

PRANG'S STANDARD COLORS,

**For the Use of Teachers, Designers, Manufacturers, Merchants, and
Others who have Need of Standards of Color.**

THESE colors have been chosen and arranged in harmonious scales for the assistance of all who need *definite and satisfactory standards of color* for reference, whether in Education, Art, Manufactures, or Trade. They have been fixed upon after repeated conferences with artists and color-experts.

Mr. Prang's work for over fifty years has included large enterprises in the line of color printing, and the reproduction of paintings in oil and water color. Many years ago he began his experiments for definite standards of color, the great need of which has always been felt by those who use color materials in the arts and industries. In the course of his work he came to feel strongly the value of color study as a part of general education, and he continued his experiments with the definite purpose of producing, in a practical, material form, a series of colors as a basis for color instruction in the schools, and as a standard of reference in the arts and industries.

The definition of a scale of standard colors, covering, to a practicable extent, the whole physical series of pure color, had Mr. Prang's first consideration. The only flowing band of color in nature is to be found in the solar spectrum; but this is incomplete as a physical series of color, and it has not the stability necessary for a proper guide. The variations of the colors composing it, in hue, in intensity, in absolute and relative luminosity, influenced by the time of day and by atmospheric conditions, are such that no reliance is to be placed on it for the construction of harmonious scales of standard normal

tones. Nature here, as in all its phenomena, can serve man only as a study for the recognition of the underlying laws: it is his mission to evolve ideals based on these laws. It was recognized by Mr. Prang that the complete physical series of color contained in the wave of white sunlight presents the unit of pure color, and as nature nowhere gives all these colors in combination, the true unit of color has to be imagined. Accordingly, he took for his color-unit an ideal of the colors potentially existing in a wave of white light. A harmonious scale of colors, covering this unit in twenty-four equal intervals, was then made, not as a mere copy of certain colors of the solar spectrum arbitrarily chosen, but as the result of careful weighing and judging, under the guidance of educated color perception and feeling.

The determination of tones for the standard scale of a normal unit color has been derived largely from artistic and educational considerations, influenced at the same time by the practical requirements and limitations found necessary in the choice of pigments for coloring.

The first stage of work in this color scheme was the painting of models, not only for a series of twenty-four standard normal tones to cover the unit in equal intervals, but also models for all tones in the whole scheme, in order to admit of the judging of the scheme as a whole, and at the same time in all its parts, so as to secure harmonious relations at once between the parts themselves and between the

THE TWENTY-FOUR COLORS OF THE COLOR UNIT,

THEIR TINTS AND SHADES.

R	RRR	RO	OR	O	OYO	YO	YYO	Y	YYG	YG	GYG	G	GBG	BG	B	B	BBV	BV	VBV	V	VRV	RV	RRV
LL	LL	LL	LL	LL	LL	LL	LL	LL	LL	LL	LL	LL	LL	LL	LL	LL	LL	LL	LL	LL	LL	LL	LL
R	RRR	RO	OR	O	OYO	YO	YYO	Y	YYG	YG	GYG	G	GBG	BG	B	B	BBV	BV	VBV	V	VRV	RV	RRV
L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L
R	RRR	RO	OR	O	OYO	YO	YYO	Y	YYG	YG	GYG	G	GBG	BG	B	B	BBV	BV	VBV	V	VRV	RV	RRV
DD	DD	DD	DD	DD	DD	DD	DD	DD	DD	DD	DD	DD	DD	DD	DD	DD	DD	DD	DD	DD	DD	DD	DD

THE SEVEN GRAYS,

THEIR TINTS AND SHADES.

Gy	RGy	OGy	YGy	GGy	BGy	VGy
LL	LL	LL	LL	LL	LL	LL
Gy	RGy	OGy	YGy	GGy	BGy	VGy
L	L	L	L	L	L	L
Gy	RGy	OGy	YGy	GGy	BGy	VGy
D	D	D	D	D	D	D
Gy	RGy	OGy	YGy	GGy	BGy	VGy
DD	DD	DD	DD	DD	DD	DD

THESE diagrams show the scheme or plan devised by Mr. Louis Prang as a basis for the production of typical or "ideal" color scales. The intervals of the normal colors (Red to Red Violet), as well as the intervals of the tones in each of the scales (e.g., Lighter Red to Darker Red or Lighter Blue to Darker Blue), were chosen and equalized with reference to harmonious relations, not only of the normal colors themselves, but also of all the scales composing the scheme, whether

scales of hues, of tones, or of both hues and tones at once. As shown in the diagrams, scales of hue may be traced along horizontal lines, e.g., Red to Red Violet. Scales of tone may be traced along vertical lines, e.g., Lighter Red to Darker Red. Scales of both hue and tone may be traced along oblique lines, e.g., Darker Red to Lighter Orange. Similarly harmonious scaling is obtained in the broken colors.

parts and the whole. These models, executed in the most permanent pigments now existing, were to serve as guides for the manufacture of Prang's standard colored papers, and thus insure a continuity of the once-adopted hues as nearly perfect in every edition as experienced workmen can produce.

The diagram on page 2 shows the plan and scope of the scheme of scales based on the twenty-four normal standard hues, covering the unit of pure colors.

To these scales of pure colors a scale of neutral gray and six scales of "broken" colors were added. These latter are based on the six leading colors of the color unit,—red, orange, yellow, green, blue, and violet,—broken by gray. They give us examples of the colors known by artists as tertiaries—russet, citrine, and olive—as well as brown, slate, and heliotrope.

MANUFACTURE OF THE PAPER.

When Mr. Prang had completed his models, he took up the next stage of the work, the reproduction of the colors on paper, so as to get a series of colored papers. In the coating of these papers he met with considerations which restricted the choice among available pigments in producing the colors, as they had to meet certain conditions connected with their use.

These conditions were:—

- I. Freedom from arsenic, which enters into the manufacture of some otherwise very desirable pigments.
- II. Permanency, as far as the choice between available pigments permitted.
- III. Adaptability for coloring of paper.

The first condition has been met absolutely. The second condition has been met as far as possible by a choice among pigments restricted by the other paramount conditions. For this reason the paper manufactured falls, in some respects, short of

Mr. Prang's models, but will be found sufficiently perfect to be of great service for educational and artistic purposes, if not so immediately helpful to the scientist.

In the simple and clear nomenclature which Mr. Prang has adopted for his standard colors, he followed other authors on the subject. The color names of the unit scale will be easily understood if the reader recalls the familiar names of the points of the compass, only assuming six instead of four cardinal points; viz. red, orange, yellow, green, blue, and violet. (See diagram on page 4.)

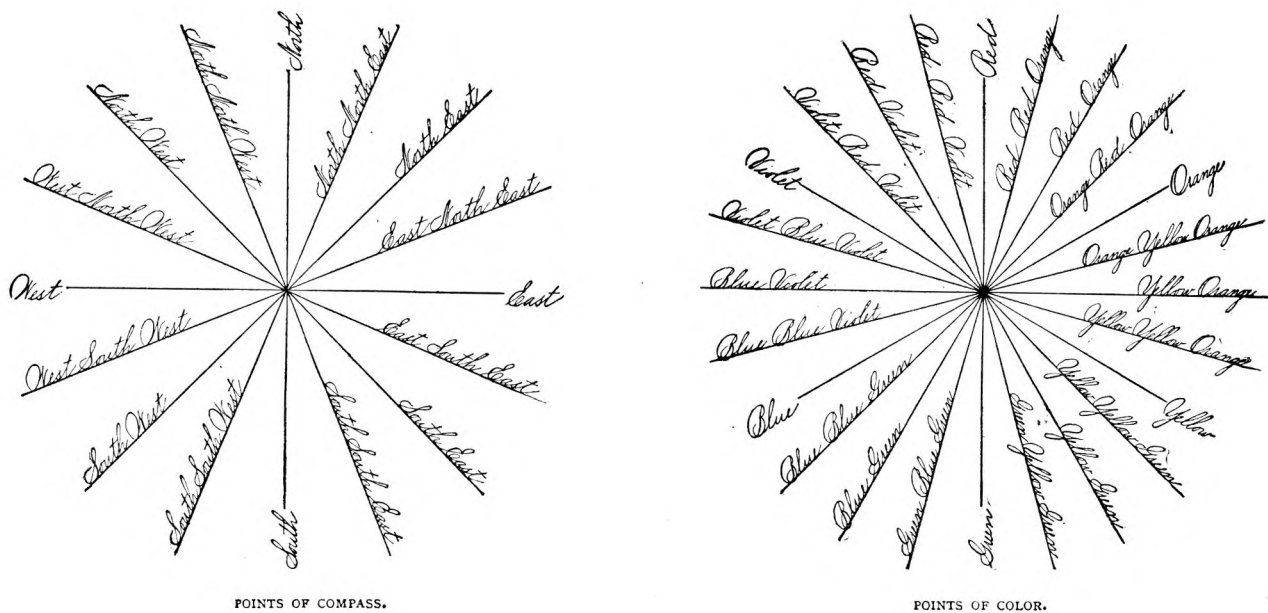
The Prang Standard Colored Papers are cut in various shapes and sizes, *and bound up in books as described below*. They are also made up into Color Charts and Color Tablets.

PRICES,

SUBJECT TO LIBERAL TRADE DISCOUNT.

Sheets 24 x 28, per ream	} Prices quoted on application.	
Sheets 24 x 28, per quire		
Books 3 x 4, each containing 155 colors, marked with names		\$.30
Books 1 x 4, each containing 155 colors, marked with names10
Packages 6 x 9, containing 155 colors, unmarked80
Packages 5 x 5, containing 155 colors, unmarked50
Packages 4 x 4, containing 155 colors, unmarked30
Packages 6 x 9, containing 50 sheets, one color only in package30
Packages 5 x 5, containing 100 sheets, one color only in package30
Packages 4 x 4, containing 100 sheets, one color only in package20
Prang's Color Chart No. 1 (showing 12 normal "unit" colors)75
Prang's Color Chart No. 2 (showing 24 normal "unit" colors)75
Prang's Prismatic Spectrum, with the Fraunhofer lines (these charts are of large size for the walls of workshops and schoolrooms)		1.00
Color Tablets, used in Primary Schools (72 pieces in a box), per box10
Suggestions for Color Instruction: a Handbook for Teachers in Public Schools		1.00

NOMENCLATURE OF THE PRANG STANDARD COLORS.



DIAGRAM, showing the plan of nomenclature of Prang's Standard Colors. In reading the right hand figure, six "Cardinal Points" should be assumed, — Red, Orange, Yellow, Green, Blue, and Violet.

Discounts to schools and to the trade will be quoted on application. Assortments will be made up to order at special prices.

It is especially desirable that the Color Instruction of Kindergartens and that of Primary and Grammar Schools shall be so conducted as to make one consistent whole in harmony with the best use of color in the arts and industries. In order to make this practicable, Prang's Standard Colored

Papers have been cut in various shapes, sizes, and assortments ready for use in the regular Kindergarten occupations. These Kindergarten papers may be obtained through the Kindergarten supply houses of E. Steiger & Co., 25 Park Place, New York City, and W. A. Olmstead, 182 Wabash Avenue, Chicago.

For further information about Color Standards and materials for studying color, address

THE PRANG EDUCATIONAL COMPANY,

646 Washington Street, Boston.

43-47 East 10th Street, New York.

151 Wabash Avenue, Chicago.