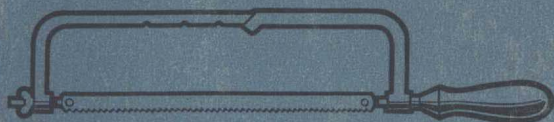
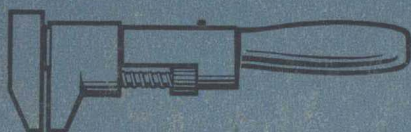


G. A. PITTMAN

# Preparatory



# Technical



# English



LONGMANS

# PREPARATORY TECHNICAL ENGLISH

G. A. PITTMAN  
Director of Education  
Nauru Island

*With Illustrations*



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## PREFACE

This book is intended for the use of apprentices and students who are desirous of improving their comprehension of technical literature written in English and their expression in English of their ideas in technical matters. It is not a grammar and the use of grammatical terms is avoided as far as possible. It is likely to prove of most use to the student who has already a fair knowledge of English and of the fundamentals of English grammar.

The book is based on the selection and teaching of a formal (or written) vocabulary which is common to technical literature of all trades. Such a selection will not include a great many technical terms proper. It is impossible to find many technical terms applicable to all trades. That has not been attempted. It *has* proved possible, however, to find a common vocabulary and sentence structures and certain common ideas used throughout all language in which the technical terms are found. This is especially true of the written language. The vocabulary *associated* with technical terms is dealt with herein, not the technical terms themselves. For this reason apparatus used throughout in the lessons is, technically speaking, simple. The attention of the teacher and student is really directed to the language, not to technical complexities of machines. It is in fact a preparatory course.

The apprentice who is learning both his trade and the English language at the same time is confused by three levels of English.

1. The language he hears by day in the workshop ("Rev it up", "Put it out", "Set it down" type) with its everyday monosyllabic words.



## PREFACE

2. The level represented by technical terms themselves and his comprehension of them, e.g. "shaft", "lubricant", "valve", "alternating current", "rafter".
3. The formal or "elevated" or "literary" language used in his textbooks, his notes of lectures and sometimes by his instructor: "accelerate", "extinguish", "deposit", "function", "process", "dimension".

There has been a tendency to concentrate on the second level and to overlook the very real difficulties presented by the third in the belief that technical English meant technical terms. A glance at technical literature especially at trade level will reveal this is not so.

The following extract, taken from a trade manual *Carpentry and Joinery*, Technical publication No. 19, Department of Labour and National Service (Industrial Training Division), p. 53, shows how a simple technical apparatus is described in such a way that the difficulty in comprehension by the student is due, not to the technical complexity of the apparatus, which is simple enough, but to the "elevated" and complex vocabulary (in *italics*) in which the simple technical ideas are expressed.

### Spirit Level

The spirit level is *dependent* on the fact that an air bubble *enclosed* with an *accompanying* liquid in a glass tube will always rise to the highest point. Lines marked on the tube *indicate* where the bubble should come to rest. To check the level, set it up on a firm base with the bubble *registering centrally*; then *reverse* the ends of the level, when the bubble should again register a central position. Any *inaccuracy* should be corrected.

In this book an attempt is made to link the first and the third levels—to relate the language of the workshop to that of the trade manual. Where explanation is provided it is supplied

## PREFACE

at the first (i.e. the conversational or workshop) level. The method used is situational, that is, the teacher with the aid of simple apparatus or by his own or the students' movements controls the oral drills of the students. These drills are followed by extracts for reading and by written exercises.

Although oral drills are used as a means of learning (and language teachers should not need to be convinced of their value) students should be discouraged from speaking *habitually* in the "elevated" style.

Throughout the book prominence is given to the vocabulary of:

- i. Description and definition;
- ii. Measurement;
- iii. Degree and proportion;
- iv. Development and processes.

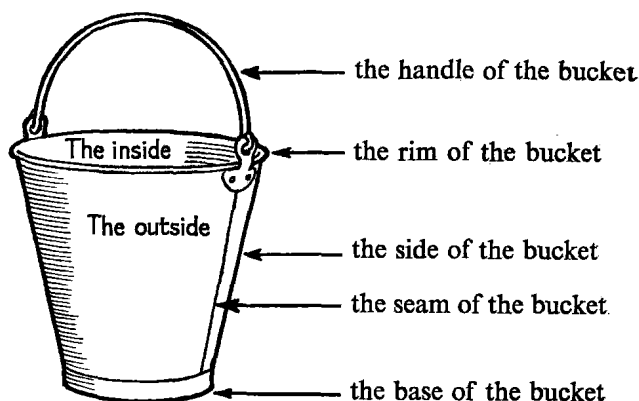
These ideas are at the root of all technical training, elementary and advanced.

It is imperative that such simple technical material as is mentioned in the situation should be used by the teacher before the class. Language teaching is concerned with making vocabulary *operative*, and to do this, drilling in a situation is necessary.



## FIRST SITUATION

### PARTS AND CAPACITY



#### I. LIST OF PARTS

*The handle* is a part of the bucket.

*The side* is part of the bucket.

*The base* is a part of the bucket.

I run my hand round *the outside* of the bucket.

I run my hand round *the exterior* of the bucket.

I run my hand round *the inside* of the bucket.

I run my hand round *the interior* of the bucket.

I run my hand round *the top* of the bucket.

I run my hand round *the rim* of the bucket.

I run my hand round *the bottom* of the bucket.

The outside, the inside and the rim of the bucket are smooth.

The exterior, interior and rim of the bucket are smooth.

The bucket *stands on its base*.

The base is *the stand* of the bucket.

## FIRST SITUATION



### II. CAPACITY

This jug holds a pint.

I pour a gallon of water into the bucket.

I pour another gallon of water into the bucket. . . .

Now the bucket is full.

It is full *to the rim*. It is brim-full.

The bucket *holds* two gallons.

It *contains* two gallons. It is a *container*.

It is a *receptacle*.

It *has a capacity* of two gallons.

Its capacity is two gallons.

It is full *to capacity*.

The bucket has *a seam*. Here it is.

The seam is watertight. The bucket is watertight.

There must be no hole in the bucket. If it has a hole in it, it will leak. The water will run out. A bucket with a hole in it is useless.

### ACTION I

Do these things, say what you are doing, then write down the sentences below. (Books closed.)

(While doing these things the tense used should be the present continuous, i.e. "I am tipping . . . I am emptying . . .")

1. *Tip* the one bucket into the other.
2. *Empty* the one bucket into the other.

## PARTS AND CAPACITY

3. Fill the empty bucket from the full one.
4. *Refill* the empty bucket.  
*Replenish* the empty bucket.
5. *The replenishment* of the empty bucket came from the full bucket.

## ACTION II

1. Stand the bucket on its base.
2. Turn it over.
3. *Reverse* it.
4. *Invert* it.
5. The bucket is *upside down*.
6. The bucket is *reversed*.
7. The bucket is *inverted*.

## EXERCISES

1. Rewrite the "action" sentences in the simple past tense with "I" for subject: i.e. "I tipped . . ."
2. Sketch the following and label their main parts:  
a chair (the back of the chair, etc.), a bed, a saucepan, a house, a table, a tree.
3. Sketch an oblong tank. Put crosses at the following points and mark them with letters.
  - (a) One-third of the way along the bottom of the tank from the left.
  - (b) Half-way along the bottom of the tank.
  - (c) Half-way up the left side of the tank.
  - (d) One-third of the way down the right side.
  - (e) One-third of the way up the left side.
  - (f) One-quarter of the way along the bottom of the tank from the right.
  - (g) Three-quarters of the way along the bottom of the tank from the right.
4. We often add "ful" to a container to mean the amount that the container can hold. "Cupful" for instance is the amount

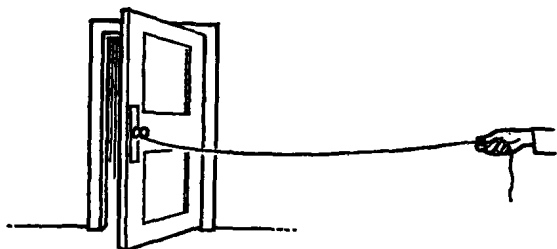
## FIRST SITUATION

contained by a cup when full. Make a list of such words from these: mouth, spoon, hand, can, jug, bottle, glass, packet, bucket, bag, tin, drum, tank, case, barrow, box, shovel, spade. Do you know any more?

5. What is the name of the receptacle into which we put:  
(a) waste paper; (b) garbage or rubbish; (c) petrol; (d) cigarette butts (or cigarette ends); (e) sweepings from a floor; (f) cement; (g) lime; (h) turpentine.  
(Use the words "bin", "drum", "tin", "can", "tray" etc.)
6. Use the words in Exercise 4 in short sentences, e.g. Fetch another bagful of sand.
7. Using the words "handle, interior, exterior, rim, seam, spout, capacity", describe orally four of the following:  
(a) a cooking pot  
(b) a bucket  
(c) a kerosene tin  
(d) a tin of salmon  
(e) a kettle  
(f) a drum of petrol.
8. Fill in the gaps in the following:  
(a) Petrol is carried in all sorts of containers. It is carried over the seas in t. . . . Some large t. . . have a c. . . of 50,000 tons or more. When the petrol is unloaded in pipes it is stored in large t. . . . From these t. . . it is sent out in t. . . , d. . . and t. . . . The drums usually have a c. . . of 44 gallons and the t. . . contain 4 gallons. From these containers, the petrol goes into the petrol t. . . of our motor cars.  
(b) There are many sorts of bins. A b. . . is used to hold the waste from a factory; bigger b. . . are used for storage. A storage b. . . may c. . . many thousands of tons of material. B. . . are of all shapes and sizes. A d. . . b. . . is the smallest sort of b. . . . It is used in our houses.

## SECOND SITUATION

### FAST AND LOOSE



I'm going to tie this piece of string to the door handle.

I'm tying it on now.

Now it's tied to the door handle.

It's *fastened* to the door handle.

It's *secured* to the door handle.

I pull the string *tight (taut)*.

I *tighten* it.

I let it *loose*.

I *loosen* it.

I tighten it. It's tight.

I loosen it. It's loose.

I make it *tight*.

I *tighten* it.

I make it *loose*.

I *loosen* it.

I make it *fast*.

I *fasten* it.

I make it *slack*.

I *slacken* it.

IT'S AUTOMATIC FOR MANY (NOT ALL) ADJECTIVES

(Take the adjective, add -en and you have the verb.)

Make it tight/tighter.

Tighten it.

Make it loose/looser.

Loosen it.

Make it fast/faster.

Fasten it.

Make it slack/slacker.

Slacken it.

Make it deep/deeper.

Deepen it.

Make it short/shorter.

Shorten it.

Make it wide/wider.

Widen it.



## SECOND SITUATION

Make it flat/flatter.	Flatten it.
Make it stiff/stiffer.	Stiffen it.
Make it black/blacker.	Blacken it.
Make it soft/softer.	Soften it.
Make it hard/harder.	Harden it.
Make it broad/broader.	Broaden it.
Make it rough/rougher.	Roughen it.
Make it moist/moister.	Moisten it.
Make it light/lighter.	Lighten it.

### SOME EXCEPTIONS

Make it strong/stronger.	Strengthen it.
Make it long/longer.	Lengthen it.
Make it hot/hotter.	Heat it.
Make it cold/colder.	Cool it.

### (Adjective=Verb)

Make it dry/drier.	Dry it.
Make it wet/wetter.	Wet it.
Make it clean/cleaner.	Clean it.
Make it thin/thinner.	Thin it (down).
Make it level.	Level it.
Make it warm/warmer.	Warm it.
Make it new/newer.	Renew it.
Make it steady/steadier.	Steady it.

## ACTION

Do these actions, say these sentences, then write them down. (Use the present continuous while doing actions, e.g. "I am tying . . .")

1. Make a *knot* in one end of the string.  
Tie a knot in one end of the string.
2. Make a *knot* in the other end of the string.  
Tie a knot in the other end of the string.