

**THE EFFICIENT PURCHASE  
AND UTILIZATION OF  
MINE SUPPLIES**

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The Efficient Purchase and Utilization of Mine Supplies by Hubert N. Stronck & John R. Billyard

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and  
Utilization of Mine Supplies

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## THE EFFICIENT PURCHASE AND UTILIZATION OF MINE SUPPLIES

### INTRODUCTION.

In the past, the stores department of the mining and smelting industries has been given but little attention, although materials constitute an important cost item in these industries. One of the principles of good management is economy in the purchase and consumption of supplies. Material costs constitute an integral part of the total production costs, and are often a basis for good or bad management. A great number of our mines and smelters are situated at a distance from the large manufacturing centers, so that the time of delivery of materials is long, and the cost of transportation is high, which adds to the total cost of materials. It is of utmost importance that supplies be on hand when needed, otherwise a serious loss in working time may occur due to waiting for material which should have been on hand.

The store should be considered as a separate department or an entirely separate business. It should have complete charge of buying, receiving, storing, and local delivery of all supplies.

Mining men are, as a rule, technical men, and unfortunately many of them have no training as to business methods and forms. In the following discussion the entire subject, from purchasing to use, will be described in detail, with hopes that it will give suggestions of some use to men engaged in the mining and metallurgical fields. Stress is laid on systems for large operating companies, with simplified methods for smaller concerns. Many illustrations and suggestions are given. They must be looked upon as suggestive, and must not be rigidly followed without considering whether some modification should not be introduced to meet the requirements of the particular case in point.

The greater part of this material has been gathered from observations and notes, and some has been taken from articles in current technical magazines and extracts from books on the Science of Management.

#### THE LAWS OF MAXIMUM ECONOMY.

To insure maximum economy, the following laws must be complied with:

1. Materials must be purchased from the lowest priced firms when materials are at their lowest prices.
2. Materials must come up to the contracted excellence in quality.
3. The quantity purchased must be obtained.
4. Materials must be delivered at the specified time.
5. Materials must be properly housed and stored.
6. There must be no unnecessary waste of material.
7. No losses must occur, except through waste.



In order to comply with the above laws, we must have:

- (a) A well-organized purchasing department.
- (b) An efficient receiving and testing department.
- (c) A proper stores system, with accurate accounting.
- (d) An issuing system which fixes the responsibility.
- (e) Reports which show the consumption of materials.
- (f) Methods which will prevent waste in the use of materials.

**(a) Purchasing Department.**

There should be a special function of Purchasing in charge of a competent purchasing agent. The resident agent should attend to the purchase of all general supplies such as are used in everyday consumption. For large, special orders, he should co-operate with an agent in the city office, who may be able to obtain quotations and deliveries on special large orders more expeditiously and economically than the resident agent. In the following, Purchasing is discussed as a function and does not imply that this should be the sole duty of one man, in all cases.

The purchasing agent is the man who acts as the safety valve of the company. He should have a working knowledge of the particular industry for which he is to purchase materials. If he has a working knowledge of the properties of materials, of their use, of the production or manufacturing of the materials, it is so much the better. The average foremen or department heads would buy according to their own judgment without considering the condition of the market, the reliability of the firms from whom they would purchase, the comparative

prices of materials, etc. To secure the most desirable delivery involves a knowledge of business methods and forms. It is impossible for the purchasing agent of a large concern to possess technical knowledge of all the work, therefore he must depend upon written records, and have these instantly available. If the function of buying is centralized in one man or department, he is usually blamed if the materials do not arrive on time and the work is delayed; hence, in order to protect himself, he should take no verbal orders, but in each case require a properly filled out and signed requisition blank, which shows the originating date of calls for material. Also, written requisitions have the advantage that the man who wants supplies is more careful in ordering over his own signature than through a simple verbal order.

**Catalogue Files.** As an aid to the purchasing agent, there should always be on hand and properly filed and indexed, catalogues of several supply companies, together with complete price lists.

There are five general methods of filing:

1. Alphabetic — by name.
2. Numeric — an arbitrary number assigned to each firm or subject.
3. Automatic Index — a combination of alphabetic and numeric.
4. Geographical — by names of places.
5. Subject Classification — classified numeric or letter system, in which materials are arranged by correlated subjects so that related matter is grouped in numeric or alphabetic letter order, based on the principles of

the Dewey Decimal Classification or the Mnemonic Classification.

The alphabetic filing of catalogues and price lists would be the simplest, since no index would be necessary; however, it has the great disadvantage that the filing space cannot be arranged properly. Catalogues vary in size from a mere sheet of paper or pamphlet, to large, elaborate volumes. An alphabetical arrangement would promiscuously mix large volumes and small pamphlets, so that a dictionary-sized book might have to be placed next to a small pamphlet. Filing space could not be efficiently utilized.

The most adaptable method is filing according to the number system. By this method, a letter is assigned to each group, "A" to the largest size, "B" to the next in size, etc. In the "A" file compartments, the catalogues are numbered consecutively from "1" up. Similarly with the "B" compartments and the remaining compartments. The compartment letter and catalogue number is written on a gummed label, and this pasted on the corner of the catalogue.

Each catalogue is now indexed in two ways:

1. By name of the dealer or manufacturer issuing it.
2. By name of the article.

The Dealers' cards should show the name and address of the dealer, the articles which they sell, the file compartment letter and the catalogue number. See Fig. 1. The cards are filed alphabetically according to the dealer's name.

A simple card register should be kept for each series