where it can successfully compete with its competitors.

"Have ye anny ancisthors, Kelly?"

"An' phwat's ancisthors?"

"Why, people you shprung from."

"Shprung from, begorra! The Kelly's shprung from nobody. They shprung at them!"—The Outlook.

"'Tis easy enough to be pleasant

When life flows along like a song,

But the man worth while is the man who can smile

When everything goes dead wrong."



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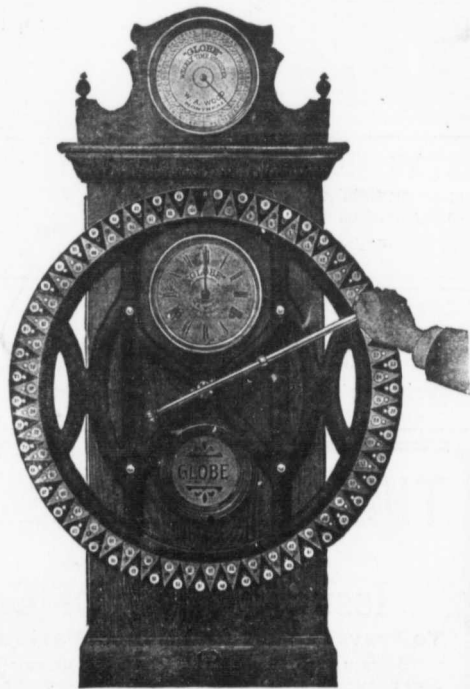
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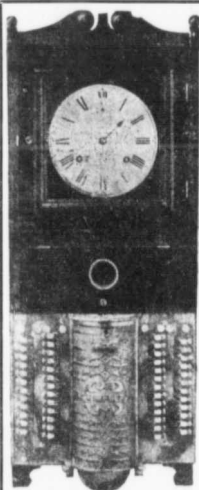


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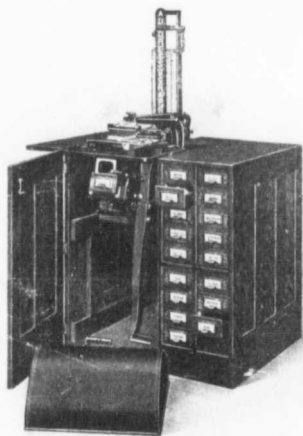
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