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A selected group of Kliegl Products for the Electrical Trade

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Reprinted from the 1928 Edition of the McGraw-Hill Electrical Trade Catalogue

KLIEGLBROS UNIVERSAL ELECTRIC STAGE LIGHTING CO., INC.

Theatrical, Decorative and Spectacular Lighting 321 West 50th Street, New York, N. Y.

A Complete Line of Lighting Specialties for Theatrical, Decorative and Spectacular Lighting

For the past 30 years Kliegl Bros. have been the foremost manufacturers of a complete line of lighting specialties for theaters, motion picture studios, window displays, show rooms, exhibitions, pageants, outdoor floodlighting, spectacular advertising, ball rooms, schools,



lodge rooms and countless other applications.

The mark "Kliegl Bros." in lighting specialties is known the world over as a symbol of quality and fine workmanship, which is backed by the well-known Kliegl guarantee.

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Semi-flush Footlights (Open Trough and **Compartment** Types)

Consists of a galvanized sheet iron trough, fixed in position, with a hood that extends $2\frac{1}{2}$ to $3\frac{1}{2}$ in. above the stage floor, protecting lamps and reflecting light to the stage. Trough and hood made in one piece—strong and rigid. Well ventilated. Correctly designed for proper distribution and control of light. Furnished in one designed longth and averative. Completely, wind any desired length and curvature. Completely wired, usually for independent control of white, red and blue lights. Reflecting surfaces painted a permanent white; trough incline dull black. Splice box provided for making feeder connections. Can be furnished with Kliegl connectors with 2-wire control circuits, providing convenient connections for footlight spots, etc.

Approved by the Underwriters.

No. 622 -Semi-flush, open trough type, fitted with single row of medium-screw-base re-ceptacles.

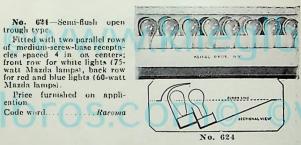
Accommodates 60 or 75-watt Mazda lamps, 3 to 4 in. on renters Price furnished on applica-



No. 622

Code word Racloir

Panel Boards with Dimmer Equipment..... Plugging Boxes and Plugs..... 10 9.COI Pockets and Plugs: Stage-floor Waterproof Floor For Battery Charging Surface Wall Type Flush Wall Type Panel VVVV.K11 Projectors: Sidewalk For Scenic Effects, and Other Projecting Apparatus 11 Scenic Effects Signs, Exit and Illuminated Spotlights Strips, Cove Light Studio Lights (see Spotlights) Supplies — Gelatines, Lenses, Cable Lugs, Color Caps, etc.



Semi-flush Footlights (Enclosed Type)

Semi-flush Footingness (Enclosed Type) Furnished in 2 sections—lighting unit and trough. Lighting unit, embodying lamps, receptacles, reflectors, diffusing roundels, wiring and hood as a complete unit, is entirely encased in No. 20 gauge galvanized sheet iron, with strong, self-supporting hood, and dirtproof and dustproof front. Extends only 3 in. above stage floor. The trough, made of galvanized iron, may be omitted where a concrete trough is provided on the stage.

where a concrete trough is provided on the stage. Made in single and double-row types. Each lamp has an individual reflector (permanently fixed in correct position) of spun aluminum, shaped to project all the light of the lamps upon the stage.

light of the lamps upon the stage. Reflectors have a pure white highly reflecting surface that will not peel or discolor, that is unaffected by heat of the lamps, retains its high luster and is easily cleaned. Diffusing roundels are convex lenses, smooth outside so as not to collect dust, ribbed inside for proper diffusion of light rays. Lenses are furnished clear, red, blue, amber, green, light blue, moonlight blue. Roundels held in place by split rings; easily removed for changing colors or replacing lamps.

for changing colors or replacing lamps. Furnished in one continuous length or in sections of

any length desired, completely wired in accordance with Underwriters' requirements (unless otherwise specified), ready for installation in footlight trough. Usually wired for independent control of white, red and blue lamps. Back of wiring trough removable-footlight can be wired on the job. Splice box provided for making feeder con-nections. Plug outlets (Kliegl connectors No. 950) also furnished, wired on separate circuits, for footlight spots and other apparatus. Three outlets usually provided, equally spaced the length of the footlight.

0000

600

No. 621

No. 621-Semi-flush enclosed type, double row, with coloredglass diffusing roundels and metal trough (furnished with-out trough if desired). *Reout trough if desired). *Re-ceptacles spaced 4½ in. on centers; colors staggered in the 2 rows Accommodate 100-watt A-23 Mazda lamps (made for 150-watt PS-25 Mazda lamps on special order).

Price furnished on application. Code word..... Racimo

*Foolights can be furnished with receptacles spaced on centers greater than specified above or with greater number of circuits for more colors, or other changes, as desired. When ordering, give length of footlight, whether curved or straight, number of colors desired, number of lamps for each color, whether splice box for making feeder connections is to be located in center or at right or left and of footlight when viewed from position on stage facing the audience.

Disappearing Type Footlights

Made so that they may be closed down flush with stage floor. Furnished in complete standard 5-ft. sections, ready for installation.

Lamp receptacles are mounted in all-metal trough with pivoted supports attached to the hardwood frame, 60x14 in, over all.

Reflecting surfaces painted a permanent white. A hardwood panel fastened to back of trough serves as part of stage floor when footlight is closed. Frame and panel substantially made of 1-in. oak flooring. Each section provided with flush ring-pull and lock; when footlight is open, it is held in position by a spring catch.

When desired, a special switch (No. 826) can be furnished for installation in the stage floor near the disappearing footlights which connects the lamp circuits when its panel is opened, and disconnects the lamp circuits when it is closed.

These footlights comply with the Underwriters' requirements, and can be supplied for straight or curved installations in special lengths if desired, and with flooring other than oak.



No. 829-Fitted with single No. 829-Fitted with single row of medium-serve-base re-ceptacles spaced 314 in. on cen-ters. Accommodates fifteen 60-watt or 75-watt Mazda lamps. Completely wired for three 2-wire circuits for independent control of white, red and blue lights. Splice box for making feeder connections.

lights... Code word... Price, No. 828, double row of \$80,00

No. 826 Floor Switch — For control of lamp circuits of disappearing foot-lights. Equipped with 30-ampero toggle switches. Operated by opening and closing footlight panel. Furnished complete with oak frame 14 x 14 in. and with switches enclosed in sheet metal box.



Borderlights (Open Trough and Compartment Types)

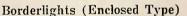
Made of galvanized sheet iron-strong and rigid; well ventilated, and designed for proper light distribution. Furnished in one continuous length, or in sections, any length desired, completely wired in accordance with Underwriters' requirements and usually for independent control of white, red and blue lights.

Price furnished on application.

Spice box provided for making feeder-cable connections. Fur-nisbed with chains and 1½-in. pipe batten for hanging, and with color frames for red and blue compartments. Occupies space 10 in. wide whon in position.

Price furnished on application. Code word, No. 613, for 300 or 500-watt lamps......Raccolta





These horderlights comprise a single row of receptacles with a spun aluminum reflector for each lamp, all entirely enclosed in a compact, strong and well ventilated housing of galvanized sheet iron. Means are provided for holding colored-glass diffusing roundels as well as slide grooves for holding color frames with gelatine mediums or glass slides, consequently any one of these 3 different forms of color mediums may be used without changes or adjustments. The roundels are convex, heat-resisting, wireglass lenses, smooth outside so as not to collect dust, glass lenses, smooth outside so as not to collect dust, ribbed inside for proper diffusion of light rays. Lenses are furnished clear, red, blue, amber, green, light blue, moonlight blue, etc. Roundels held in place by split rings—easily removed. Reflectors, securely fixed in position, have double-focus contour—reflecting surface will not peel or discolor, unaffected by heat of lamps and wardly depend easily cleaned.

Furnished in one continuous length, or in sections, any length desired, completely wired in accordance with Underwriters' requirements and usually for independent control of white, red and blue lights. Back of wiring trough removable—they may be wired on the job when necessary. Splice bor provided for making feeder connections. One or more work lights can be furnished, wired on separate circuits, reflecting light upward or downward, and usually placed in center of borderlight. Furnished complete with 154-in. pipe batten and chains for hanging, also with color mediums as specified.

No. 602—For 200-wait P.S. Mazda lamps. Receptacles spaced 7 in, on centers. Double-focus reflectors with adapter for holding 6½-in, colored-glass roundels, also with slide grooves for holding color frames for gelatine mediums or colored-glass slides. Occupies space 8 in, wido when in position. Price furnished on application. Code word, No. 602.

No. 603-For 300 or 500-watt P.S. Mazda lamps. Receptacles, 10 in. on centers; 9-in, colored-glass roundels; occupies space 11 in, when in position.

No. 604-For 750 or 1000-watt P.S. Mazda hamps. Receptacles, 14 in. on centers; 1312-in, colored-glass roundels; occupies space 14 in. wide when in position. Raboseos

Code word, No. 604.

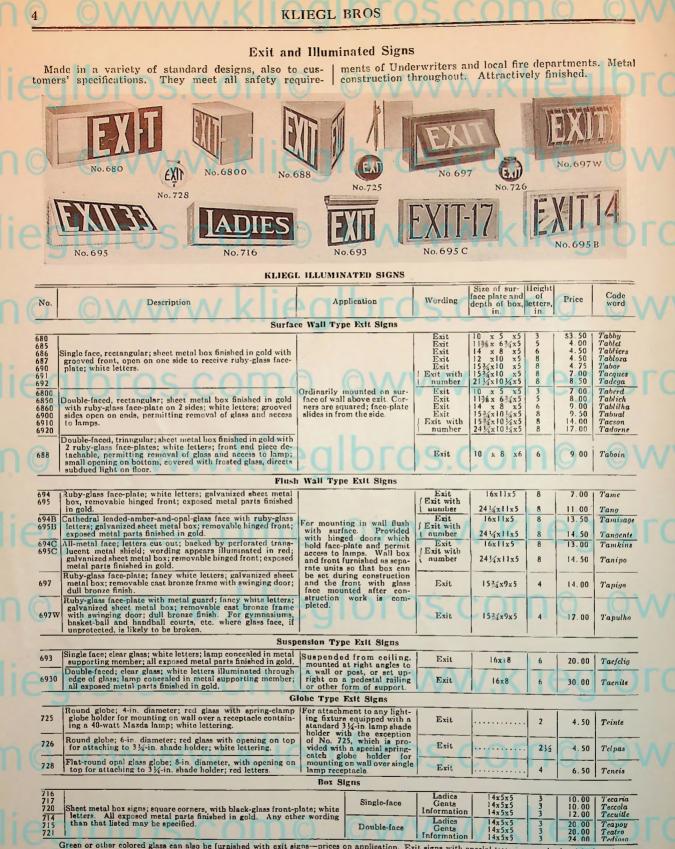
Code word, No. 604. Note: State whether colored-glass diffusing roundels are re-quired, or metal frames for gela-tine color mediums, or metal frames with colored glass slides; give length of borderlight (usually about 2 ft. longer than prose-num opening); state number of colors desired; number of lamps; for each color, and size of lamps; state location of splicing box; tright or left side facing audi-ence).



No. 603



No. 612



Green or other colored glass can also be furnished with exit signs-prices on application. Exit signs with special lettering can be furnished--prices or

KLIEGL BROS

Cove Light Strips

For concealed indirect lighting. Designed for installation in coves, back of panels, around rotundas, under marquees, or cornice tops, etc. Made for natural or color lighting effects. Made of heavy-gauge galvanized sheet iron, fitted with medium-screw-base receptacles, completely wired, and furnished in any length or curva-ture specified. Wiring completely enclosed.

No. 731-Wired for 1 to 3 colers, ordinarily for white, red and blue. ccomodates 60-watt Madza lamps, usually spaced 4 in. on centers. Frame, x 2 in. Sets in cove space 8 x 6 or 8 x 6 in., depending on size of dome. Price furnished on application. Code word.

No. 735—Used for bright indirect lighting. Lined with corrugated mirrored-glass reflectors. Accommodates 60-watt Mazda lamps, usually spaced 12 in on centers. Occupies space approximately $51/4 \ge 33/4$ in. Price furnished on application.

No. 734

No. 736

WYS No. 735

steps without annoying the audience or interfering with the performance.

Aisle and Step Lights

No. 736 — Especially de-signed for use where little space is available. Accommo-dates 40-watt tubular lamps, usually spaced 12 in. on centers. Reflecting surface is half-round and painted a permanent white. Wired for one color. Price furnished on appli-cation.

Note-Always specify length of strip, whether straight or curved, and number of lights per foot required.

Enable persons to find their way in darkened auditoriums, etc. They cast a subdued light downward on aisleways and



No. 675

No. 677

No. 676

LIEGL BROS,

Price. Code word. \$4.50

 S4, 50

 No. 676 Alsle Light—Vertical type for flush wall mounting. Consists of medium-screw-base receptacle mounted in a heavy gauge galvanized bheet iron box 73 ¼ x 43 ½ x 3½ in. deep with ½ in. knockouts in sides, rear and bottom. Provided with removable cast aluminum louvered front (8 ¼ x 43 ½ in.). Accommodates 40-watt Mazda lamp.

 Price.
 \$5,00

 Code word.
 \$5,00

 No. 672 Store Light.
 \$6,00

Code word. No. 677 Step Light—Horizontal type generally set flush in the riser. Removable cast aluminum louvered front ($8\frac{1}{4} \times 4\frac{3}{6}$ in). Medium-screw-base receptacle. Housed in heavy-gauge galvanized sheet iron box $7\frac{3}{2} \times 4\frac{3}{2}$ is $3\frac{1}{6}$ in deep. $\frac{1}{2}\sin$. Accommodates 40-watt Mazda lump. Price Price.... Code word. \$5.00

Raresco

Automobile and Carriage Calls

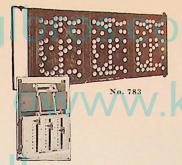
Made entirely of metal and consists of 3 units placed side by side, each unit having receptacles completely wired for lamps which outline the numerals. Three units with numeral range from 0 to 9 each are

used for "calling" with a total range from 0 to 999; a narrow unit with the numeral 1, and two standard units for "calling" with range from 0 to 199. Calls made single and double face. Units like those

used in assembled call, but made of copper, are furnished separate for assembling in frames constructed to harmonize with architectural designs.

The call switch is self-contained and operated by sliding pointers to digits of the number called and by closing a switch. Requires no perforated key cards or other contrivances. It is encased

in weatherproof iron box pro-vided with door, lock and key.





Kliegl Automobile and Carriage Call Assem-bled in Special Frame No. 783-Single face, with call switch; call 72 x 291/2 x 6 in.; call range.

0 to 999.
0 (0 999.
Price,\$450.00
Code word
No. 785-Double face, with call switch; call 72 x 291/2 x 11 in.; call range,
0 to 999.
Price\$600.00
Code word
No. 787-Three separate single-face units made of copper for assembling
in specially designed frames, for single-faced calls; with call switch; call
range, 0 to 999.
saso on
Price. \$450.00 Code word
Code word
No. 789-Six separate single-face units made of copper for assembling in

specially designed frames, for double-face calls; with call switch; call range, 0 to 999. Price..... Code word...

high by 16 in, wide. Separate units with numeral "1" are 26 x 51/2 x 5 in deep; units with numeral range 0 to 9 are 26 x 19 x 5 in deep. When designing frame, allow at least 2 in, inside between units; for double-face calls, allow a space of at least 5 in, inside between the two calls. Call 0 to 999 requires a 34-conductor cable installed in 124-in, conduit. Lamps and cable not included in price. 10-watt 5.14 lamps are used. No. 783 call takes 141 lamps.

Standard Panelboards with Dimmer Equipment

Dead front type-all live parts mounted on separate panels back of the board. Switches operated by specially constructed insulated handles extending through panel to front of board. All electrical parts comply with the requirements of the National Board of Fire Underwriters and City inspection. Workmanship guaranteed.

No. 1209, a small dead front panelboard with dimmers, provides facibility in light control at a rea-sonable cost. Designed for lodge rooms, schools, etc. Toggle switches and slider type dimmers control the circuits. Usually white lights in footlight, and first and second bor-den lights are controlled by the forder-lights are controlled by the first vertical row of dimmers, blue lights by the second row and red lights by the third row. A master lever permits operation of 3 dimmers at once. A standard model for 12 circuits, with control of 3 colors with 9 dimmers, 500-1000 watts each.

.....\$395.00 Price Code wordNadering



1209 Dend Front Panel Board with Dimmers



No. 765—All-metal with light guard on all sides of music rest. Light fature enclosed in a metal housing open at the bottom—attractive, simple and dignified lines; equipped with pull chain twin-Imp socket. Music rest 24 x 15 in. at set angle; cast iron tripod base; iron adjustable pedestal; furnished n gold except inside surfaces of music rest, which are dull black; furnished with 8 ft. of cable.

Price..... Code word.....\$16.00 ...Rcconir

No. 766—All-metal with light guard on all sides of music rest. Light ixture enclosed in cylindrical metal housing with bell-shaped ends, removable for lamp renewal; provided with specially formed open trough which directs light to music rest; equipped with pull chain lamp socket. Music rest 24 x 15 in, at set angle; cast iron tripod base; iron adjustable pedestal; finished in gold except inside surfaces of music rest, which are dull black; furnished with 8 ft. of cable. Price. Code word. \$14.00 Recram

No. 752 Piano and Organ Light A complete stand-lamp with

pull chain twin-lamp socket; furnished complete with re-flector, stand and 10 ft. of lamp cord.

Can be adjusted to any desired position.

Dull brass finish.

Weight, 15 lb. \$14.00 Price

Cleaner Stands and Work Lights

These portable lights are used wherever a temporary lighting unit is required. They consist of an iron base with pedestal stand equipped with 1 or 4-lamp receptacles.

No. 655—Cast iron tripod base; 14-in iron pipe pedestal 36-in, high, on which is mounted a single lamp socket; cable extends through pipe and out at bottom of base; finished in black enamel \$5 50 Rambeh

No. 658—Cast iron tripod base; 14-in. iron tele-scopic pedestal for raising or lowering light (lowest point is 36 in. fron floor to center of cluster); 4-lamp receptacles with 14-in. reflector and fixed wire lamp guard; cable passes through pedestal stand and out at bottom of base; finisaed in black pained. \$10.00 Ramiro



Floodlights for Show Windows and Displays

Kliegl floodlights provide means for the effective floodlighting of show windows, display rooms, exhibits, etc. They are provided with slide grooves for color frames with gelatine or glass color mediums or colored glass roundels.

Suspension and bracket types for 200 and 500-watt Mazda lamps.

No. 512 – Open-box square-face suspension type with pipe clamp for gripping any size pipe from $\frac{1}{2}$ to $\frac{1}{4}$ in.; provided with mogul-screw-base re-1/2 to centacle.

eeptacle, Accommodates a 500-watt P.S.-52 Mazda lamp. Hood made of sheet metal; interior reflecting sur-faces painted permanent white, exterior finished in black enamel. Grooves for color frames; completely wired with asbestos covered leads. Furnished with metal frame for gelatine color medium.

medium.

Price, No. 543, for 1000-watt P.S. lamps.....\$12, 25 Code word.....

No. 533—For mounting on a wall, beam, pillar or over windows; supporting bracket provided with swivel thumb-serew adjustment for swinging light in any direction. For 250-watt G-30 Mazda lomp; fitted with medium-serew-base receptacle. Reflector (11 in. diameter) made of spun aluminum with reflect-ing surfaces painted white; provided with side grooves for metal frames for gelatine color mediums. Furnished complete with asbestos covered leads and color frame.

Price.... Code word..... .\$13.00 Oebotas



No. 542



No. 533

No. 602 Borderlight for Show Window Lighting This borderlight is well adapted to the efficient lighting of show windows, providing the color lighting features and control used in stage lighting. Made for any size lamp desired. Also made in single units. For detailed de-scription, see third page pre-ceding.



KLIEGL BROS

Spotlights

Kliegl spotlights are made in every conceivable form, in all sizes, in arc and Mazda types. Substantially constructed, portable, and properly designed for flexibility, ease of adjustment, thorough ventilation, and correct lighting at maximum efficiency. They comply with all Underwriters' requirements.

No. 56—Square suspension type, supported by iron bracket fitted with pipe clamp for attaching to 1½ to 1½-in. pipe—can be turned in any direction. Accommodates a 250-watt G-30 Mazda lamp. Russian iron body, thor-oughly venilated, fitted with 414-in, condensing lens; medium-screw-base receptacle adjustable for focusing; removable color frames for gelatine color mediums; asbestos covered leads. Can be furnished with 33/4 in. mirrored-glass reflector back of hanp receptacle, which increases light about 50%.

Price\$12.00 Code word	
No. 54-Square type mounted on round base.	

Otherwise same as No. 56. Price..... \$12.00 Code word...

No. 53-Square portable type with support de-signed for changing angle of inclination. Same as No.56 except furnished without pipe clamp.

No. 56



No. 66-A-For 250-watt concentrated filament Mazda lamp; fitted with medium-serew-base re-ceptacle fixed in position; lens holder adjustable for focusing, equipped with 3½-in. condensing lens; Russian iron hood with aluminum frame front and rear, provided with bracket support and thumb-screw adjustment; can be mounted on wall, eciling, pillar or floor.

Can also be used as a floodlight by removing lens. Furnished complete with asbestos leads and color frame for gelatine mediums. Can also be furnished with 33;-in. mirrored glass reflector mounted back of lamp to increase light volume about 50%. \$16.00 Price

Code word..... . . Chiroter

No. 60 (With Dimmer) and No. 61 (Without Dimmer)—Pedestal type for 250 or 400-watt concentrated fila-(in the of the second s

Prices

No. 60, with dimmer.....\$43.00 Code word.....Chaouch







No. 70—Suspension type; fitted with mogul-screw-type-base receptacle for 1000-watt concentrated filament Mazda lamp.

Russian iron hood with aluminum frame front and rear, mounted in trun-nion and swivel bearings (swings in any direction).

Equipped with 5-in. condensing lens and slide grooves for color frames; receptucle on sliding base, with exten-sion wing nut for focusing and 5-in, mirrored-glass reflector back of famp. Furnished complete with pipe clamp and asbestos covered lead.



No. 72-Spotlight with 6" lens, and color frames automatically controlled from a remote point. Four or more color frames may be used and by means of electric-magnetic control, one or more color frames may be thrown in or out of position in front of the lens, permitting spotlight to be changed instantly to any color or any combination of colors, or all color frames removed for white lighting. \$130.00

Price.... Code word ... Chloies



Fig. 14—Consists of No. 70 Spotlight equipped with motor-driven color wheel (no winding necessary) for remote control. Used wherever continuous or inter-mittent change of color is desired. Price, spotlight and color wheel.....\$93.00 Code word. Xarda



No. 6—A standard range arc type spotlight for average working distances of 50 ft. Gives a 4-ft. spot or a wide spread. Fitted with 25-amp. 125-volt arc lamp: 6-in. condensing lens; Russiau iron hood (lighttight and thoroughly ventilated) with aluminum frame front and rear, self-closing spring door for access to lamp; are lamp mounted on slide rails with arm extending through rear of hood for quick focusing; carbon holders are rigid and fed by wooden knob under hood; lower carbon

and fed by wooden knob under hood; lower carbon holder adjustable horizontally—are crater can be properly positioned in respect to lens system. Con-densing lens held by split iron ring and mounted to allow unrestricted expansion. Slide grooves receive standard size color frames, color wheels and effect attachments. Hood mounted with adjustable support on telescopie iron stand; can be set at any angle, raised, lowered and turned easily in any direction. Furnished complete with enclosed fixed resistance mounted on base of stand, enclosed switch, asbestos covered leads end 25.61 stance enble. and 25-ft. stage cable.

Code word
No. 7-Same as No. 6, with 5-color wheel attached.
Price





No. 12 — A new spotlight wherein all operations are entralized — arc. 5-color frames, iris and curtain shut-ters, and direction of light heam are controlled from back of spotlight. Gives 3-ft. spot at 150 ft., also a wide spread of uniform light. Fitted with 70-ampere 125-volt are lamp of hand-feed type, mounted on slide rails with arms for focusing and arc control extending through rear of hood. Russian iron hood, thoroughly ventilated and light-tright, with double walls and alumi-uum frames front and rear, with large self-closing spring door on side permitting access for earbon renewals or adjustments. Swing door in bottom permits reneval of dirt. Fitted with 6-in condensing lens monned in uncestricted expansion and ventilation. Slide grooves provided for special color frames. Hood well balanced and mounted with adjustable support on telescopic stand—may be set a say angle, raised, lowered and turned in any direction. Heavy substantial base eliminates vibration. Furnished with fixed resistance mounted on pedestal stand, complete with color frames, enclosed switch and 25-ft. cable.

\$250.00 Berites

Sidewalk Projector No. 253 Used to project announcements, let-

tering and other messages upon the sidewalk, from a show window or other location within the building line. Consists

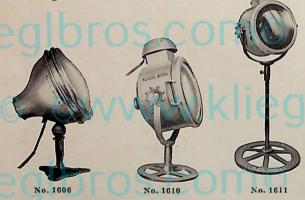
No. 12

the building line. Consists of a small stereopticon, fur-nished complete with lens, medium - screw - base lamp socket and 8 ft. of lamp cord with attachment plug. Accommodates a 100-watt G-25 Mazda lamp. Uses slides 2½ in. in diameter, with sten-ciled lettering or stenciled design.

No. 253

Outdoor Floodlights

Kliegl floodlights are widely used for close-range or long-range outdoor illumination. Substantially con-structed, weatherproof, thoroughly ventilated and cor-rectly designed to give proper distribu-tion of light for the service intended.



No. 1600—For close-range lighting of building fronts, display signs, etc., providing a brilliant flood of evenly diffused light over a wide area. Polished bell-shaped aluminum housing mounted with an adjustable support on a abort tripod stand—hood can be set at any angle. Special heat-resisting parabolic mirror reflector fitted with mogul-screw-base receptacle for 250-watt G-30 or P.S. Mazda lamp. Heat-resisting glass front.

Price.....\$30.00 Code word.....Jupon

No. 1601-Same Mazda lamp.	as No.	1600	except	that if	accommodates	a 500-watt

Code wordJuraban	
No. 1610-Gives a concentrated beam of light at long range. Special heat-resisting mirror reflector 13% in diameter fitted with mogul-screw-base	
receptacle for a 1000-watt P.S. Mazda lamp. Mounted with adjustable support on a short tripod stand permitting any desired setting. Heat-resisting glass front.	
Price	

Price\$14.00 Code wordFincape No. 565

diffused light

Price..... Code word...

Price..... Code word.

Price..... Code word.....

Stage-floor Pockets and Plugs

Pockets—Used for connecting stage lamps and other devices to supply circuits. They set flush in the floor and have hinged self-closing covers notched for cablecovers always closed whether cable is or is not in use. Furnished with detachable sheet iron box having conduit knockdowns in 3 sides. Surface plates and covers made of cast iron; cast iron frame on under side supports porcelain receptacles at convenient angle; position of receptacles and opening at base prevent dirt from lodg-ing therein; opening in bottom of box allows sweepings to fall through. Approved by Underwriters. See table below.

Plugs—Furnished with stage pockets. A tongue at-tached to receptacle frame indicates whether receptacle is intended for arc or incandescent lamps; tongue fits a corresponding groove in the plug, preventing insertion of an arc plug in an incandescent receptacle, or vice versa, and allows incan-

descent circuits to be fused lighter than arc circuit; plates on cover also indicate rated capacity of individual pockets. Any desired com-bination of arc and incandescent pockets, from 1 to 4. can be furnished. Approved by Underwriters. See table below.



KLIEGL STAGE-FLOOR POCKETS AND PLUGS

No.	No. of	Rati	ng of rece	pracles		Code
	pockets	Amps.	Volts	No. of wires	*Price	word
351 352 353 354 1350	1 2 3 4 1	1-50 1-50; 1-25 3-25 4-25 100	250 250 250 250 250	2 2 2 2 2 2 2 2	\$10.00 16.00 24.00 30.00 20.00	Hulagu Hulotte Hulscan Hululcr Hedge

· Plugs included in price of pockets.



No. 1613-Same as No. 1611 except that it gives a wide spread of evenly diffused light. \$55.00 Jussau Code word ... No. 562 for the reflector for horizontal (bracket) mounting. Accom-modates two 1060-watt P.S. 52 Mazda lamps. Used to floodlight great open spaces. Projects an extremely wide spread of light without blinding glare. Base made of east aluminum, with weatherproof coverings which house the mogul-screw-base receptacles and allow free circulation of air. Base has adjustable bracket—can be mounted on a pole, etc (usually about 40 ft. above ground). Reflector hood made of galvanized sheet iron; spreads out to a 361 \approx 29-in. opening. Substantial construction throughout; compara-tively light in weight; easily handled.

\$50.00

.....\$55.00Jurisoni

No. 1612-Same as No. 1610 except that it gives a wide sprend of evenly

No. 1611—Same as No. 1610 except that it is mounted with an adjustable support on a 3-ft. telescopic pedestal stand.



KLIEGL BROS

Waterproof Floor Pockets and Plugs Set flush with surface of floor. Special cover prevents

No. 300

water and dirt from entering receptacle. Cast iron floor box drilled for 1-in. conduit. Two brass covers furnished — one bellshaped, fits over cable connected to plug, screws into surface plate when plug is in place; the other is a screw disc cover used to close the box watertight when outlet is not in use. A Kliegl plug re-ceptacle is mounted in in floor box. A Kliegl plug is furnished. Approved by Underwriters.

KLIEGL WATERPROOF FLOOB POCKETS AND PLUGS

No.	Description	Price	Code word
299 300 304	3-wire, 30-ampere, 125-250 volts 2-wire, 50-ampere, 250 volts 2-wire, 100-ampere, 250 volts		Hadbote Hadoram Hacdos

Wall Pockets and Plugs

Surface Wall Type Battery Charging Pocket and Plug-Consists of a plug receptacle enclosed in cast iron case, with opening for plug pro-tected by a self-closing drop door. Used extensively for connecting storage batteries to charging cir-cuits, also in theaters on fly floors, bridges, balconics and stage walls. Furnished complete with non-reversible plug. Capacity, 50 amperes, 250 volts.



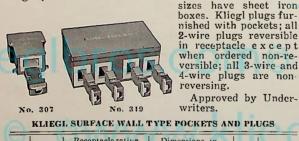
No. 305

Approved by Underwriters.

KLIEGL BATTERY CHARGING POCKETS AND PLUGS

No.	Description	Price	Code word
305	l-in. conduit entrance at bottom.	\$10 00	Hunch
306		10.00	Hyal

Surface Wall Type Pockets and Plugs-For mounting on surface of walls in horizontal, vertical or angular position. Consist of Kliegl porcelain plug receptacles, with copper current-carrying parts and terminal lugs, fitted in weatherproof iron box suitable for making conduit connections, and provided with detachable cover. Single pocket made with cast iron box and cover; all other



No.	No. of		eptacle		Dim	ensions,	in.	Price	Code
140,	pockets	Wire	Amps.	Volta	lleight	Width	Depth	rnee	word
307 317 318 319 1307 4307 2307 3307	1 2 3 4 1 1	2 2 2 2 2 2 2 3 3	50 50 50 100 200 30 100	250 250 250 250 250 125 125/250 125/250		$ \begin{array}{c} 4^{3}4\\ 11\\ 11\\ 11\\ 5^{1}4\\ 11\\ 5^{1}4\\ 11\\ 5^{1}4\\ 11 \end{array} $	412	\$8.00 14.00 21.00 28.00 16.00 25.00 17.00 30.00	Hazubah Heapest
338	1	2	100	500	7	111	414	19.50	

Other sizes on 2, 3 or 4-wire pockets on application

Flush Wall Type Pockets and Plugs-Set flush with surface of wall. Consist of Kliegl porcelain plug receptacles, with copper current-carrying parts and terminal lugs, fitted in cast iron box, suitable for making conduit connections. Two styles—with brass detachable face plate (single pocket only); with cast iron detach-

able face (1 to 4 pockets); both types have hinged selfclosing door. Pockets furnished with Kliegl plugs. All 2-wire plugs are reversible in receptacle except when ordered non-reversing; all 3wire and 4-wire plugs are non-reversing.

Approved by Underwriters.





No. 310

No. 311

KLIEGL FLUSH WALL TYPE POCKETS AND PLUGS

	No. of			nension		1		Code
No.	pockets	Haight	Width	Donth	Surfac	e plate	Price	word
		meight	math	Depth	Height	Width		
*308	1	534	41/2	331	7	5	\$13.00	Huddie
\$310	1	531	415	331	716	6	10.00	Haven
§311	2	6	71/2	4	716	9	16.00	Hawk
\$312	3	6	815	4	712	101/2	24.00	Hawser
\$313	4	6	1016	4	713	1216	30.00	Haze

*With brass face plate, and with lock and key.

With iron face plate; without lock and key. Receptule rating: 2-wire, 50 amps, 250 volts. Other sizes, 2 or 3-wire, also 100 and 200 ampere pockets, on application

Panel Pockets and Plugs

Consist of a metal cabinet or box fitted with Kliegl plug receptacles completely wired to a panel having busbars and fuses, or to a branch cutout.

Approved by Underwriters.

No. 370—For use in machine shops and other places where portable motor equipment is used. Fitted with two 30-ampere plug receptacles and a double-branch 3-wire to 2-wire fused cutout; for plug fuses; completely wired; en-closed in weatherproof sheet iron case with detachable cover. Furnished complete with No. 301 Kliegl reversible plugs. See table on following page No. 372—Same as No. 370 but fitted

with 50-ampere plug receptacles and entridge fuses. See table on following

page. No. 374-Used primarily for theater balconies and border bridges, motion picture booths, photographic studios, etc. for connecting spotlights and other lighting apparatus. Fitted with four 50-ampere plug receptucles and slate





panel with main busbars, 2-wire or 3-wire, arranged for and fur-nished with cartridge fuses, or with link fuses if desired. Completely wired; enclosed in iron cabinet with hinged door having snap lock. Furnished complete with No. 301 Kliegl reversible plugs. See table on following page

No. 376-Same as No. 374 except that it is fitted with six 50-ampere plug receptacles. See table on following page.

KLIEGL PANEL POCKETS AND PLUGS	1	KLIEGL	PANEL	POCKETS	AND	PLUGS
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No.	No. of	Receptacle rating Wire Amps Volts		Dimensions, in. Length Width Depth			*List	Code	
370 372 374 376	2 2 4 6	2 2 2 2 2	Amps 30 50 50 50	250 250 250 250	Length 11 15 20 28	7 8 1314 1314	41/2		Labacol Label Labrus

*Prices include plugs. Panel pockets for 8 or more receptacles on application.

Portable Plugging Boxes

For quickly and conveniently connecting several light-ing units to a single outlet. Sturdily constructed to withstand severe usage.

Consist of plug receptacles in groups of 2, 4, 6, 8, 10 or 12, mounted in an asbestos-lined wooden case, reinforced with aluminum end frames; each receptacle fused independently; positive and negative busbars and fuse connections on separate slate panels mounted on opposite sides of box to eliminate short circuits; self-closing doors with spring hinges provide access for making connections: feeder cable enters box through a special clamp on top which securely grips outer insulation of cable and prevents possible strains on connections when box is Made for 2-wire and 3-wire feeder mains, 2-wire out-

lets, in 2 types—one interchangeable for use with cart-ridge or link fuses, the other for link fuses only.

Plugs furnished with these boxes are Kliegl No. 301 50-ampere, 2-wire; body made of solid fiber, practically indestructible and a perfect insulator; cable extends well into handle; cable clamp with teeth grips outer insulation of cable (relieving connections and binding screws of all strain and preventing unraveling of insulation);



contact strips are heavy copper, one fixed in position, the other floating and backed with a special spring so as to expand in the receptacle, insuring perfect contact; lower end of floating contact rests in a groove in the plug to eliminate the possibility of bending contact out of shape, but with sufficient leverage for pliability. Approved by Underwriters.

VILEGI, PORTABLE PLUCCING BOYES

Runda Forthann Foodonta northy								
No.	No. of pockets	Rating—O Amperes	volts	§Price	Code word			
2-wire Main-2-wire Outlets-Interchangeable for Cariridge or Link Fuses								
390 391 392 393 394	2 4 6 8 10	10 to 30 10 to 30 10 to 30 10 to 30 10 to 30 10 to 30	250 250 250 250 250 250	\$14.00 27.00 40.00 54.00 67.50	Latch Laund Lawn Lean Levync			
3-wire, 1	25-250 Volt	Main-2-wire	Outlets-	-For Link H	uses Only			
381 382 383	4	10 to 60 10 to 60	125	29.00 43.50 58.00	Lagunda Lakende			

SPrices include plugs.

Indestructible Connectors

Used with stage lighting apparatus, portable lighting units, etc., for quickly and securely making electrical connections.

Rigidly constructed to withstand severe usage. Made of solid fiber, in two principal parts—one-half (male section) provided with heavy brass split pins which fit tightly and with perfect contact into brass sleeves in the other half (female section). Spacing between pins and other structural details are in accordance with Under-writers' requirements. All live parts embedded in the fiber. Removable fiber plate gives access to terminals for making connections. Cable extends well into body of connector, and teeth on cover plate firmly grip outer insulation of cable, thus relieving binding screws and



No. 950-AC No. 950

No. 957-N

connections of all strain and preventing insulation from unraveling.

Sizes range from 5 to 200 amperes, in 2, 3 and 4-pole types; also multiply circuit and branch-off connectors. Above 30-ampere capacity connectors are provided with lugs for wire ends; above 60-ampere capacity they have an aluminum collar where sections join, protecting the pins and providing additional strength.

Connectors are furnished reversing and non-reversing. Approved by Underwriters.

Two-pole Connectors-For 2-wire circuits. Have 2 brass pins and corresponding sleeves.

Three styles:

(1) For duplex cable wherein both male and female sections have a single opening in cable ends of connector for entrance of cable.

(2) For connecting asbestos-covered leads or other single-conductor wires to duplex cable wherein male section has 2 openings for wires, and female section a single opening for duplex cable.

(3) For connecting asbestos-covered leads or other single-conductor wires to both sections of connector-2 openings provided for wires in each section.

KLIEGL TWO-POLE INDESTRUCTIBLE CONNECTORS

No.	Reversing or non-reversing	For cable gauge No	Ашр.	Volta	Price	Code word		
For Connecting Duplex Cable								
950	Reversing	14	5	250	\$1.10	Pack		
950-N	Non-reversing	14	5	250	1.35	Pacovio		
951	Reversing	16	5 15 15	250	1.10	Paddle		
955	Reversing	12	15	250	1.50	Pall		
955-N	Non-reversing	12	15	250	1.75	Palleal		
956	Reversing	10	30	250	2.40	Pallid		
956-N	Non-reversing	10	30	250	2.65	Palliola		
957-N	Non-reversing	6	60	250	6.00	Pallor		
958-N	Non-reversing	2	100	250	10.50	Palmy		
959-N	Non-reversing	000	200	250	19.80	Pander		
For Con	For Connecting Two Asbestos-covered Single Conductors to Duplex Cable							
950-AC	Reversing	14	5	250	F. 10	Ратисто		
955-AC	Reversing	12	15	250	1.50	Parvoice		
956-AC	Reversing	10	30	250	2.40	Pasados		
957-AČ	Non-reversing	6	60	250	6.00	Pascada		
958-AC	Non-reversing	2	100	250	10.50	Pasmuni		
For Connecting One Pair of Asbestos-covered Single Conductors to Another Pair								
950AA	Reversing	14	5	250	1,10	Partipit		

950AA	Reversing	14	5	250 1	1,10	Partivit
955AA	Reversing	12	15	250	1.50	Parcenir
956AA	Reversing	10	30	250	2.40	Paryari
957AA	Non-reversing	6	60	250	6.00	Pascito
958AA	Non-reversing	2	100	250	10.50	Pasiras

Three-pole and Four-pole Connectors-Kliegl 3 and 4-pole "indestructible" connectors are similar in design and construction to the 2-pole connectors, except they are provided with either 3 or 4 split-pins and a corresponding number of sleeves. and made with the opening in cable ends for 3 or 4-conductor cable.

Reversible or non-reversible as shown in the table on following page.



No. 3950

KLIEGL 3-POLE AND 4-POLE INDESTRUCTIBLE CONNECTORS

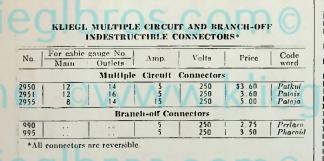
No.	Reversing or non-reversing	For cable gauge No.	Amp.	Volts	Price	Code word	
	3-Pole Connectors						
3950 3955 3956 3957 3958	Reversing Reversing Non-reversing Non-reversing Non-reversing	14 11 10 6 2	5 15 30 60 100	25-250 25-250 25-250 25-250 25-250 25-250	\$2.40 3.60 5.00 7.00 19.80	Pany Parade Parch Parole Paroma	
4-Pole Connectors with Aluminum Cable Clamps							
4950 4955 4956 4957	Non-reversing Non-reversing Non-reversing Non-reversing	14 12 10 6	5 15 30 60	250 250 250 250 250	5 00 6 00 7 50 15 50	Paropter Parorria Parouel Parrudo	

Multiple Circuit and Branch-off Connectors-Designed to provide several separate circuits from one feeder cable

Multiple Circuit Connectors - Attached to the end of the cable; body Animple Carcuit Connectors — Attached to the end of the cable; body fitted with 3 pairs of brass sleeves, interconnected, which receive 3 separate 2-pole male end pin connectors, thus providing for 3 separate 2-wire circuits Two sizes for 5 and 15 amperes per circuit. Body also receives male ends (reversible type) of other Kliegl connectors of same rated capacity; cable clamps on cover plates relieve connections and terminals of all strain. See table below.

Branch-off Connectors—Attached to the feeder cable at one or more places along its length, permitting several circuits to be obtained from one enble without making splices. Cable passes through full length of connector, Connections made with binding screws without cutting the wire. Body fitted with brass elseves to receive 2-pole male end 5-ampere reversible pin connectors.

Made in single and double branch. See table below.



Supplies for Stage and Color Lighting

Color Wheels—Automatic and manual; with clockwork or motor drive; by combination of colors; 9 to 24 in diameter.

Color Frames for Gelatine or Glass Color Mediums-For open-box lights, bunch lights, spotlights, etc. Sizes range from 8x9 in. to 26x1515 in. Special sizes to order. Made of metal or wood.

Special sizes to order. Made of metal or wood. Lenses-Sciopticon objective lenses for producing a picture in a ratio of 1 to 2 ft. diameter for every foot of distance from the screen; for 4, 6, 8, 10 and 12-in, focus. Stercopticon objective lenses, 14 and 16 m. diameter, for 4, 6, 8, 10, 12 and 15-in, focus Long distance objective lenses, 274 in di-ameter, for 18, 20, 24, 30 and 36-in, focus. Above lenses are mounted in ad-justable brass tubes that fit slide grooves on the projection appartus. Poly-scope objective lenses for stercopticons permits projection appartus. Poly-picture, from a distance of 40 to 80 ft., by simply adjusting a thumb screw. Condensing lenses for specificiens, sicc. are plano-convex and properly ground to accurate size and focus; and made in 2 types: standard type, 41₂, 5, 6, 8, 10, 12 and 14 in, diameter for 63 to 21 in-focus; special heat resisting type, 42₂, 5, 6 and 8 in diameter for 63 to 13-in focus.

Framing Shutters and Blinders—For spotlights, projectors, etc. Made in various forms for controlling and framing light areas, producing lightning flashes and "fading off" and "fading on" effects.

Gelatine Color Mediums—Strong, uniformly colored sheets of gelatine, x21 in., stocked in a wide range of colors and fancy combination of colore.

Lamp Coloring Solutions—"Weatherproof" for permanently coloring incandescent lamps for outdoor use (yellow, amber, red, blue, green and white oppl): "Opalescent" for outdoor use where color is desired to last several months (yellow, light and dark amber, red, pink, blue, green and white oppl): "Signaloid" for stage lighting and other indoor use (frostine, yellow, amber, red, pink, purple, blue, green and moonlight blue).

Stage Cable-N. E. C. Standard. 2-conductor (36 to 18 gauge); 3-con-ductor (36 to 8 gauge).

Borderlight Cable-N. E. C. Standard. 3, 4, 6, 8, 12, 14, 16, 18, 20, 24, , 40 conductors of No. 12 gauge flexible cable carried in stock; other sizes to order.

Are Lamp Carbons -- Large stocks of solid and cored carbons in size-3 4x4 to 1x12 in. Also are lump carbons (3/ax12 in.) for producing light rich in ultra-violet rays.

Color Globes and Caps-For detachable color globe type horderlights, footlights and proceenium lights; permanent colors-amber, red, blue and green. Globes for 150-watt PS-25 Mazda lamps; caps for 75 to 300-watt Mazda lamps.

Solderless Copper Terminals -For Nos. 2, 4, 6, 8, 10 and 12 gauge stage cable or asbestos-covered wires.

Copper Terminal Largs for Soldering Sizes of wire holes range from Sie to He in., for 50 to 400 ampere

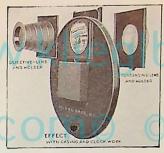
Pipe Clamps—For mounting spotlights and open-hox lights on pipes and battens. Adjustable to fit any size pipe from [4 to 1]3 in. Borderlight Cable Supports—Relieve the borderlight of all eable strams and prevent injury to cable. They take any size borderlight eable from 36 to 1% in. diameter; clamp grips a 1%-in. pipe support.

Resistances and Rheostats -- For spotlights and projectors. Sizes of fixed resistances: 125 volts, 10 to 200 nupperes; 250 volts, 10 to 100 amperes. Adjustable rheostats: 50 to 125 volts, 25 amperes; 50 to 250 volts, 25 amperes

Scenic Effects

Kliegl scenic effects are reproductions of natural phenomena and countless other forms of stage illusions.

A partial list of the many standard Kliegl effects that are carried in stock are described below. Special effects and illusionary devices, also effects for degree work, are made to order.



SCENIC EFFECTS PRODUCED WITH KLIEGL SCIOPTICONS**

No.	Description	Price	Code word
104		\$80.00	Deterge
105	Flowing water'	80 00	Detexes
122	Flowing water" Lightning, zigzag (3 brass cut-slides with lightning	00.00	Deter Aco
122	shutter).	30 00	Deturpo
129	Moonlight water ripple (mich traveling slides and	50.00	Decurpo
127	framing shutter)	60.00	Deuten
133	Moving clouds with rising or setting sun (18-in disc		17Cuton
135	and slide)		Derast
135	Moving fleecy clouds (*)		Develin
138	Moving storm clouds (*)		Devesci
151	Ocean waves (*)		Devium
154	Panorama, moving, country scene (*)		
1550	Panorama, moving, railroad (§)	120 00	Denotory
158	Rain effect (18-in gingle disc and slide)	85 00	Demannu
161	Rainbow effect (glass prisms)	130 00	Dewlan
164	Rising fire and smoke (§)	120 00	Dertini
170	Running water (*)	85 00	Dicheo
176	Sand storm effect (§).	115 00	Diables
	Snow effect (*)	75 00	Diacone
195	Waterfall (*)	85 00	Diakria
196	Water ripple (mica slides and framing shutter)		Dialima
1314	Aeroplanes, flying, with moving clouds (§)		Derancous
94	Dissolving colors (with attachment and shde car-	190.00	INCLUME ON A
/1	rier, 3 design-slides and color wheel with clock-		
	work for objective)	35 00	Desuturi
98	Falling flowers (*)		
103.4	Fire rockets (*)	70 00	Detenso
106	Flying angels (*)	120 00	Detmar
108	Flying butterflies (18-in. glass disc with clockwork).	120 00	Detorts
112	Flying ghosts and skeletons (*)	150.00	Detrudia
	Inferno, spectacular (§)	120.00	Detumui
68	River of souls (*)	120.00	Dhows
88	Twinkling moon, comical (hand movement).	20.00	Diadota

*18-in. single disc with clockwork. §18-in. double disc with clockwork. **Effect can be furnished with motor drive, instead of clock work, if de-sired—prices on application.

SCENIC EFFECTS PRODUCED WITH SPOTLIGHTS

			and the second s
1181	Iris shutter for fading-out effect (6-in. opening). Radium dance effect, produced with ultra-violet lens, filter glass and water shield. Radium liquid, visible only in ultra-violet light, per quart.	30.50	Finerra Atizara Atiplo
	per quarerrerrerrerrerrerrerrerrerrerrerrerrer	1 12.00	1 Milpio
S	CENIC EFFECTS PRODUCED WITH OPEN-	BOX L	IGHTS
50	Twilight effect (6 rolls of 7 colors).	\$40.00	Cento
e	CENIC EFFECTS PRODUCED ELECTROMEC		TATTY
			JALLI
233	Automatic lightning striker (with rheostat, switch		
	and 25-ft stage cable)	\$38.00	Emuled
202	Candle stick with lamp and battery	4.50	Emendabas
204	Chemical smoke (a combination of acid and air.		
	producing smoke, complete with air tank)		Emender
204A	One new charge for chemical smoke	2 75	Emendico
209	Electric smoke boxes (single unit)		Emetology
209A	Electric smoke powder for No. 209 (1 lb.)		Emetpale
214	Fireflics (in sets of 24)		Emilio
	Fireplaces-coal, gas, wood	H	Limato
231	Hand lightning (enclosed) with rheostat, switch	Conservation.	
	and 25-ft, stage cable		Empuse
226	Noise of wind effect (§)		Emparks
201	Torch, flaming (with lamp and battery)		Emenda

*Information and prices on application. §Other howling and whistling noises can be furnished.

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