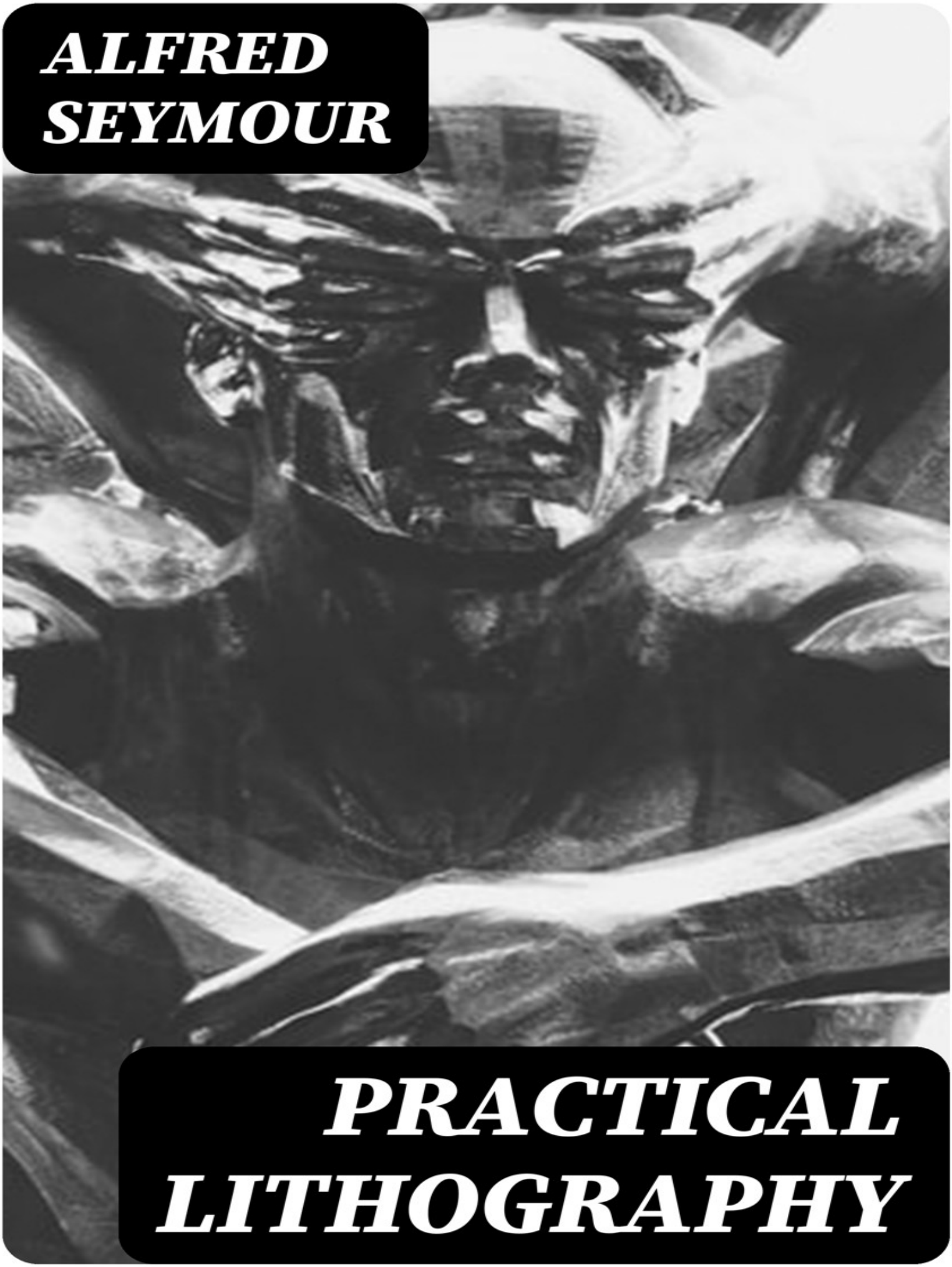
ALFRED SEYMOUR



PRACTICAL LITHOGRAPHY

Alfred Seymour

Practical Lithography

EAN 8596547311959

DigiCat, 2022
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INTRODUCTION

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“Alois Senefelder never benefited much by his discovery of the elementary principles of lithography, but none of those to whom it has given profitable occupation will remember without some feeling the patient and persistent efforts of the struggling actor and dramatist who, only after the greatest sacrifices and hardships, laid the germ of this splendid development, and watched and guarded its growth.” There is one characteristic feature of the discovery of lithography for which Senefelder ought to receive the fullest credit. Unlike other discoveries of industrial and scientific value, there can be no doubt whatever as to its origin. Senefelder’s claim has never been disputed, yet “the payment of a debt of gratitude to the fact is easily overlooked when the wheel of history has made another turn.”

It has been again and again suggested that the blighting influences of Commercialism have robbed lithography of many of its traditional features and a few, at least, of its best and most artistic qualities as a reproductive art. This same commercial spirit, however, has inspired and encouraged a charming variety of effect both in colour and design, and lithography of to-day, in almost every form of its manifestation, is infinitely more attractive and capable of considerably more expressive power than could ever have been hoped for before commercial utility and value demanded a full recognition. Pleasing and harmonious

effects, which are almost invariably sought after in lithography, need not be inartistic; and it is quite possible for the technique of the lithographic draughtsman to translate original work without a serious depreciation of its pictorial and artistic value.

While expressing a sincere hope that this volume may be of considerable assistance to his fellow-craftsmen, the writer wishes to emphasise the fact that resourcefulness and intelligent application are faculties which may be encouraged and amplified but cannot be imparted even by volumes of text.

A mere formal acknowledgment of assistance cordially rendered by the editors of the *British Printer* and *The Caxton Magazine* and *Press*, Messrs. Penrose & Co., and other firms whose blocks are *primâ facie* evidences of their interest, does not adequately express the appreciation with which it has been accepted and made use of.

A. S.

London, *December 1903*.

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CHAPTER I

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Elementary Details

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Concerning Stones—Character and Texture—Some Simple Elements—Preparation of Stones—Planing and Levelling—Grinding Grained Stones—Descriptive Treatment—American Method.

There are a vast number of details in connection with lithography and lithographic printing which are indisputably elementary in their character. It would be impossible, however, to regard them as non-essential, and a just appreciation of their value and influence must of necessity enter into any comprehensive exposition of the craft.

Stone as a printing medium.—The value of the Bavarian limestone was one of those fortunate discoveries which tended to materialise lithography as a graphic art, and may even be regarded as a fundamental principle, the practical value of which is only equalled by its far-reaching effects.

Other printing surfaces have been discovered and developed, with more or less substantial results, yet without depreciating their merits, it will be but a fair recognition to concede the premier position to the Solenhofen and other limestones of a like nature.

The homogeneity and porosity of these stones render them peculiarly suitable for lithographic purposes, and it undoubtedly reflects a vast amount of credit upon

Senefelder that even at the outset he should select a medium so well adapted and in every way so eminently suitable for graphic reproduction.

I have already, and almost inadvertently, indicated the peculiar value of the Bavarian stone, for homogeneity and porosity of texture are absolutely essential properties, and upon these is based almost every theory which has assisted in the development of this craft. These properties, in conjunction with a suitable greasy pigment, provide the requisite materials for that cause and effect which require and compel consideration.

The simple elements of lithography may be very briefly described, and in this direction at least we must follow certain well-defined lines which may be regarded as well-worn ruts, the consideration of which offers little that is new.

A brief review of the theories of chemical and mechanical affinities is best calculated to impress upon the mind the elementary principles of the lithographer’s art.

The penetrative power of a greasy pigment, together with the porous nature of the litho-stone, may be regarded as the cause by which the lithographer produces as an effect a design or impression which, to some extent, enters into the texture of the stone—the homogeneity of which checks any tendency to *spread*. This fatty matter may be applied in one or two ways, either as a transfer from some other printing surface, or as a direct drawing with pen, brush, or crayon.

The first question for consideration will be the initial preparation of the litho-stones. These preparatory operations—which have for their object the levelling,

polishing, and cleaning of the stones—were at one time entirely performed by hand labour, but are now accomplished with much greater facility and in a more effective manner by machinery. The importance of each individual operation will be more readily appreciated when once its purpose is clearly understood. A litho-stone having a *perfectly level* surface is necessary in order to enable the printer to secure a firm and uniform pressure over the whole design when printing therefrom. A *smooth*, *polished* surface will readily receive the finest designs, and retain all their original characteristics. A *clean* surface is an absolute necessity, *i.e.* a chemically clean surface free from grease or any foreign matter which would be likely to enter into the texture of the stone and by so doing injure any greasy drawing or transfer which might be made thereon.

These are simple, elementary principles, and as such are probably familiar to every reader, but the frequent result of familiarity is a dangerous tendency to under-estimate the importance of everyday causes and effects. If, therefore, such a reference as the above to common details serves to convey some intelligent idea of their place and true value, then no apology whatever will be necessary for their insertion in this volume. It has already been stated that, in the preparation of litho-stones, the superseding of hand labour by machinery has effected considerable and important changes.

Several machines, all of more or less practical value, have been introduced to the trade. One of the more recent developments, a stone-planing machine, possesses many features of real merit (Fig. 1).

The stone is securely fixed on a perfectly true bed and passes slowly to and fro beneath the blades of powerful cutting knives. These blades are arranged in an inverted V-shape and locked in an oscillating framework. By an automatic action they are almost imperceptibly lowered at each traverse of the machine, when they lightly cut away the surface of the stone until the old work is completely removed and a smooth level face is assured. The chief objection to this type of machine is that in course of time the knives become worn and slightly irregular, and it is but reasonable to suppose that when a number of small stones have been operated upon and immediately afterwards a full-sized stone is planed, such irregularities will be very pronounced and detrimental.

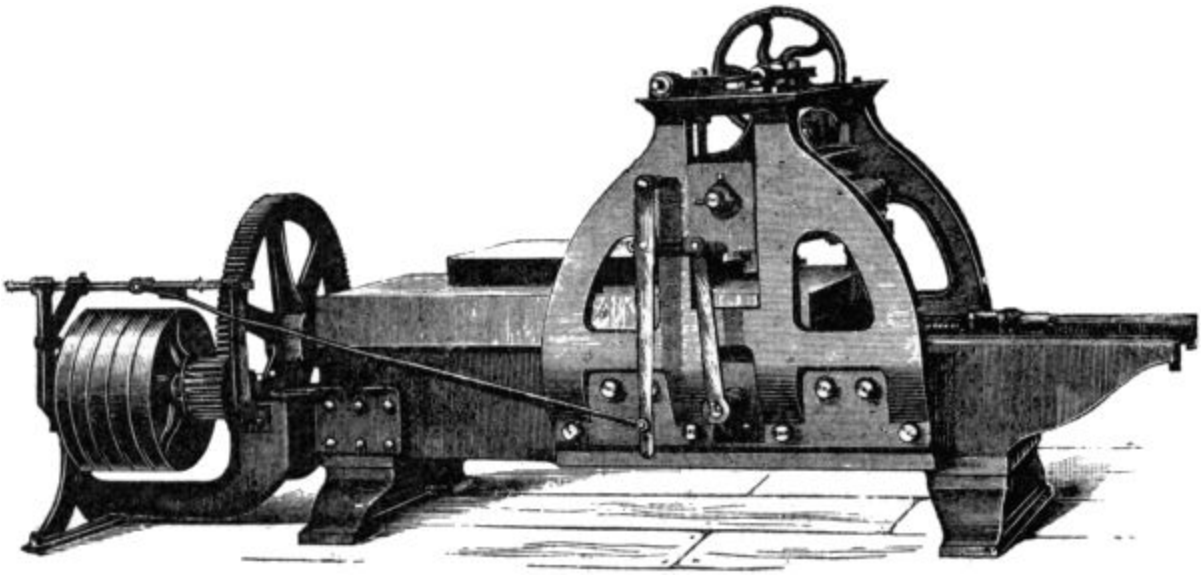

FIG. 1.

Many machines have been designed on the simple grinding principle, but one type differs from its contemporaries and offers several distinct advantages over them (Fig. 2).

This machine is constructed on hand-polishing lines, *i.e.* the movements are to some extent mechanical arrangements of hand-polishing principles. The size of stone makes no difference whatever, and the results are in the main uniform and satisfactory. The inconveniently sharp edges, such as are produced by the planing machine, are unknown,—the wear and tear on the stone is perceptibly lessened, and the power required to drive such a machine is not by any means a serious matter.

When a planing machine does not enter into the operation, and grinding by hand is therefore necessary, sharp, clean sand should be used as a grinding medium. To secure some degree of uniformity in the grain, and at the same time remove all the larger particles of grit, pass the sand first through a fine sieve. The harder qualities of sand have, of course, the greatest cutting power, and therefore are the most suitable for this purpose.