

BERGER'S
Raydiant
TRADE MARK
SIDEWALK LIGHTS

THE BERGER MFG. CO.

1034 Washington Avenue,
PHILADELPHIA, PA.

BERGER'S
Radiant
TRADE MARK

S Y S T E M

(Patented)

of

Sidewalk and Vault Lights

for

Sidewalks, Skylights,
Vaults, Areaways,
Floors, Roofs, Etc.



T H E B E R G E R
Manufacturing Company

Main Offices and Manufacturing Plant
CANTON, OHIO

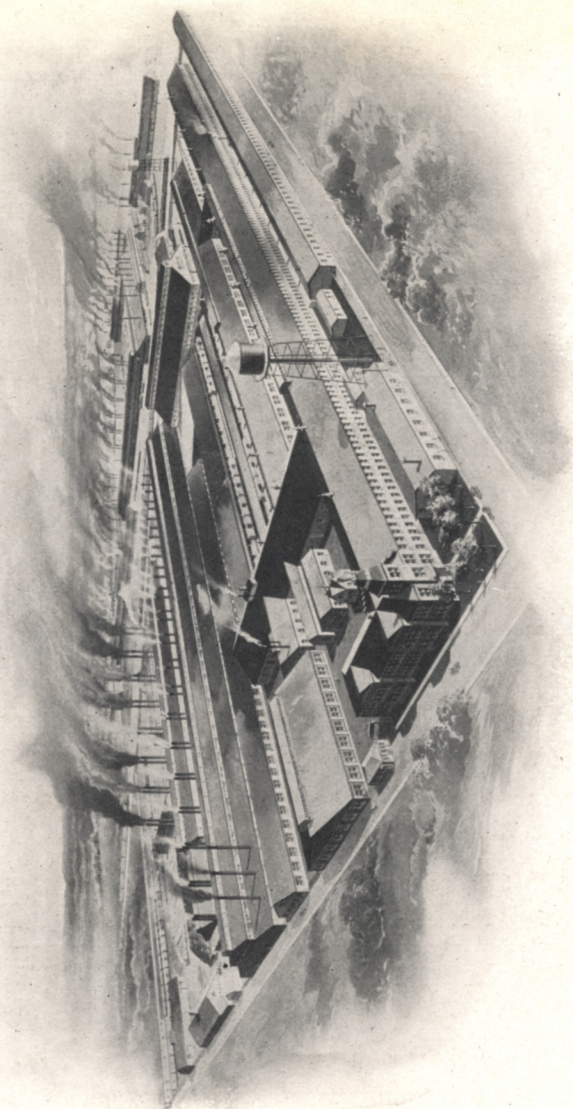
B R A N C H E S

NEW YORK
MINNEAPOLIS

PHILADELPHIA
BOSTON

CHICAGO
SAN FRANCISCO

ST. LOUIS
ATLANTA



Plant and General Offices of The Berger Manufacturing Co., Canton, Ohio.

FOREWORD

YOUR cellar and the space under the sidewalk are of too much value to throw away by failing to have them properly lighted:—this part of the building alone, when well constructed and lighted, quite often brings in more money than any other, on account of its location and particular adaptability for various purposes.

BERGER'S SYSTEM of Vault and Sidewalk lights presents an opportunity for high class use of basement space that is otherwise practically valueless. This is accomplished by the simple and effective lighting with *day-light* instead of by using artificial light, which is not only a continuous item of expense but requires constant attention as well.

With scientifically designed prisms, it is an easy matter to refract the daylight downward and back into the basement, making it almost as bright and cheerful as the storeroom above. The only cost or expense connected with this transformation and consequent increase in rental returns, is the first cost of installation; therefore, it is most important when making the improvement to use a construction that gives ample light, has been thoroughly tested out, and will give the greatest return on the investment. As best fulfilling all these requirements, we submit for your careful investigation BERGER'S *Radiant* Reinforced System of Vault and Sidewalk Lights.

USES OF VAULT AND SIDEWALK LIGHTS

Scope **T**HE wide field of application of Vault and Sidewalk Lights is too generally recognized to require extended mention or comment in this catalogue. Accordingly, we content ourselves by showing a number of installations we have made which illustrate this to some extent.

Uses The lights may be used in roofs, courts, or sidewalks, and the space under them for such purposes as salesrooms, accounting rooms, vaults, barber shops, restaurants, etc., etc.; in fact, for practically any purpose imaginable. Uses somewhat out of the ordinary, but showing particular adaptability, are exemplified by cuts of blacksmith shop, feed storage, and railroad tunnels.

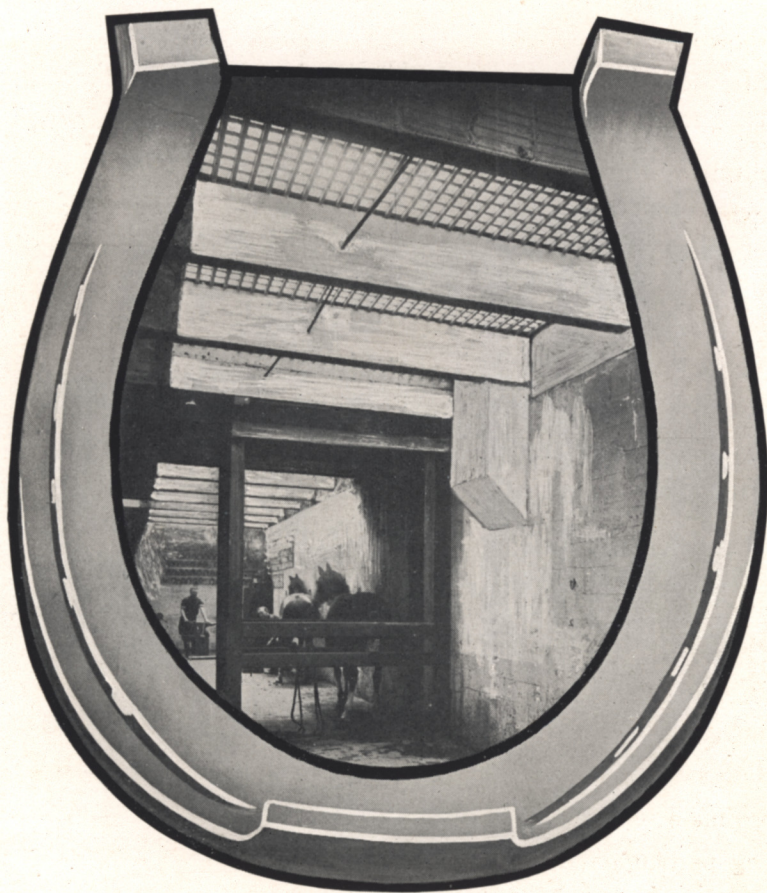


Barber Shop

BERGER'S
Raydiant

"Good Luck to All Who Use

BERGER'S
Raydiant Lights"



Livery Stable Above—
Blacksmith Shop Below

THE CONSTRUCTION IN GENERAL

Evolution



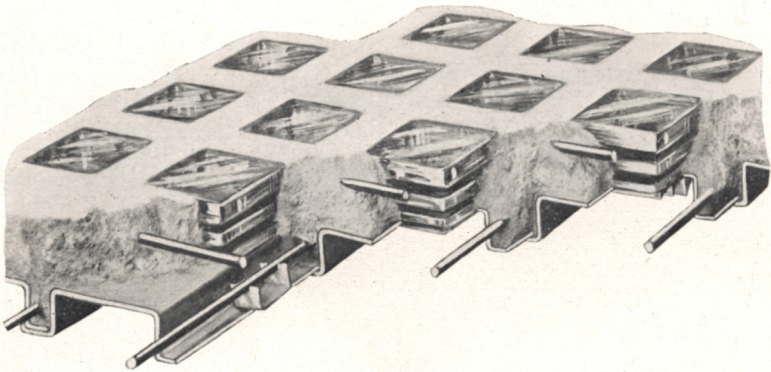
System is the evolution of many years of careful study and experience, resulting in a construction presenting points of merit and advantage that cannot well be overlooked.

Present Perfection

It has been brought to its present high degree of efficiency by successive improvements, bearing in mind at all times the vital points of ease, speed and economy of installation, abundance of light area, strength and durability.

Construction Detail

The construction consists of a series of permanent forms of heavy galvanized steel, glass scientifically designed and made



Details of Construction of *BERGER'S Raydiant* System.

of especially prepared material, steel reinforcing rods, and concrete, all combined as indicated by the detail cut of construction shown on this page.

Strength

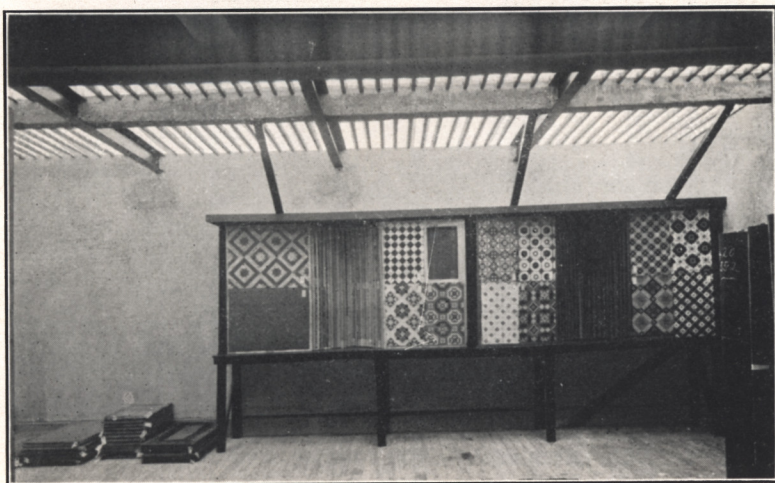
The heavy steel forms, four inches on center, interlock one with the other, forming a rigid base for receiving the glass and concrete, and not only serve the purpose of centering,



Building of
Vincent,
Scott & Co.,
Pittsburgh,
Pa.

BERGER'S *Raydiant* SIDEWALK
LIGHTS
Installed.

Street View.



Vincent,
Scott & Co.,
Building.

Note how
perfectly
colors and
patterns can
be discerned

View Under Sidewalk

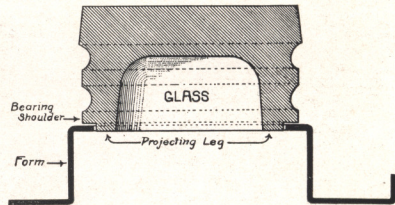
but at the same time brace and stiffen the concrete construction to a remarkable degree; therefore the completed job is twice strengthened, *first* by the *rods* and *second* by the *forms*, so that BERGER'S SIDEWALK LIGHTS *Raydiant* are doubly secure and strong.

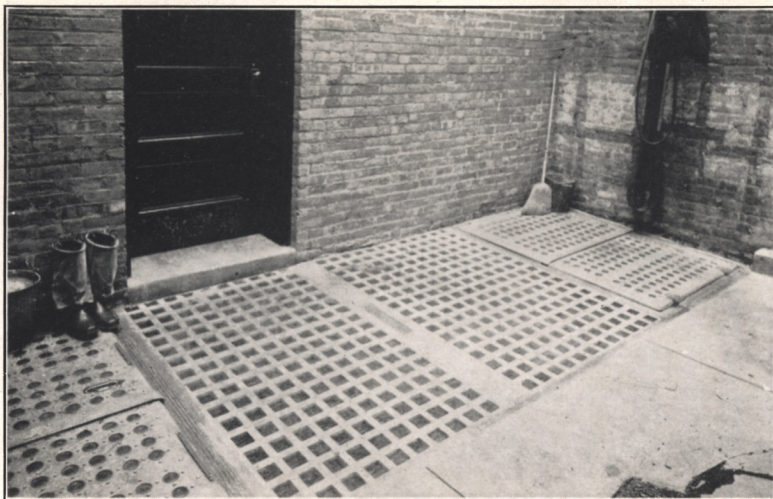
Forms

In addition to their strength, the steel forms make a neat, attractive surface underneath, which may be decorated without danger of becoming discolored by the action of the concrete, and the small ribs, four inches on centers on the underside of the construction, break up the surface just enough to make a strong effect, pleasing to the eye. These small ribs or beams, while adding to the attractiveness of the construction, do not in any way interfere with the diffusion or refraction of the light.

Glass Setting

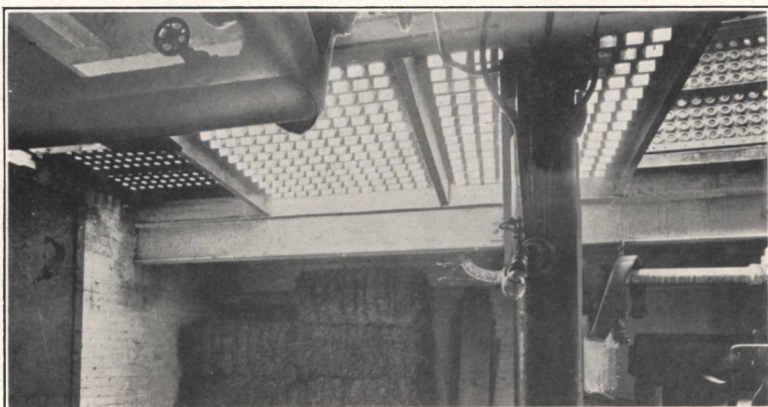
The lower part of the glass fits down into the openings in the forms and has a supporting shoulder which rests on top of the form and extends entirely around the bottom of the glass; hence each glass has bearing on all sides, thus equalizing and distributing the strain and preventing their being cracked and broken on account of unequal bearing. The vertical





View
Above

BERGER'S
Raydiant Vault Lights in Rear of Building.



View
Below

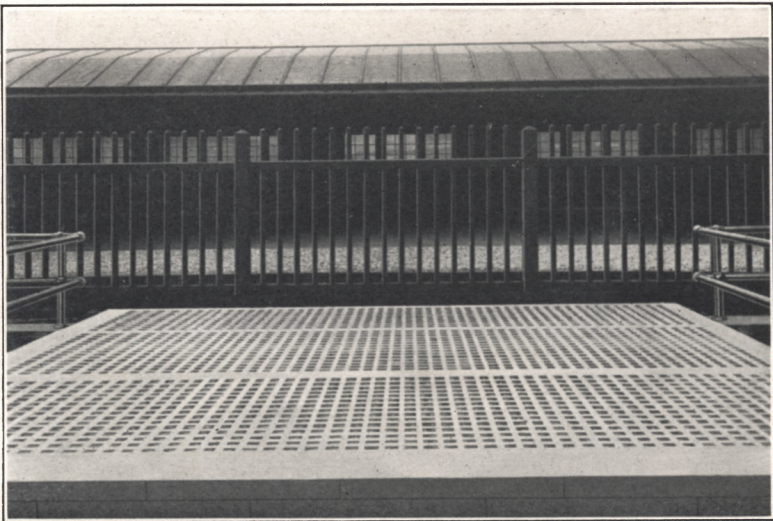
The Effect of Above Lights. Note the Difference in Volume of Light Admitted Through Berger's No. 7 Glass and Through Common Bull's Eye in Doors.

Alignment

By referring again to the cut of the construction detail (page 6) an idea may be obtained of the great amount of light area procurable; and also of the splendid alignment of glass that can be maintained, because each form containing a single row of glass may be shifted or moved at any time before the concrete is placed. Due to this fact, it is possible to complete the job with all glass laid true and straight both ways—a very important consideration.

Installation

After the bearings are in place, any mason or concrete finisher can lay the forms, drop in the glass, and put in the

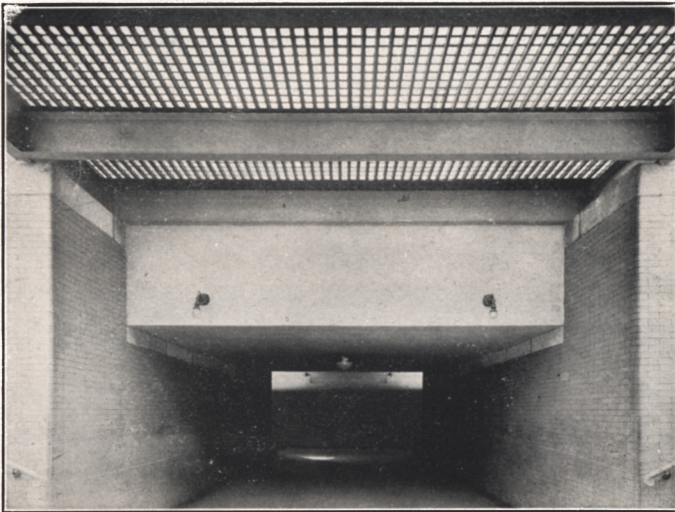


BERGER'S
Raydiant

Vault Lights over Tunnel, Penna. R. R., at East Pittsburgh, Pa.
View from Above.

concrete and reinforcing rods. The construction is very simple and the installation can be made easily and in much less time than that required for systems using false work or wooden centering.

The advantages secured from these special features of Conclusion
BERGER'S *Raydiant* System are readily apparent and their value will be thoroughly appreciated by practical men, because it so distinctly fulfills the essential requirements of a satisfactory job with maximum economy and efficiency.



BERGER'S *Raydiant* Vault Lights over Tunnel, Penna. R. R., at East Pittsburgh, Pa.
View from Below.

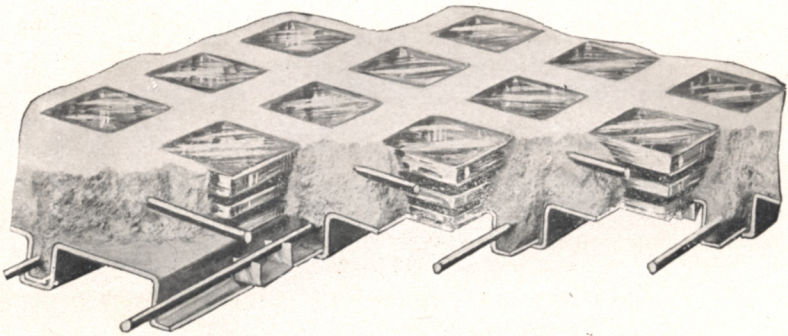
MATERIALS OF CONSTRUCTION.

Combination

A VERY good idea may be obtained of the assembled materials entering into this constructoin by noting the detail perspective of completed portion shown herewith.

Forms

The forms are made from special analysis open hearth steel, heavily galvanized, and of full number eighteen gauge



Details of Construction of *BERGER'S Raydiant* System.

stock. They are of four inches effective covering width and are furnished in depths of one, one and one-half, and two inches, according to the span and the load to be carried. See page 19 for table of safe loads.

Glass

This is one of the most important features entering into Vault and sidewalk Light construction as upon it depends the Life of the structure.

This fact has led us to make a great many costly experiments determined if possible to produce a glass that would

meet the trying conditions to which sidewalk glass are subjected. We are very glad to state that the results obtained have demonstrated that it is possible to produce a glass that will not crack-craze or crizzle. We are offering this new glass to the trade at no additional cost giving our customers all the benefit derived from the use of our

TANEX GLASS.

Every detail in its manufacture has been given the most exacting attention both in the selection of material and the elimination of all ingredients that might have a tendency to make the glass brittle. The construction of the moulds—the method of annealing as well as the time allowed to remain in the lehr—all these points have been taken into consideration in producing Tanex glass.

TANEX Glass are formed with grooves or water breaks around the four sides which engage with the concrete and prevent leaks. Tanex
Glass

Malleable Coating is used on all glass put out by the Berger Mfg. Co. This elastic material adheres to the sides of the tread portion of the Glasses or prisms making a cushion between the glass and cement which takes up the unequal coefficient between the cement and glass—thereby preventing crazing of the glass and leaks as well.

No. 5
Tanex



List Price per Hundred, \$12.00

Berger's No. 5 is the standard *plain, square* glass used for diffusing the light to space directly below and immediately adjacent thereto. Being square, it presents most light area and gives greatest diffusion, and is the most popular glass for general service. It is $2\frac{3}{4}$ inches square and $1\frac{1}{2}$ inches deep.

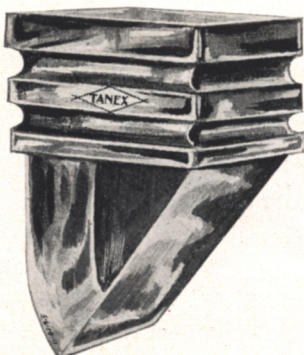
No. 6
Tanex



List Price per Hundred, \$12.00

Berger's No. 6 is the standard *plain, round* glass for the same purpose as No. 5, but being round it presents less light surface. It is $2\frac{3}{4}$ inches in diameter and $1\frac{1}{2}$ inches deep.

No. 7
and
No. 7a
Tanex

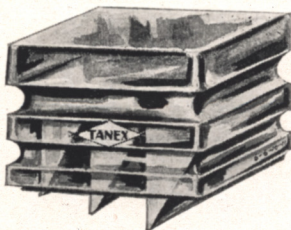


List Price per Hundred No. 7, \$25.00
List Price per Hundred No. 7a, \$21.50

Berger's No. 7 is the standard *square pendant prism* glass for refracting the light downward and back into *deep* basements. It is $2\frac{3}{4}$ inches square, is $1\frac{1}{2}$ inches deep, and has a pendant $2\frac{1}{2}$ inches long and $2\frac{1}{2}$ inches wide.

The No. 7a glass is identical with the No. 7 excepting that the pendant is $2\frac{1}{4}$ inches wide instead of $2\frac{1}{2}$ inches.

No. 8
Tanex



List Price per Hundred, \$15.00

Berger's No. 8 is the standard *square three point prism* glass for refracting the light downward and back into *shallow* basements. It is scientifically designed on the multi-prism principle with a series of three prisms set at different angles so as to give the best results.

Berger's No. 9 is the standard *plain, square glass*, for floor, roof and sky-light construction. It is $5\frac{1}{2}$ inches square and $1\frac{1}{2}$ inches deep;



No. 9
Tanex

List Price per Hundred, \$40.00

designed especially for the purposes mentioned where the loads are not so heavy and the light area must be of the greatest percentage possible. On pages 18 and 19 we present additional data concerning the use of this size of glass, which is particularly well adapted for floor light usage. This construction is built up on the Berger Steel Forms, glasses being $6\frac{1}{2}$ inches on center in each direction. By the use of this system the old style light-well and consequent dead space can be done away with and such space utilized, and at the same time satisfactory light obtained.

As reinforcing, it is possible to use any design of rods, Reinforcing the main point being that the construction should not be burdened with an excess of steel, which is not only entirely unnecessary but has a tendency to break up the construction and thereby weaken it. Rigorous tests indicate that $\frac{1}{4}$ inch rods are amply sufficient.

The concrete entering into this construction should be made of the very best Portland cement and clean, sharp sand. Details regarding this are given later in the directions for installing. (See pages 26 and 28.)



BERGER'S *Raydiant* SIDEWALK LIGHTS at Municipal Building, Seattle, Wash.

Clayton D. Williams, Architect

James Parke, Contractor

TABLE OF SAFE LOADS

for

BERGER'S *Raydiant* **SIDEWALK Lights**

SAFETY FACTOR OF FOUR

Load in pounds per square foot uniformly distributed.
Deflection in one sixty-fourths of an inch.

Clear Span in Feet and Inches	DEPTH OF FORMS					
	1 Inch		1½ Inch		2 Inch	
	Load	Defl.	Load	Defl.	Load	Defl.
3-0	910	2	1,060	2	1,200	1
3-6	620	3	710	3	800	2
4-0	450	3	530	3	580	3
4-6	340	4	415	4	450	4
5-0	265	5	335	5	365	4
5-6	215	5	282	5	305	5
6-0	175	6	240	6	260	6
6-6	150	7	205	7	225	6
7-0	125	9	175	8	195	7
7-6	110	10	157	9	175	8
8-0	95	12	140	10	157	8
8-6	82	14	125	11	142	9
9-0	75	18	115	12	132	10
9-6	70	23	110	13	125	12

(See page 19 for Table of Safe Loads for FLOOR Lights.)



Tests of FLOOR Light Slabs

View at
Total Load of
3680 lbs.
Equivalent to a load,
uniformly distributed,
of 4900 lbs.
Clear span 60 inches;
area 15 sq. ft.
Load per sq. ft. uni-
formly distributed, 328
lbs.
Deflection 3-64 inch.
Forms, $1\frac{1}{2}$ inches.
No. 18 gauge.
Rods, $\frac{1}{4}$ inch.
plain round.
Glass, Berger's
No. 9



View at Failure. Total Load per sq. ft., Uniformly Distributed, 860 lbs.
Maximum Deflection 15-64 Inches.

TABLE OF SAFE LOADS

for

BERGER'S
Raydiant FLOOR Lights

SAFETY FACTOR OF FOUR

Load in pounds per square foot uniformly distributed.
Deflection in one sixty-fourths of an inch.

Clear Span in Feet and Inches	DEPTH OF FORM		
	1 Inch	1½ Inch	2 Inch
	Load	Load	Load
3-0	270	600	800
3-6	210	465	615
4-0	165	345	450
4-6	130	270	340
5-0	100	220	275
5-6		180	230
6-0		150	190
6-6		130	170
7-0		115	135
7-6		100	120
8-0			100

NOTES—For the above safe loads, the maximum deflection is *in no case* greater than 1-16 inch.

(See page 17 for Table of Safe Loads for *SIDEWALK Lights*.)

HOW TO ORDER.

- First** SEND sketch or blue print, if possible, showing the layout of openings, if any, supporting walls, beams, or other supports on which the ends of the steel forms are to rest. Forms should have 2 inches to 3 inches end bearing, and may run either at right angles or parallel to the building line, although they are usually placed at right angles.
- Second** Forms are cut to fit, therefore be very accurate in your measurements, always stating whether opening is in the clear or whether you have allowed for end bearings of forms. If bevels are to be cut, give sufficient details and measurements.
- Third** Compare the load you must carry on the span in question with tables on page 17, for *Sidewalk Lights*, and page 19, for *Floor Lights*, and from same determine the depth of forms to specify. The depth of forms regulates the depth of bearings below finished surface, as the glasses are $1\frac{1}{2}$ inches deep above forms in all cases.
- Fourth** State what glass you desire, being careful to make the selection according to your requirements.
- Fifth** Mention any and all conditions peculiar to the job in question.

ESTIMATING

Dimens'ns:— Figure over all dimensions which must include bearing space.

Weights:— The weights given in this list are shipping weights.

Fgt. Rates:— In the Official Classification, rates on forms and glass are the same; that is, third class less car load and fifth class car load. In the Western Classification the freight rates are the same on forms and glass; that is, fourth class in less car load and fifth class in car load. In the Southern Classification the rates on glass are third class in less car load and fifth class car load. The rates on forms are sixth class less car load and a special iron rate in car load lots. The rates on reinforcing rods, sidewalk doors and accessories take the same classification as forms.



PRICE LIST SIDEWALK LIGHTS

Forms Only

For Glass No.	Size of Forms		Blank Unpunched		Punched	
	Depth	Gauge	Wt. per 100 sq. ft.	List per sq. ft.	Wt. per 100 sq. ft.	List per sq. ft.
5, 8, 7 or 7a	1	18	415	\$0.50	325	\$0.60
"	1½	"	480	.60	390	.70
"	2	"	540	.70	450	.80
"	1	20	320	.40	250	.50
"	1½	"	370	.50	300	.60
"	2	"	420	.60	350	.70
6	1	18	435	\$0.50	340	\$0.60
"	1½	"	500	.60	405	.70
"	2	"	560	.70	465	.80
"	1	20	335	.40	260	.50
"	1½	"	385	.50	310	.60
"	2	"	435	.60	360	.70
9	1	18	270	\$0.50	240	\$0.60
"	1½	"	310	.60	280	.70
"	2	"	350	.70	320	.80
"	1	20	225	.40	200	.50
"	1½	"	255	.50	230	.60
"	2	"	275	.60	250	.70

SIDEWALK LIGHTS

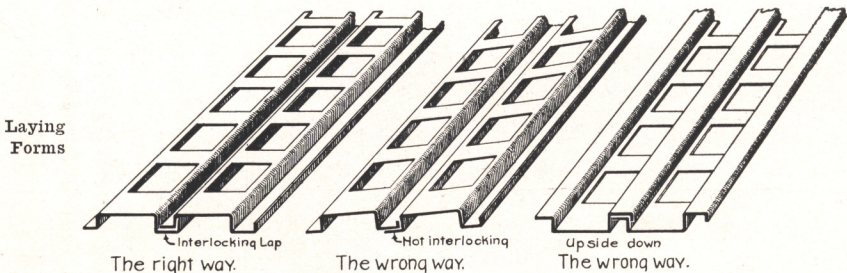
Including Forms, Rods and Glass

FCRMS		SHIPPING WEIGHTS Per 100 Square Feet Covering				GLASS		List Price
Depth	Gauge	Forms	Rods	Glass	Total	No.	Description	Per Sq. ft.
1	18	325	100	750	1175	5	Square top.	\$1 50
1½	"	390	"	"	1240	"	2¾" x 2¾"	1 60
2	"	450	"	"	1300	"	Plain glass	1 70
1	20	250	"	"	1100	"	for diffusion	1 40
1½	"	300	"	"	1150	"	of light.	1 50
2	"	350	"	"	1200	"	"	1 60
1	18	340	100	675	1115	6	Round top.	\$1 40
1½	"	405	"	"	1180	"	2¾" diam.	1 50
2	"	465	"	"	1240	"	Plain glass	1 60
1	20	260	"	"	1035	"	for diffusion	1 30
1½	"	310	"	"	1085	"	of light.	1 40
2	"	360	"	"	1135	"	"	1 50
1	18	325	100	950	1375	8	Square top.	\$1 80
1½	"	390	"	"	1440	"	2¾" x 2¾"	1 90
2	"	450	"	"	1500	"	3 part prism	2 00
1	20	250	"	"	1300	"	for shallow	1 70
1½	"	300	"	"	1350	"	refraction.	1 80
2	"	350	"	"	1400	"	"	1 90
1	18	325	100	1600	2025	7	Square top.	\$2 50
1½	"	390	"	"	2090	"	2¾" x 2¾"	2 60
2	"	450	"	"	2150	"	Pendant	2 70
1	20	250	"	"	1950	"	2½" wide	2 40
1½	"	300	"	"	2000	"	For deep	2 50
2	"	350	"	"	2050	"	refraction.	2 60
1	18	325	100	1400	1825	7a	Square top.	\$2 25
1½	"	390	"	"	1890	"	2¾" x 2¾"	2 35
2	"	450	"	"	1950	"	Pendant	2 45
1	20	250	"	"	1750	"	2¼" wide	2 15
1½	"	300	"	"	1800	"	For deep	2 25
2	"	350	"	"	1850	"	refraction.	2 35
1	18	240	67	950	1257	9	Square top.	\$1 70
1½	"	280	"	"	1297	"	5½" x 5½"	1 80
2	"	320	"	"	1337	"	Plain glass	1 90
1	20	200	"	"	1217	"	for floor ser-	1 60
1½	"	230	"	"	1247	"	vice. Diffu-	1 70
2	"	250	"	"	1267	"	sion only.	1 80

INSTALLATION IN DETAIL.

Grade GREAT care should be taken in having the bearings level and true and set at the proper grade or pitch for sidewalk work. This grade should be not less than $\frac{3}{8}$ inch to the foot, and had better be $\frac{1}{2}$ inch—the usual specification.

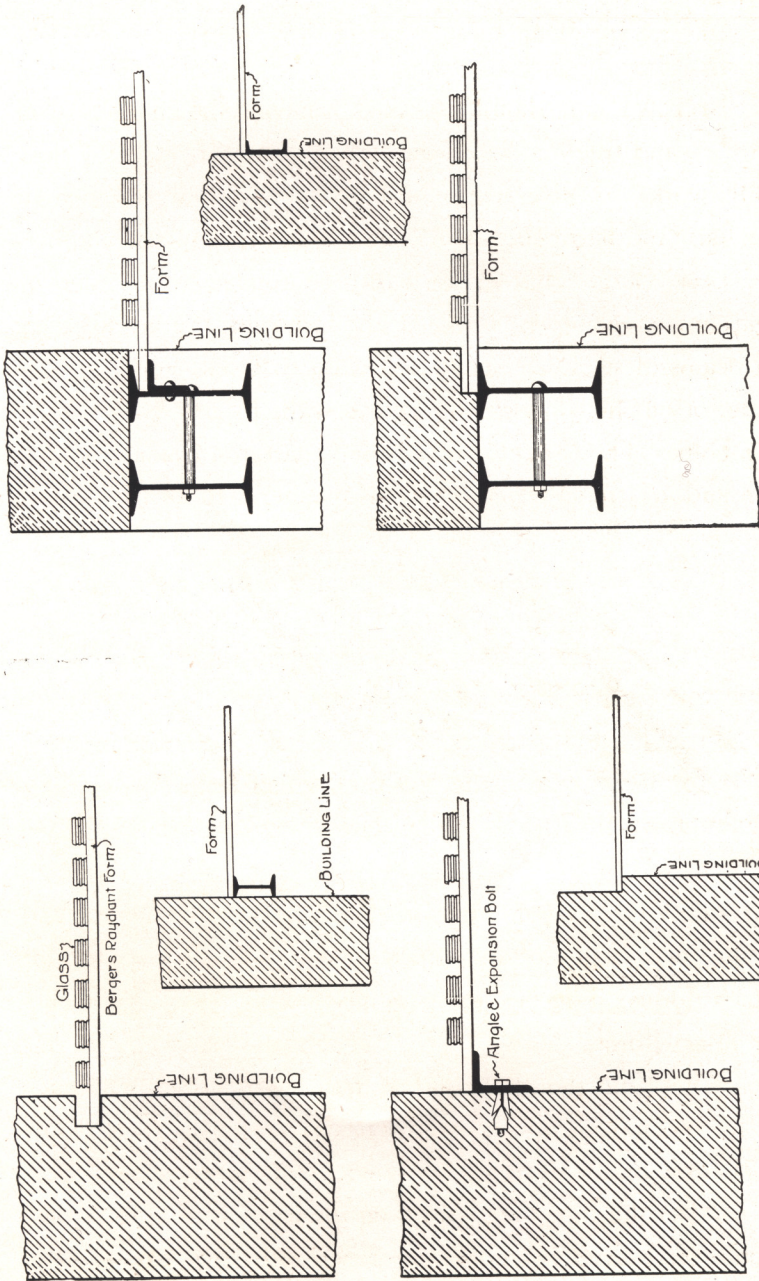
Beams The Berger System can easily be applied to any kind of bearings. (See cut, page 23.) The forms may be laid directly on beams of steel or concrete, on walls of brick, stone, or concrete, or on shelf angles attached to walls by means of expansion bolts. They are also adaptable to cast iron frame construction and are frequently used in this manner. In all cases bear-



ings should be set below the finished surface a distance equal to the total depth of the construction; i. e., $2\frac{1}{2}$ inches for 1-inch forms, 3 inches for $1\frac{1}{2}$ -inch forms, and $3\frac{1}{2}$ inches for 2-inch forms.

The forms should be laid so that they *interlock* with each other, and having the holes on top and the beam parts below and resting on the bearings, as shown by cut on this page.

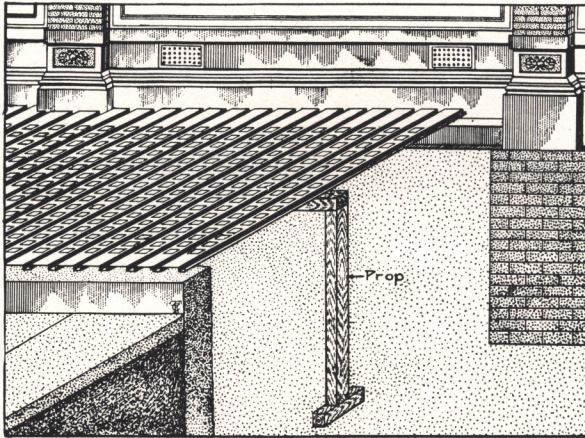
Bracing After the forms are placed on the bearings properly, they should be braced or supported underneath (see cut on page 24) until the concrete is in and thoroughly set. This is to pre-



Various Methods of Providing Bearings at Building Line for ~~Glass~~ ^{Berger's Raydiant} Forms

vent any movement taking place during installation of concrete, and will keep the forms from any slight deflection which would

Shoring

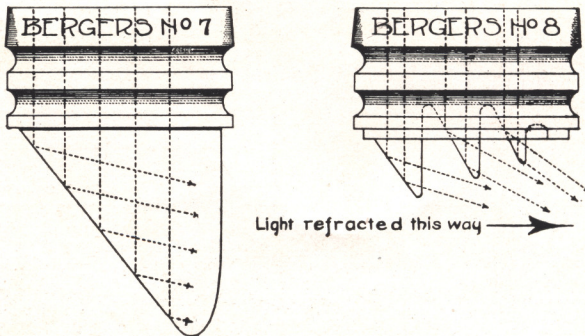


Method of Supporting Forms Until Concrete is Set

admit the thin concrete underneath the interlocking lap and thus cause an unevenly finished top surface.

Laying
Glass

In laying the glass, numbers 5, 6 and 9 may be inserted in the forms without regard to the direction from the building line, but numbers 7 and 8, being refracting glass, should always



be placed so that the vertical leg of the pendant, or pendants, is toward the direction in which the light is to be thrown.



Dime
Savings Bank
Brooklyn,
N. Y.

Architects,
Mowbray &
Uffinger

Contractors,
Jno. Thatcher
& Son



BERGER'S
Raydiant SIDEWALK
LIGHTS

in
Dime
Savings
Bank,
Brooklyn,
N. Y.

View from
Below

CONCRETING.

Bridging

AFTER the forms have been placed and braced as shown, and the glass inserted properly, the job is ready for the concrete. This should be applied from bridging, being careful to keep off the construction at all times while same is being concreted and until thoroughly set.

Mixture

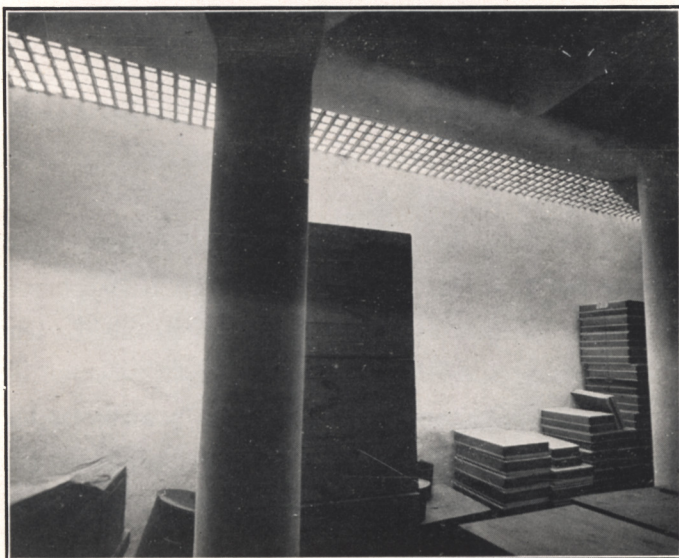
The concrete should be made up of one part good Portland Cement to two parts clean, sharp sand. This should be thoroughly mixed dry, then enough water added, and the whole thoroughly worked so as to make it the consistency of thick mortar.

Application

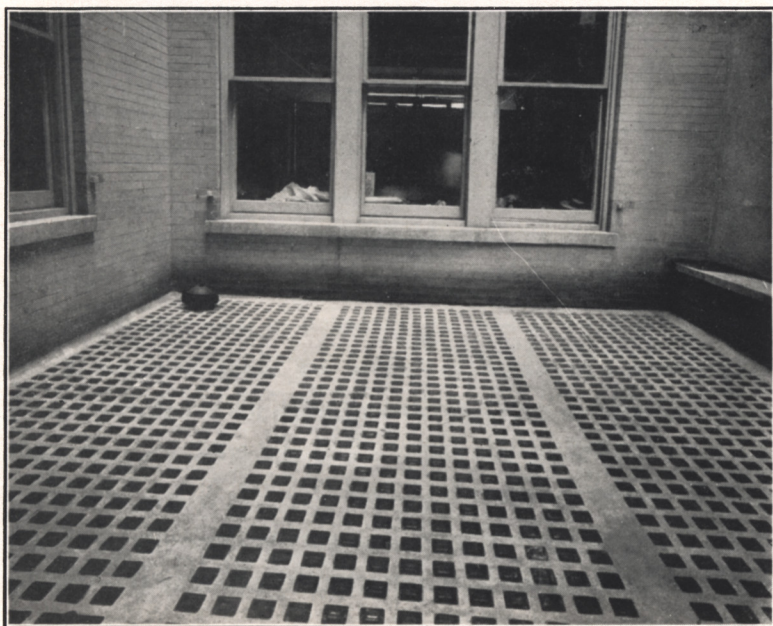
The concrete should be placed at different points, after which a small straight-edge should be drawn over the surface of the glass until all spaces have been thoroughly filled level with the tops of the glass. Then throw over the surface a mixture made of one part of Portland Cement to two parts of dry sand which has been passed through a $\frac{1}{8}$ -inch sieve. This mixture is called "dry stuff" and its purpose is to take up the surplus water which rises to the top and thereby facilitate the setting of the concrete. Next, after allowing the dry stuff to stand a few moments, the straight-edge should be used with a circular movement to rake off all materials flush with the top of the glass, as before. After going over the surface in this manner, more dry stuff should be thrown over the top and allowed to stand a few minutes longer than the first application. Then

Rubbing

begin to rub the surface with excelsior or navy oakum, all the while throwing on a little more dry stuff. A circular movement should be used in rubbing, being careful not to bear too heavily,



A Basement View Showing Storage.



Application of *BERGER'S*
Raydiant Vault Lights to Courts.

lest the concrete be displaced and made lower than the top surface of the glass. This rubbing should be continued until the surface is uniform and even, and setting of concrete well advanced.

Reinforcing

The reinforcing bars should be put into place at the time of placing the concrete. Independent loose bars are preferable. Those that run the length of the forms are the tension rods and should be about $\frac{1}{4}$ of an inch in diameter, of either plain or deformed sections, and placed in position by means of the rod holder shown on page 31, before concrete is put in. The other bars that run between the glass at right angles to the length of the form may be of 3-16-inch diameter, and should be used between every glass. These cross rods should be kept near the top surface, being placed immediately after the concrete has been leveled off with the top of the glass, pressing them down so that they will be about $\frac{3}{8}$ of an inch below the top. In this way they prevent cracking which might otherwise result from expansion and contraction, or from any settling in bearings or other parts of the construction.

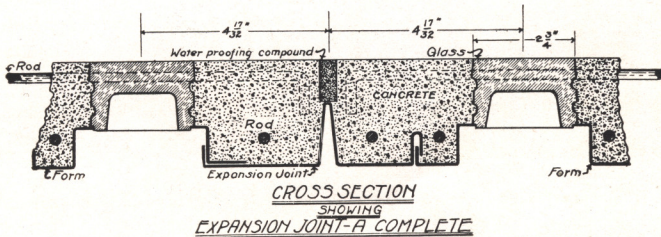
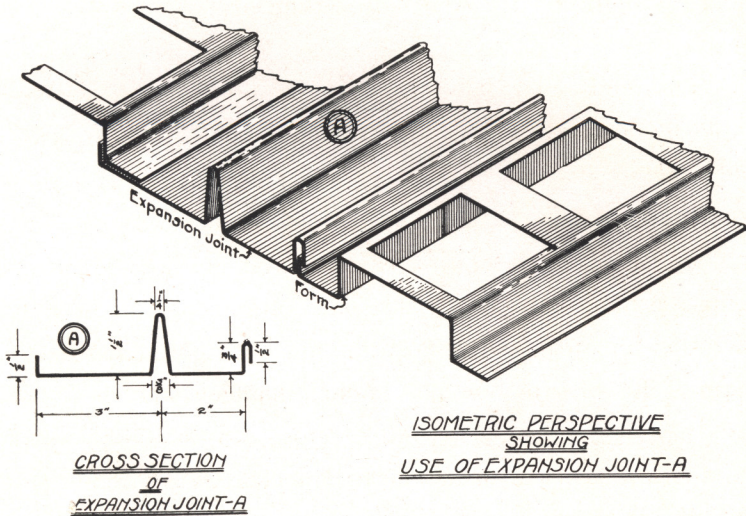
Expansion
Joints

Expansion joints should be provided at proper intervals by using blank forms and cutting down in the concrete over them in the same manner as employed in solid concrete work. (See pages 29 and 30.) There are many ideas as to the proper spacing of expansion joints, but a good rule to be governed by is to not include between joints an area greatly exceeding sixty square feet.

Finish

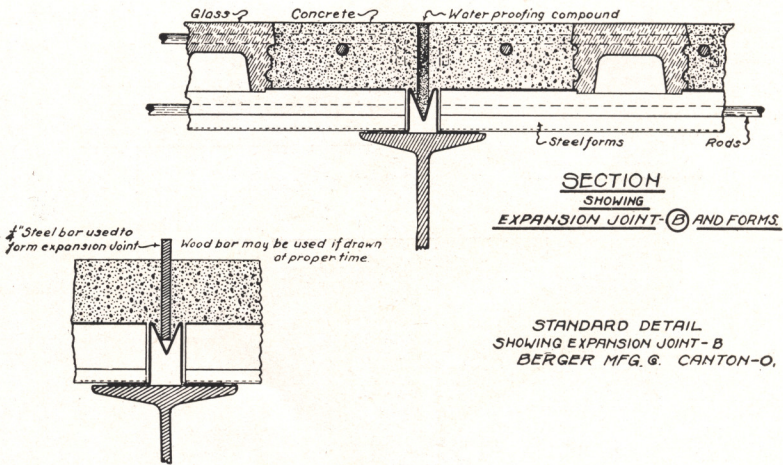
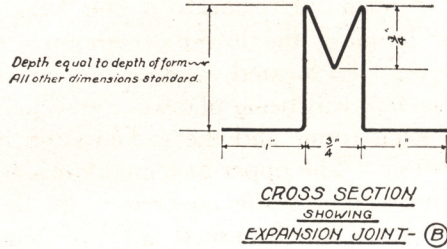
For the borders surrounding the glass surface, it is best to use a finisher's steel trowel so as to give this part of the work a good smooth finish.

EXPANSION JOINT "A"



Expansion Joint "A" is the expansion joint provided for those parallel to the direction of the forms. By its use a stiffening beam of reinforced concrete is obtained wherever the expansion joint is placed. These joints should be provided at proper intervals, so spacing them that the space included between joints is *not* to exceed sixty square feet. A less area is preferable.

EXPANSION JOINT "B"



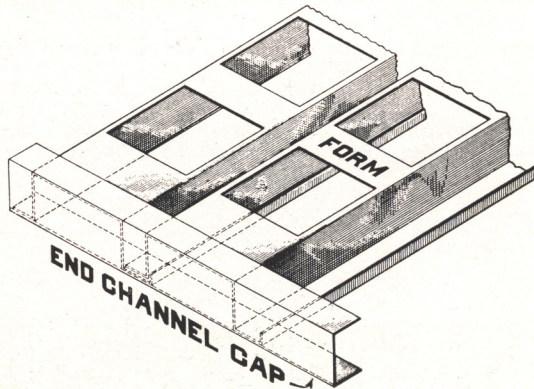
Expansion Joint "B" is the expansion joint provided for placing at the ends of forms. It is so made as to provide ample water break and yet is flexible enough to allow for expansion and contraction.

Both Joints "A" and "B" are furnished with all ^{BERGER'S}*Raydiant* shipments without extra charge, and are positive insurance against leaks and attendant trouble.

END CHANNEL CAPS

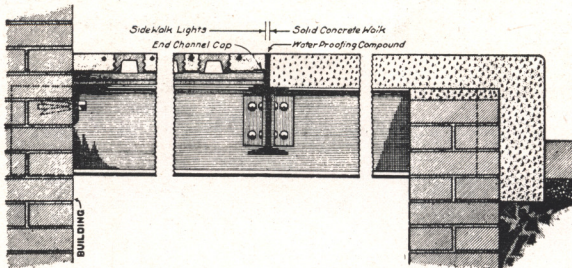
THE End Channel Cap is used for covering the open ends of the forms when the forms are placed against work that has previously been installed, or when for any reason it is desired to cover the ends of forms. This is desirable in connection with Expansion Joints, etc.

The End Channel Caps should be placed over the ends of the forms and should be held in position by prick-punching



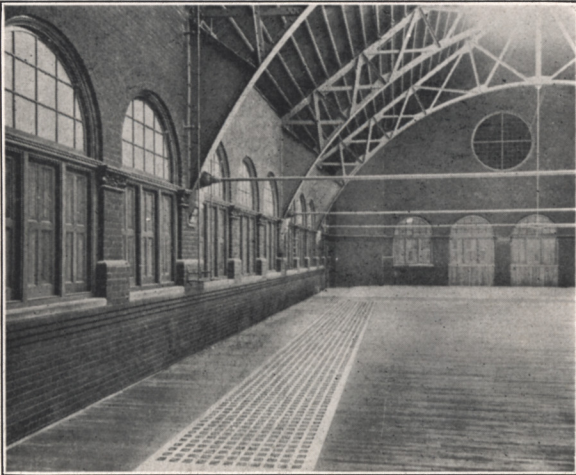
through the top flange of the End Channel Cap and every other form. This will not only serve to hold the forms in line, but will also improve the bearing arrangement.

Cuts shown on this page illustrate method of using the Cap and also its use in connection with an Expansion Joint at the end of the forms and adjoining old work that has previously been installed.



SPECIFICATION

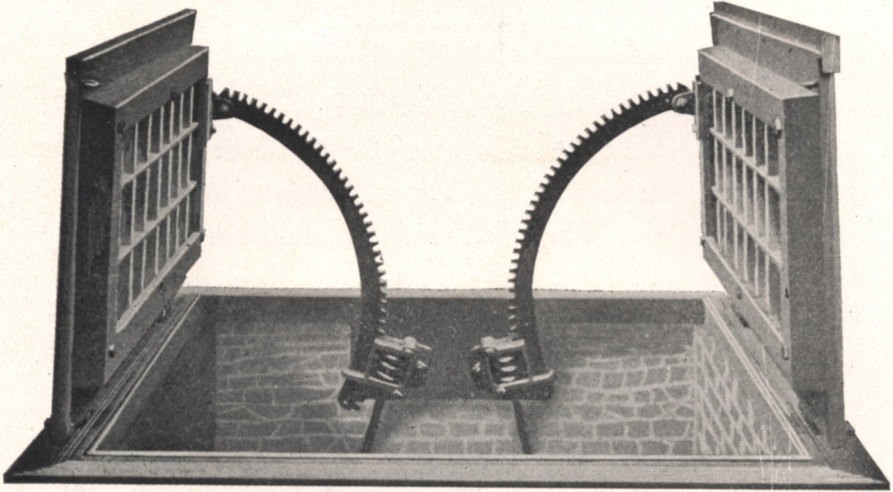
A GOOD specification for sidewalk lights reads as follows:
Sidewalk lights shall be of the Raydiant Reinforced System manufactured by The Berger Manufacturing Company of Canton, Ohio. They shall consist of permanent galvanized steel forms, deep, Berger's No. . . . glass, and 1/4-inch plain reinforcing rods concreted together with a first-class Portland Cement concrete, of one part cement and two parts clean, sharp sand. The work shall be completed in a workmanlike and satisfactory manner and substantially as per manufacturer's directions.



BERGER'S
Raydiant Floor Lights in 13th Regiment Armory, Brooklyn, N. Y.
Chas. Werner, Architect Geo. Stanton, Builder

ACCESSORIES

BERGER'S NUMBER ONE DOOR—ILLUMINATED



Doors Opened with Ratchet Attachment

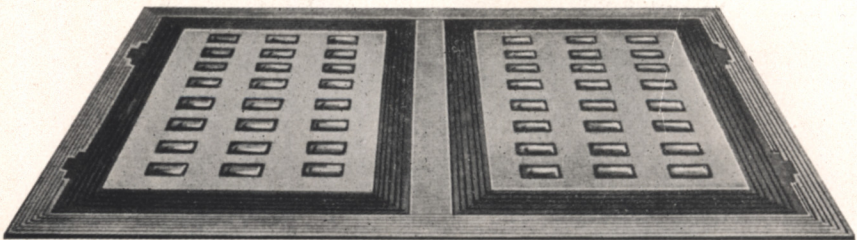
This door is shipped from the factory ready to be set into place. After setting the door frame and doors, the glasses (which are of the same size and character as the glasses used in the Raydiant System) are then placed in position and concreted the same as the sidewalk lights.

The ratchet attachment always should be used in connection with the illuminated door because of the weight and the necessity of avoiding shocks which might otherwise occur by dropping the door.

In ordering, the clear opening should be stated and the side on which the doors are desired to be hinged.

Special sizes quoted on application.

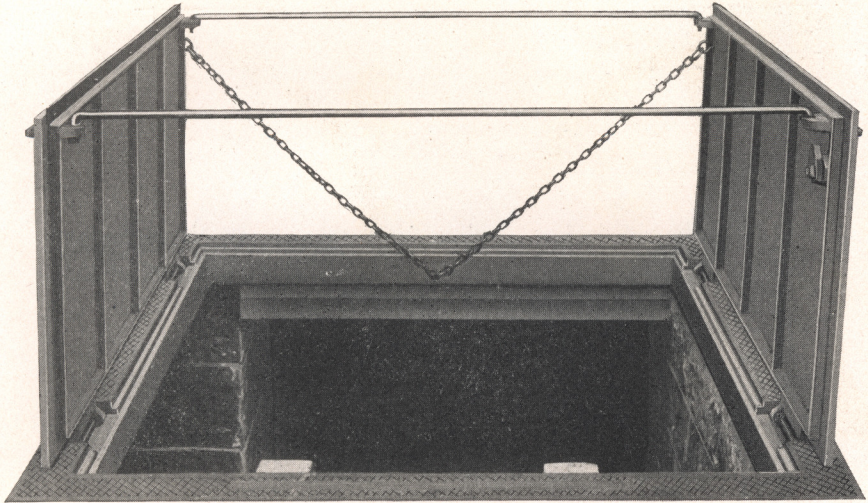
Note.—Flange of door frame is $4\frac{1}{2}$ " wide.
Frame and door frames cast iron.



Doors Closed, Set Flush with Sidewalk
Concrete Surface Between Glasses.

ACCESSORIES

BERGER'S NUMBER ONE DOOR—NOT ILLUMINATED



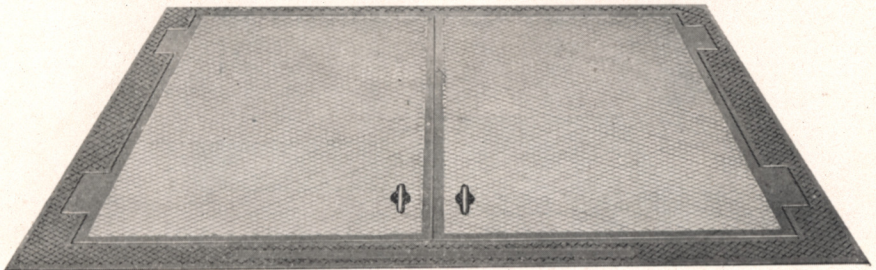
No. 1
Door

Doors Open—Stay Chains, Guard Rods, Padlock, etc.

This door is shipped complete from the factory ready to be placed in position, and is furnished with door plates of wrought steel. For the larger sizes the ratchet attachment should be included; otherwise the ratchet attachment is not usually shipped with the non-illuminated doors. In ordering, state clear opening and the side on which doors are to be hinged.

Special sizes quoted on application.

Note.—Flange of door frame is $4\frac{1}{2}$ " wide.
Frame cast iron. Doors cast iron or wrought steel.

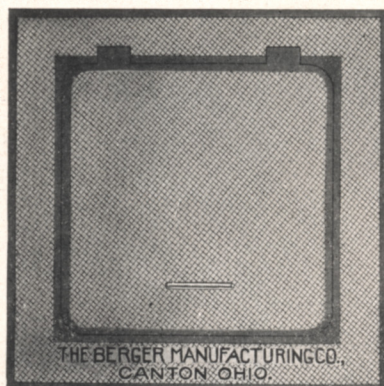


Doors Closed—Set Flush with Sidewalk.

PRICE LIST OF DOORS—BERGER'S NO. 1 VAULT DOORS

Clear Opening in Inches	Hinge on Side Length	SHIPPING WEIGHT IN LBS.				PRICE LIST	
		Cast Iron Doors Complete	Wrought Iron Doors Complete	No. Glass	Illuminated Doors Complete	Cast or Wrought Iron	Illuminated
30 x 42	30	460	340	36	490	\$ 72 00	\$ 75 00
48	"	500	360	48	550	77 00	81 00
54	"	550	400	54	600	87 00	91 00
33 x 58	33	620	440	84	700	92 00	98 00
72	"	720	500	98	820	101 00	109 00
36 x 36	36	470	340	48	510	72 00	76 00
44	"	550	400	64	620	82 00	87 00
48	"	590	420	64	660	87 00	92 00
60	"	610	450	96	710	96 00	104 00
72	"	770	530	98	870	106 00	114 00
40 x 48	40	610	430	64	680	92 00	97 00
54	"	700	470	80	780	96 00	103 00
60	"	720	500	96	820	101 00	109 00
72	"	840	570	112	950	111 00	120 00
43 x 41	43	570	400	54	630	87 00	91 00
44 x 36	44	540	380	60	600	82 00	87 00
44	"	610	430	80	690	87 00	93 00
48	"	650	460	72	720	92 00	97 00
60	"	770	530	108	880	106 00	115 00
72	"	890	600	128	1,020	116 00	126 00
48 x 30	48	510	370	60	570	77 00	82 00
36	"	570	410	60	630	87 00	92 00
48	"	700	480	80	780	101 00	108 00
54	"	740	500	100	840	106 00	114 00
60	"	830	560	120	960	111 00	120 00
66	"	890	600	140	1,030	116 00	127 00
72	"	950	630	140	1,090	120 00	131 00
50 x 38	50	750	500	66	820	92 00	97 00
52 x 45	52	700	490	88	790	101 00	108 00
52	"	780	530	110	890	106 00	115 00
60	"	870	580	132	1,000	116 00	126 00
72	"	1,000	670	154	1,160	125 00	137 00
54 x 36	54	530	340	72	600	92 00	97 00
48	"	820	550	100	920	106 00	114 00
56 x 26	56	530	380	60	590	72 00	77 00
60 x 36	60	680	470	78	760	96 00	103 00
48	"	830	560	112	940	111 00	120 00
64 x 52	64	930	620	140	1,070	116 00	127 00
65 x 59	65	1,030	680	160	1,200	130 00	143 00
66 x 36	66	740	510	90	830	101 00	108 00
48	"	900	600	112	1,010	116 00	125 00
54	"	980	650	150	1,130	120 00	132 00
70 x 52	70	1,000	670	150	1,150	125 00	137 00
72 x 44	72	900	610	128	1,030	116 00	126 00
48	"	960	640	160	1,120	120 00	133 00
60	"	1,110	720	192	1,310	135 00	150 00
76 x 42	76	920	620	144	1,060	120 00	132 00

ACCESSORIES



Coal Hole Door, Closed

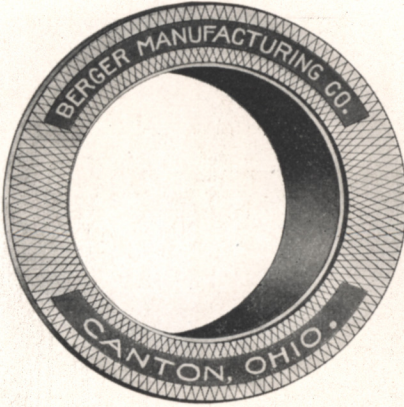
PRICE LIST COAL HOLE FRAMES AND DOORS (Flush Hinge)

Inside Clear Measure- ment, Inches	Hinge Side	WITH CHECKERED TOP		WITH ILLUMINATED TOP		
		Weight	List	No. Glass	Weight	List
20 x 20	20	175	\$18 00	54	225	\$26 00
24 x 18	24	200	24 00	64	260	32 00
24 x 24	24	225	32 00	86	300	40 00
30 x 24	30	275	40 00	127	350	48 00
30 x 30	30	310	50 00	153	390	60 00
36 x 30	36	350	60 00	179	425	72 00

Note.—Weights given represent approximate shipping weight.

Ventilated Covers 24 x 24 and smaller, at same price as Solid Covers. Larger sizes of Ventilated Covers must be fitted with center grating of wrought iron at special price.

ACCESSORIES



Coal Hole Ring—14, 16, 18, 20, 24, 30 and 36 inches



Coal Hole Cover, Plain



Coal Hole Top (Illuminated)



Ventilated Top

PRICE LIST COAL HOLE RINGS AND COVERS

Size Clear Opening	Thimble		Solid Top Only		Ventilated Top Only		Illuminated Top Only			THIMBLE WITH TOP					
										Solid		Ventilated		Illuminated	
	Wt.	List	Wt.	List	Wt.	List	No. Class	Wt.	List	Wt.	List	Wt.	List	Wt.	List
14"	35	\$2.80	18	\$2.00	15	\$1.80	27 32	\$6.00	53	\$4.80	50	\$4.60	67	\$8.80	
16"	50	3.50	26	3.00	20	2.40	33 36	7.00	76	6.50	70	5.90	86	10.50	
18"	53	4.00	30	4.00	25	3.40	41 40	10.00	83	8.00	78	7.40	93	14.00	
20"	62	5.00	50	5.00	32	3.80	45 57	12.00	112	10.00	94	8.80	119	17.00	
24"	65	7.00	63	8.00	37	5.00	69 80	15.00	128	15.00	102	12.00	145	23.00	
30"	75	9.00	93	9.50	62	7.50	86 116	24.00	168	18.50	137	16.50	191	33.00	
36"	95	11.00	120	12.00	83	10.00	121 148	32.00	215	23.00	178	21.00	243	43.00	

Sidewalk Gutter Box—Prices on application.
Grating—Prices on application.
Street Crossing Plate—Prices on application.



Merchants' Association Building
Schwartz & Gross, Architects

Brodie-Adler-Koch Building
Samuel Sass, Architect
Brodie-Adler-Koch Building Co., Builders

Tichenor-Grand Building
Hill & Stout Co., Architects
Thompson-Starrett Co., Contractors

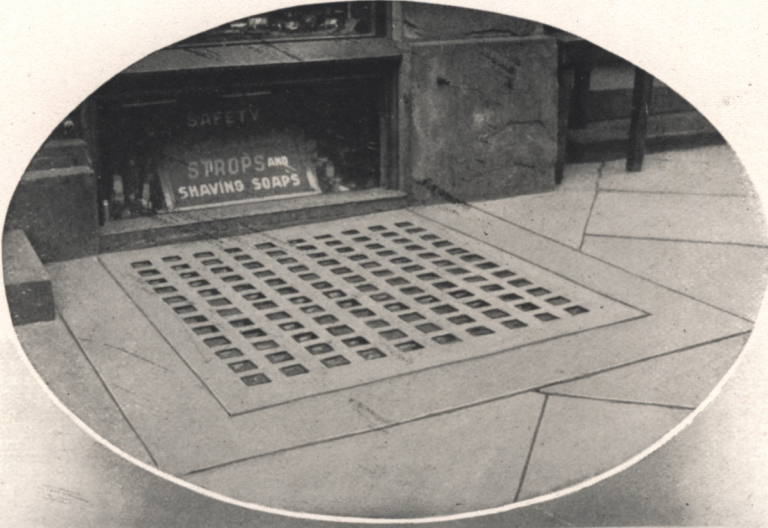
SOME INSTALLATIONS OF *BERGER'S Raydiant* SIDEWALK LIGHTS IN NEW YORK CITY



BERGER'S
Raydiant SIDEWALK
LIGHTS at Mint Arcade, Philadelphia, Pa.
Architects and Builders, Wm. Steele & Sons Co.



BERGER'S *Raydiant* SIDEWALK LIGHTS at Commercial Building, Pittsburgh, Pa.

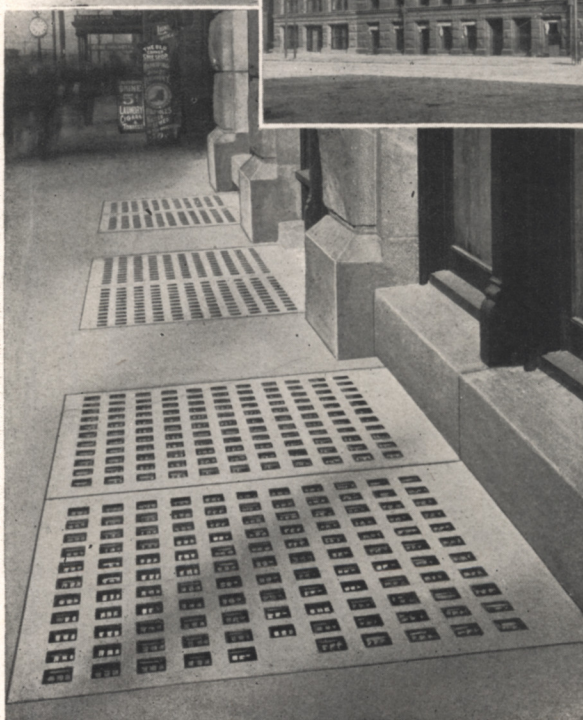


Store
Front
Holyoke,
Mass.



Draper Hotel, Northampton, Mass.

INSTALLATIONS OF *BERGER'S Radiant* SIDEWALK LIGHTS

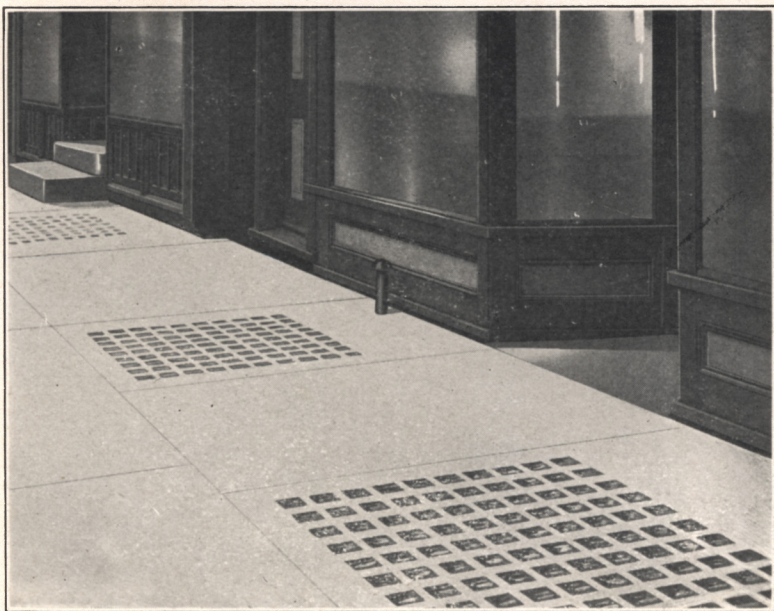


J. E. Dietrick,
Architect

Parsons & Kiene
Gen. Contractors

Merchants National Bank Building, Omaha

Raydiant Sidewalk Lights Installed



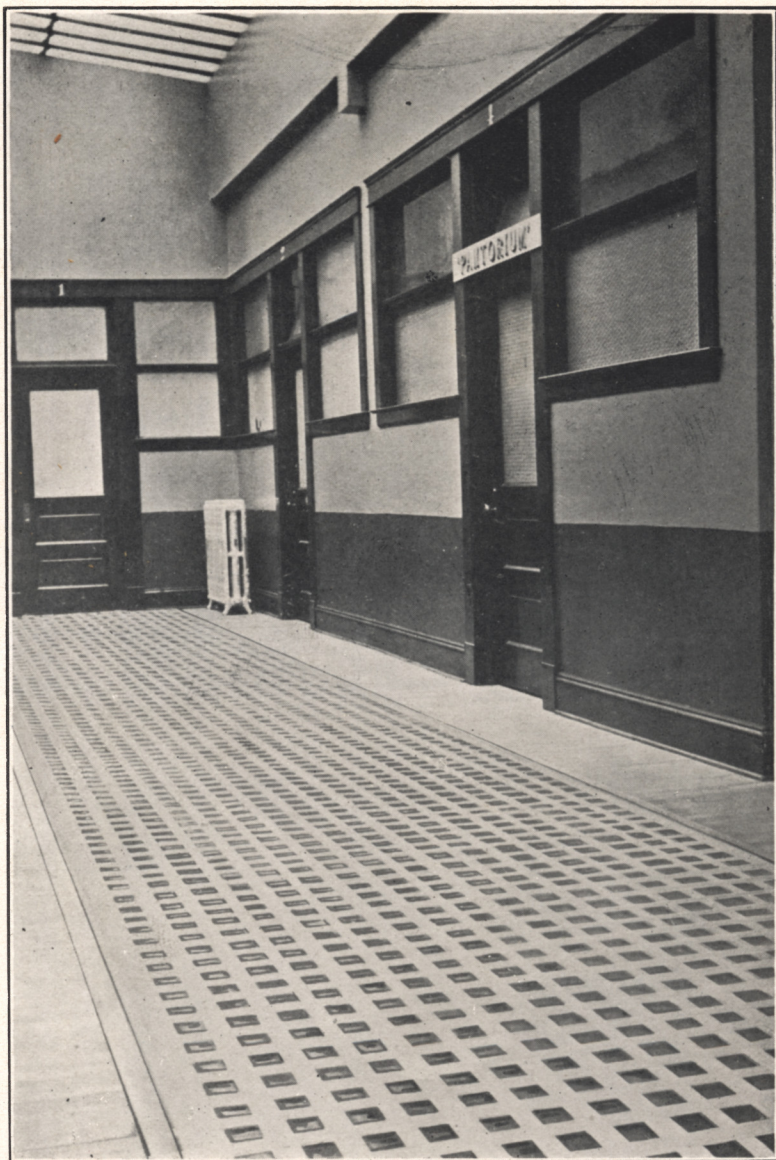
Vogel Building, Milwaukee, Wis.



Pokriefke Building, Milwaukee, Wis.

SOME INSTALLATIONS OF *Raydiant* BERGER'S SIDEWALK LIGHTS

Jacob Jacobi, Architect



BERGER'S
Raydiant

Floor Lights in Euclid Realty Building, Cleveland, Ohio.

Note Adaptability for Floor Use Under Skylights Above

H. T. Jeffries, Architect

John Schmeller, General Contractor



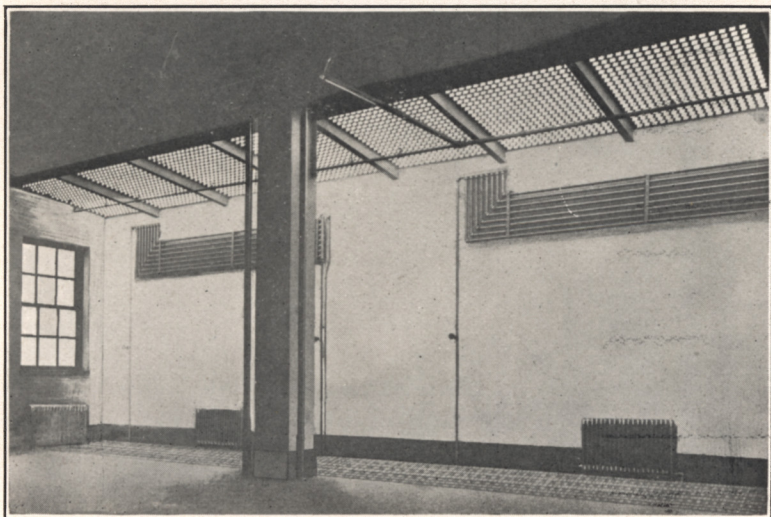
Spero Building, New York City

BERGER'S
Raydiant

Sidewalk
LIGHTS Installed

Robert D. Kohn, Architect

C. A. Cowen, General Contractor



BERGER'S
Raydiant

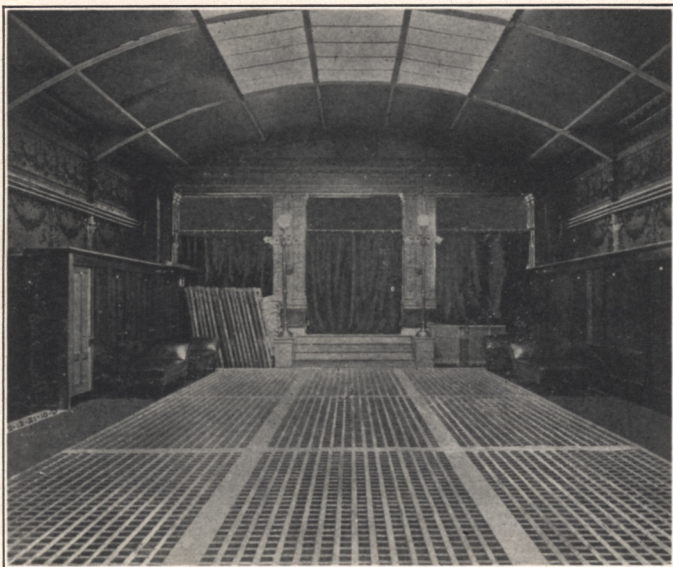
Sidewalk
LIGHTS

In Spero Building
View from Below



Hotel Southland, Dallas, Texas

Raydiant SIDEWALK
LIGHTS Installed

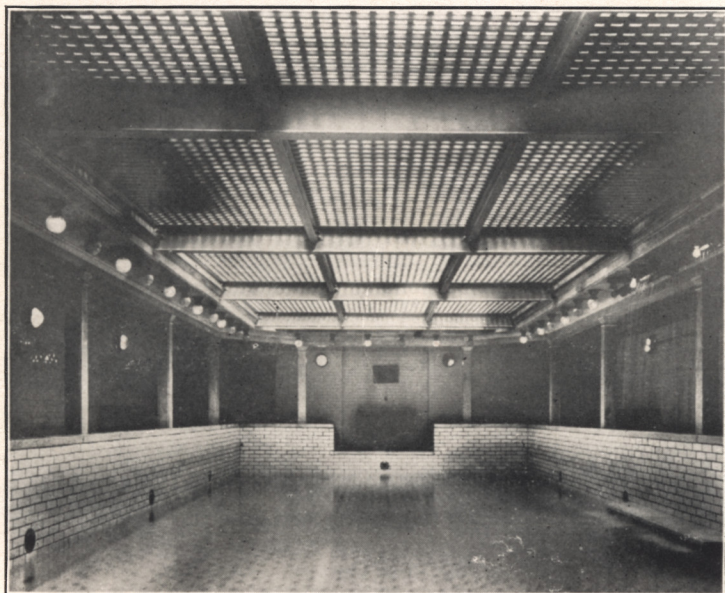


BERGER'S
Raydiant

Floor Lights Above Swimming Pool in Hollander Baths, New York City

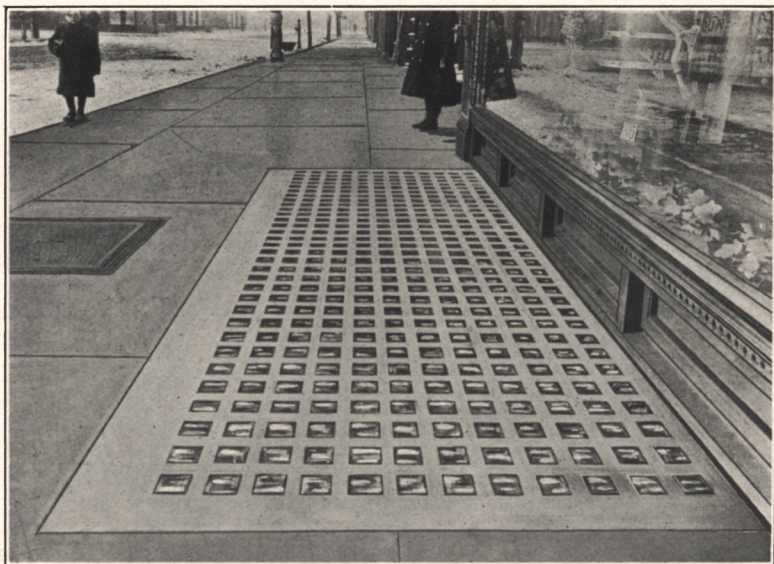
Hugo Kafka, Architect

A. Bernhauer, Contractor



BERGER'S
Raydiant

Floor Lights in Hollander Baths
View from Below



BERGER'S *Radiant* **SIDEWALK LIGHTS** in Front of Bischoff Building, Granite City, Ill.
 Theo. C. Kistner, Architect H. H. Bischoff, Owner



Atkins-Williams Building, Fort Smith, Ark.
 W. H. Blakely, Architect T. T. Reddick, Contractor
BERGER'S *Radiant* **SIDEWALK LIGHTS** Installed



White Buildings, Seattle, Wash.

Howells & Stokes, N. Y. City, Architects

S. W. R. Dally, Agent

Raydiant BERGER'S SIDEWALK LIGHTS Installed



BERGER'S
Raydiant

Sky Lights Above Court, First National Bank Building,
Birmingham, Alabama
Wm. C. Weston, Architect Solon Jacobs & Co., Contractors



Accounting Room Below Court, First National Bank, Birmingham, Alabama



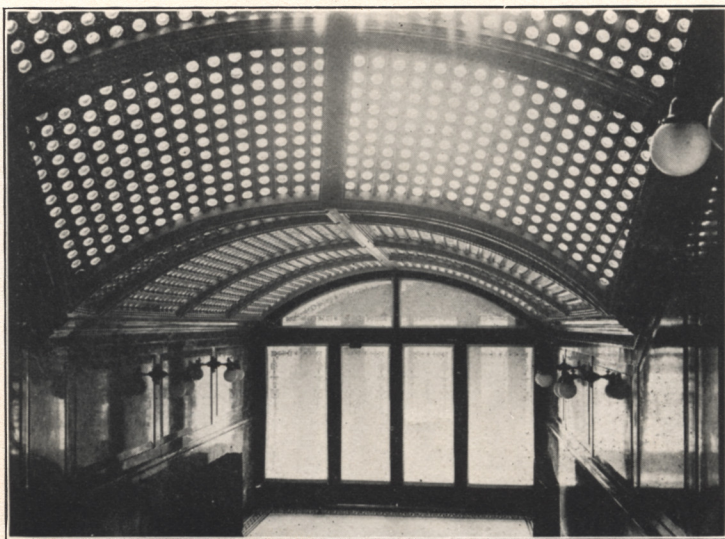
Massachusetts Mutual Life Insurance Co. Building, Springfield, Mass.
Trowbridge & Livingstone, N. Y. City, Architects
The Norcross Bros. Co., Worcester, Mass., Builders
BERGER'S Radiant SIDEWALK LIGHTS Installed



Courtland Building, Canton, Ohio
Guy Tilden, Architect
BERGER'S Radiant SIDEWALK LIGHTS Installed



Fluri Building, New York City
Neville & Boggs, Architects
BERGER'S
Raydiant Sky Lights Installed



BERGER'S
Raydiant Sky Lights in Fluri Building, New York City
View from Below



Carew Building, Cincinnati, O.
The Union Iron Works Co., Contractors
BERGER'S Radiant SIDEWALK LIGHTS Installed

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