

Reviews.

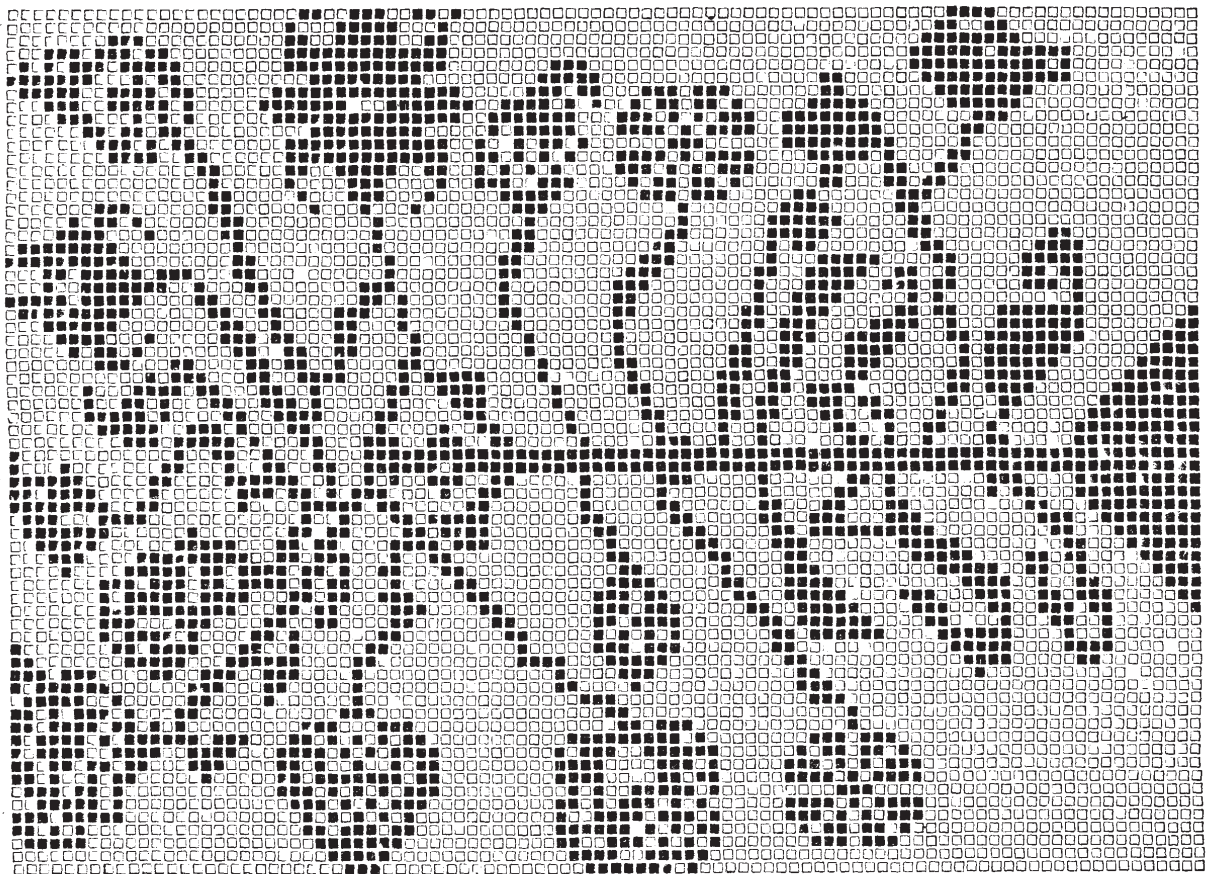
**The Slide Rule.**—The fourth edition of a work on the Slide Rule becomes a recommendation that is more valuable than any ordinary advertisement. Mr. Chas. A. Pickworth's book on this subject has the advantage over many others that we have seen, of presenting the subject in such a manner as to be easily comprehended by any attentive reader. Much of the unpopularity of the Slide Rule has been hitherto due to the obscurity of its exponents whose complete familiarity with their subject seemed to interfere with their powers of simple explanation. The reader is

*Slide Rule*, by Charles N. Pickworth, Wh. Sc. Price, 2s. Emmot and Co., Ld., Manchester.)

**Whittaker's Mechanical Engineer's Pocket Book.**—The tendency of Engineer's Pocket Books is now to appeal to various divisions of the trade rather than to cater for them all, as did the original works, which in consequence tended to become too bulky to be carried regularly in the pocket. *Whittaker's Mechanical Engineer's Pocket Book* already approaches the limits of bulk, but its special purpose excludes much general matter in order to give the mining and hydraulic engineer a work to suit his special requirements. The author, Mr. Philip R. Bjarling, at the outset reminds his readers that while the English Imperial Gallon weighs 10 pounds, that of the United States weighs 8,330 and

Weaving Designs.

This Design is suitable for Table Cloths. The particulars are: 14's warp, 18's weft, 52's reed, 52 picks; leave as many warp ends and as many weft picks around the group as required.



prepared in nine pages of text for dealing with sums in proportion on the Slide Rule, after which come exercises in the conversion of quantities and measurements to equivalents under a different title, as pounds per square inch to kilogrammes per square centimetre; feet per second to miles per hour, &c. Compound multiplication and division, involution and evolution, and combined operations follow in quick succession leading to examples in technical computation and application to trigonometry. In an appendix are given illustrated descriptions of some special forms of slide rules such as the Engine Power Computer, Boucher's Calculator, and Fuller's Calculating Rule. The draughtsman and the quantity estimator will find valuable aid in this excellent little work. (*The*

that of New York 8 pounds. The growing use of American standard works in British territory renders a note of this kind necessary and useful. Municipal and water works engineers in India will here find a valuable assortment of data all printed in the most readable type, and without over-crowding. The data for the design and duty of pumps are numerous and comprehensive, and excellent figures are given for the gauging of water flowing over sills and through V and rectangular openings. Among the useful tables may be noted those of the various wire and sheet metal gauges used in England and America, a table of safe loads on iron and steel bolts; of friction of air, steam and gas in long pipes, &c. The Book is one which should find many appreciators

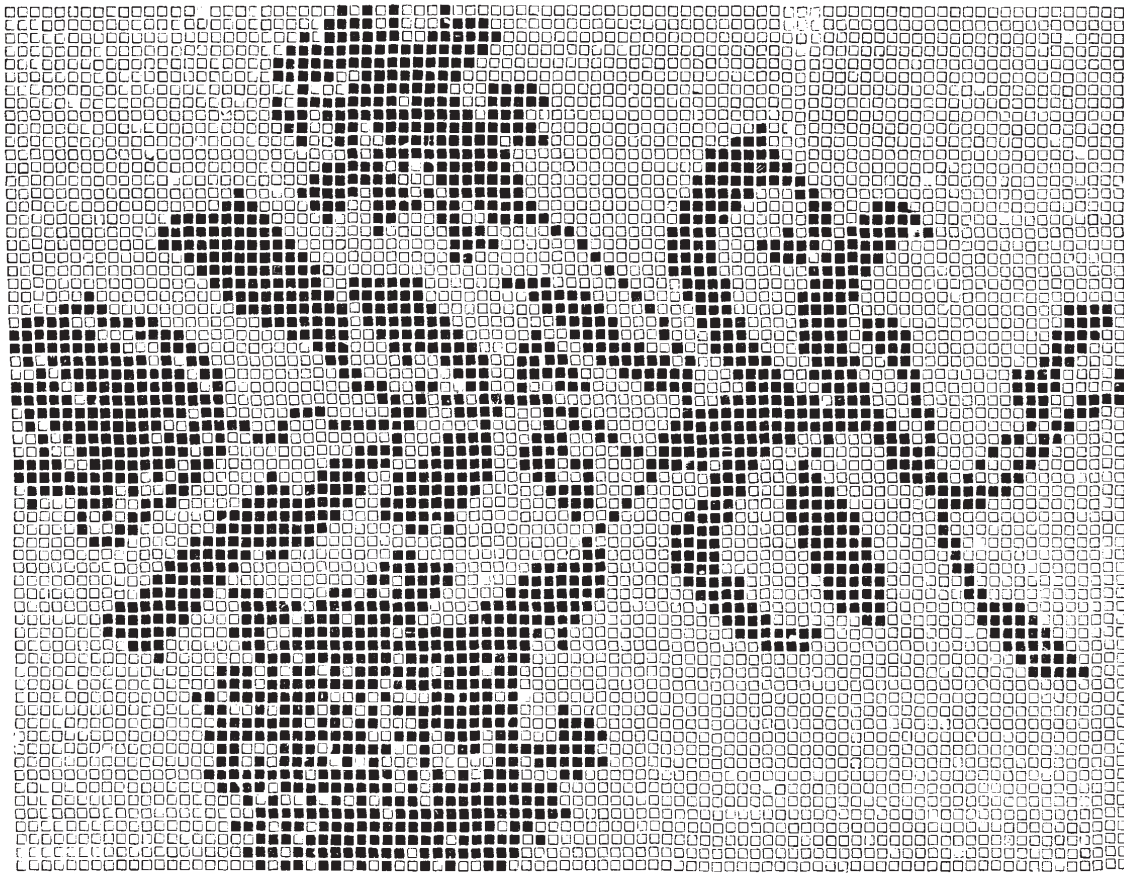
in India. (*Whittaker's Mechanical Engineer's Pocket Book*, by Philip R Bjorling. Price, 5s. Whittaker and Co.)

**Sketches of Engine and Machine Details.**—Students, apprentices, and even employers who want to learn to draw for the workshop will find the subject prepared ready to hand in the work of Mr. Wallace Bentley, who has attacked his task in a way that is at once original and practical. Although he does not say so, it is plain that his idea of working drawings is the plainest and simplest delineation that will convey to the workman exactly what he has got to do. This is a wide departure from the idea that was current twenty-five years ago, and which still lurks in certain schools, to the effect that a mechanical drawing should be

design is good—with one exception—the lathe carrier, page 37. Such a carrier would probably be split on the first day of use. As it takes longer to learn where to place dimensions on a drawing than to learn the art itself, we think that a short chapter on the subject of dimensions, notes, and the reasons for them, might save the beginner a good deal of trouble. The neglect of a single important dimension has frequently caused vexatious delays and correspondence, not to speak of errors in construction. Mr. Bentley has made a useful and original addition to the text books on drawing. (*Sketches of Engine and Machine Details*, by Wallace Bentley, A.M.I.M.E. Price, 2s. 6d. Chapman and Hall, London.)

**WEAVING DESIGN—(continued.)**

This Design is suitable for Sofa Covers and Table Covers. The particulars are: 16's warp, 16's weft, 50 p. c. size 40's reed, 52 picks; leave as many warp ends and weft picks around the group as required.



nically painted and shaded. Drawings that will sooner or later acquire a coat of dirt and grease in the workshop cannot be too plain. They should be practically outlines and sections of the work with every dimension that the workman may require marked plainly upon them in figures. It was a happy thought of Mr. Bentley to apply to various well known engineers and companies for specimen drawings of their specialties. His examples thus acquired a variety in design that would have been absent from the work of any one man or firm. The designs from some of the best locomotive, marine) and agricultural engineers are given along with those of well known boiler makers engine builders and specialists. Although some of the drawings are rough the style of

**D. A. Low's Pocket Book for Mechanical Engineers**—The very handsome little volume before us can scarcely be called a pocket book, for the days of big pockets are gone, at least for the present, and the book measures a fair inch and a quarter across the back. But once on the desk or drawing board its dimensions are clearly in its favour; it will lie open, and in type, paper, and finish it is a model of its class. A very sensible beginning is made with Weights and Measures, in which the attention of the reader is drawn to the fact that although the American measures of length and surface are similar to ours, the ton is only 2,000 lbs. avoirdupois, and the gallon weighs only 8.3254 lbs. instead of 10 lbs., as with us. The increasing use of American text books in