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 to-morrow 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.