



**TOGETHER**  
*for a sustainable future*

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Report  
of the  
Technical  
Committee  
of Experts  
on  
Industrial  
Development

UNINDUSTRIAL DEVELOPMENT

United Nations Industrial Development Organization

Vienna International Centre  
Vienna, Austria

United Nations  
Vienna, Austria

REPORT OF THE TECHNICAL COMMITTEE OF EXPERTS ON  
INDUSTRIAL DEVELOPMENT

UNITED NATIONS INDUSTRIAL DEVELOPMENT ORGANIZATION  
VIENNA, AUSTRIA

MS

1970-1971

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J. D. Thompson



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### BRITISH INDEPENDENCE AND THE COLONIES

British independence was a policy adopted by the Government  
of the United Kingdom of Great Britain and Northern Ireland, and its colonies,  
(from the 1920s) when they became independent from Great Britain  
and its colonies.

As a result of this policy, Britain lost control of Canada with **very**  
little, and the United States had to work hard to meet the **demands** of  
the people. The United States has been very successful.

British independence was also adopted by the government of the present  
Government of Great Britain, and it has been adopted by the government of  
Northern Ireland, and it has been adopted by the government of

The "Government of Great Britain" and its colonies took the form  
of a colony, and the government of Great Britain, and its colonies, and its colonies,  
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## WOOD WORKING TRADE FAIRS

With extreme difficulty, it is possible to estimate the total value of lumber and building woods. Most dealers and manufacturers do not keep records of their purchases and sales, and as a result no exact figures can be obtained. However, it is safe to assume that there is a large demand for lumber to meet the individual needs.

All materials required for the manufacture of furniture or a large article of furniture can be supplied by lumber supply cannot at present meet the demand. However, the present plant ideal of timber supply in the near future begins to meet the demands.

Kerimade panel products such as plywood, melamine, laminated board, insulated and insulation boards etc. are used extensively for furniture and joinery construction. With the variety of timber used in this country, and the tremendous amount of waste timber from fellings to the finished product ultimate, some attention must be given to this field, when you consider the quantity of lumber used, instead of consumption.

A general Product Trade Fair is organized annually by the "Daily Mail Trade Fair" and participated by many of the furniture and joinery industries. To boost our export trade, a yearly general Trade Fair should be organized so that our export can meet the demand of furniture production in the overseas.

## Polishing methods

Formerly lacquered furniture was made by being varnished with turpentine to a thin film and then applied on reddish.

Imported materials imported for polishing:

**Mahogany wood**, cherry, oak and mahogany, oil varnish and French polish by most of them furniture and joinery factories have now largely replaced the former type of polish.

There are three types of methods of applying varnish:

- (1) By hand polished,
- (2) By hand brush,
- (3) By spray gun.

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(Continued) The following recommendations are made to the Bureau of Alcohol, Tobacco and Firearms, the Federal Bureau of Investigation, and the U.S. Marshals Service:

In formulating future recommendations to the Bureau of Alcohol, Tobacco and Firearms, the Federal Bureau of Investigation, and the U.S. Marshals Service, the following factors should be considered:

## RECOMMENDATIONS

### Physical Evidence

#### (a) Natural Fibers

#### (b) Synthetic Fibers

This Report is based upon the physical evidence presented to the Bureau of Alcohol, Tobacco and Firearms.

Industry will be required to implement the recommendations made to it, depending on the specific problem or circumstances of each case. All the recommendations are cost-free.

The problem of identifying gunpowder deposits on the outside of the timer, I estimate, will be the most difficult problem to solve, although able to expedite processing of evidence, it would not have to solve another for 1" thick timers, but, as shown in the recommendations taken above, 1" thick timers. At the present time, no company has yet come forward to the market.

## APPENDIX B - COMMERCIAL FIRMS

<u>Retention</u>	<u>Life</u>	<u>English</u>	<u>Trade/Class</u>
1. Extended Period by Law	Never	None	I
2. Shorter Period	8	Robbins	I
3. Periodic Basis by Law	4-6	Stevens	II
4. Reason	Unknown	Unknown	I
5. Chronological	Unknown	Unknown	I
6. Periodic, Informal	Unknown	Unknown	I
7. During Operation	Unknown	Unknown	I
8. Daily	Unknown	Unknown	I
9. Temporary Periodic	Unknown	Unknown	II

Any recommendations made by the Federal Bureau of Investigation, that there is a lack of specificity in the law, should be referred to the appropriate congressional committee so that the problem will be placed in the federal legislative, budget, classification, and investigation of the Federal Bureau of Investigation.

## THE FURNITURE INDUSTRY IN EGYPT

Although most furniture is still made by hand, there are still some important industries making more by hand.

The cost of labor varies greatly, depending upon the type of furniture and job being manufactured. Wood cutting machinery can be economically justified in the production of certain types of furniture. The improvements by utilizing machinery have been tremendous, with great accuracy of manufacture.

At present there are about 100 furniture factories operating in the country.

1. **Panama** - 100% American lumber, 100% American labor.
2. **Petaw** - American lumber, American labor.
3. **Panama** - American lumber, Egyptian labor.
4. **Kasewa** - American lumber, Egyptian labor.

Local farmers still cut their own roughly finished products due to the tools which they use. These men often use the machete while for cutting the logs into merchantable sizes the pick ax must be used.

These sawmills still use the old fashioned hand saws. Chain saws are used extensively now after felling, the logs are transported by tractors to the sawmill where they are sawed or cut to merchantable lengths and sizes.

Machine layout must be given permanent consideration. For example, the shop must be well illuminated both naturally and artificially and, of course, well ventilated. It should have sufficient space for the movements of materials, especially with the large quantity of timber used.

Most of the machine workshops currently operating in the country lack the above, and worst of all, the machines are neglected. In fact, they tend not to be used. The Chief Inspectorate of Machinery is playing an important role in this regard as all machinery workshops are inspected periodically.

## ALBINO LUMBER MACHINERY - GRANITE STONE WORKS

For many years also, primitive cement has been used for joining together pieces of wood carvings in ancient furniture, silicon glues that adherives have been used for a very long time.

The Egyptians utilized gum Arabic, tree resin, acacia, egg and resin from trees were used to decorate their wooden coffins. The Romans, like the ancient Chinese made adhesives from the sticky tree resins, the resin of which was made sticky to catch birds.

10. **Manufacture of rubber products** - This is one of the major industries given  
in India. The rubber products are made from natural rubber which is  
obtained from the latex of the rubber tree. The latex is collected from the  
rubber tree and then it is processed.

The latex is dried and then it is heated to remove water. It is then  
mixed with other materials like carbon black, sulphur, etc. to make  
it more durable. The final product is called rubber. There are several  
methods for making rubber products. Some of them are discussed below.

**Thermal vulcanization** - This is the most common method used for the manufacture  
of manufactured rubber products.

There are two stages in this process. In the first stage, the latex is heated in ovens. **Rubber**  
before the heating does not have any elastic properties. But when they  
are exposed to heat, they become very elastic and are called rubber. They are  
then washed again and finally off to the market.

**Pyrolytic vulcanization** - In this method, the latex is heated in a furnace with  
heat. This method is also known as pyrolytic vulcanization. It is a very  
potent. A very small amount of heat is required to make the latex  
from trees come out of its natural state.

There are three types of trees which are used for the manufacture of rubber. **Latex** can be  
used for industrial purposes.

In these three parts, the latex is collected, processed, and  
then it is heated in a furnace. The latex is then converted into  
the rubber.

#### **Properties of various rubber products**

- Rubber types** - This is one of the major types of rubber which is collected  
from the latex of the rubber tree. It is also developed in  
the form of a film or in the form of a granular form.
- Latex types** - These are the ones which are used by children  
for the making of balloons and such like. The bubbles are made  
out of latex.
- Latex types** - These are the ones which are used to make films, but  
they are also used in the form of granules. They are developed by the tree or  
the plant which is called latex.

Oil-based varnishes are used extensively in furniture industry  
at present. They are durable, flexible, and have good adhesive  
qualities. However, they are not water-soluble and therefore, the  
stand-life of the varnished articles is limited due to hydrolytic  
action.

In recent years, there has been a great interest in the use of **lacquer**  
**adhesive** in furniture production. The lacquer adhesive is based on the  
possibility of polymerization of certain monomers, often referred to as **resins**, for kitchen,  
dining, table tops, and other articles.

#### LACQUER ADHESIVES

In all furniture articles, the application of lacquer, templates  
and formers are permanent, whereas the temporary adhesives available  
can easily be removed or dissolved by solvents or even heat production  
alone.

#### PREPARATION

Preparation of the lacquer (the base) involves the reduction of reactive  
insects in the case of oil lacquer (e.g., linseed oil, tung oil, cotton seed oil, etc.) and the  
powder polyisobutylene (which is a solid at room temperature).

#### PROBLEMS IN LACQUER ADHESIVES

There are two types of lacquers, namely:

- 1) Tar oil type
- 2) Water-borne type

These types of lacquers are prepared at **Sectra Leone**.

#### APPLICATIONS

- 1) Hard back board
- 2) Ply wood.

The former is used extensively by wood workers and the latter is  
at present only used by some few firms.

- **Wood** - the most abundant material on earth, it is a natural product which can be used in many ways. It is a renewable resource and can be used for construction, furniture, and other products.
- **Plastics** - synthetic materials made from petroleum or natural gas. They are durable, lightweight, and can be molded into various shapes. They are often used in packaging, automotive parts, and household items.
- **Metal** - a natural element that is strong and malleable. It is often used in construction, machinery, and transportation. It is also used in electrical wiring and plumbing.
- **Concrete** - a man-made material made from cement, sand, and aggregate. It is strong and durable, making it ideal for building foundations, walls, and floors.

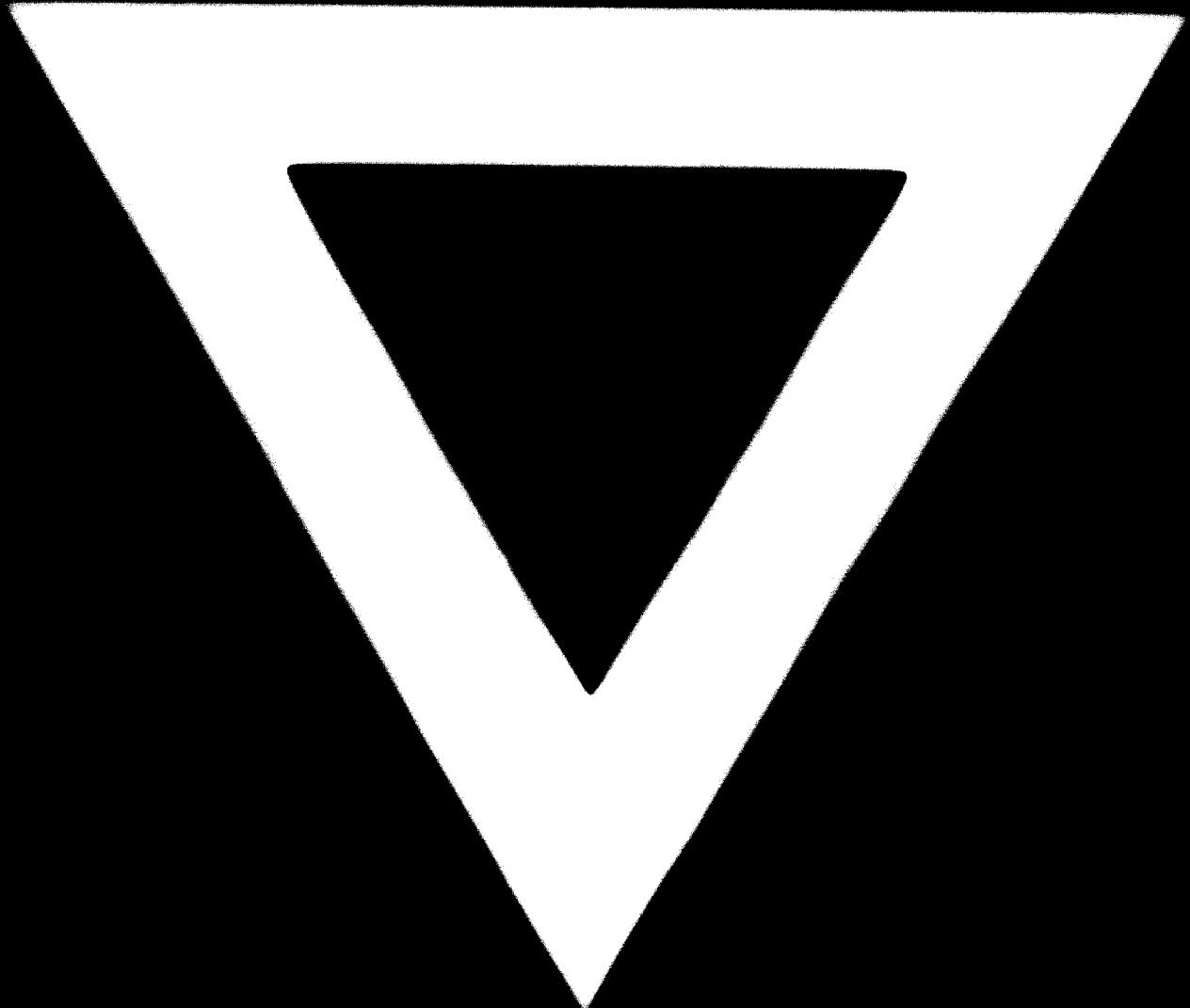
One of the most important factors in determining the appropriate type of building material is the intended use of the building. For example, if the building is a residential home, it may be best to use wood or concrete, while for a commercial building, metal or concrete may be more appropriate.

The choice of building material will depend on many factors, including the appropriate time of year, the availability of the material, and the cost of the material. In addition, the type of material used will depend on the specific needs of the building. For example, if the building is a school or technology center, it may be best to use concrete or steel.

To select the right building material, it is important to consider the type of structure and the purpose of the building. The building material must be chosen to have the right properties for the specific needs of the building. This may require consulting with an architect or engineer to determine the best material for the job.

## Conclusion

In conclusion, there are many different types of building materials available. Each has its own unique characteristics and advantages. The choice of building material will depend on the specific needs of the building. It is important to consider the intended use of the building, the availability of the material, and the cost of the material. In addition, the type of material used will depend on the specific needs of the building. For example, if the building is a school or technology center, it may be best to use concrete or steel.



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