Ingersoll Steel & Disc Division

Borg-Warner Corporation

310 So. Michigan Ave., **Chicago, Illinois** **Distributors in the Principal Cities**

Ingersoll **KOOLSHADE*** *Sun Screen*

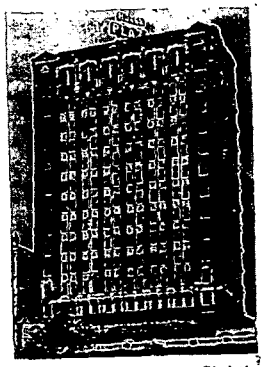
"It's cooler in the shade!"

A Metal Fabric for Screening Windows that Reduces the Solar Load in Sun-Exposure Rooms as Much as 80 to 85 per Cent.

KOOLSHADE is still considered a new product, but more than 10,000 installations—in every knid of building, from giant defense plants to small dwellings—attest the acceptance it has already had. Made like a tiny bronze Venetian Blind . . . with minature slats fixed at a 17 degree angle to screen out sun heat and let in soft, glareless light . . . KOOLSHADE is unlike any other product.

KOOLSHADE has had such ready acceptance among Air Conditioning Engineers because it offers the highest efficiency in cutting down the Solar Load—and does this without shutting off light or vision.

- By stopping 80 to 85 per cent of the Solar heat outside the window glass, KOOLSHADE often reduces the original cost of air conditioning equipment.
- It saves in operating cost—as much as 25 to 50 per cent where there are large windows.
- It reduces the need for zoning for sun effect.
- It forestalls complaints due to extreme sun heat.
- It maintains lower temperatures in non-cooled rooms.



Plaza Hotel, Corpus Christi—Engineers report KOOLSHADE saved $4,000 on first cost of air conditioning, $45 monthly on operation.



KOOLSHADE SUN LOAD 19 PER CENT

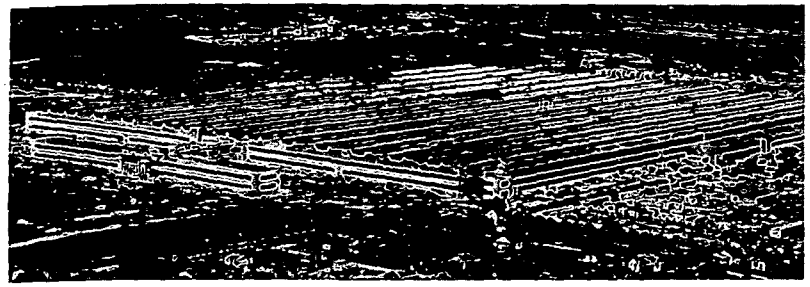
Automatic Sun Shade—KOOLSHADE is always in position . . . functions automatically . . . protects most when needed. The flat horizontal wires, held at a FIXED angle of 17 deg, fully stop direct heat rays when the sun is 38½ deg or more above the horizon—the heat of the day in all seasons. KOOLSHADE gives sun-exposure rooms the effect of cool "north" light.

*Registered Trade Mark—Property of Ingersoll Steel & Disc Division, Borg-Warner Corporation.

SUN HEAT TRANSMITTED THROUGH WINDOWS



Awnings in Use Sun Load 22 Per Cent to 28 Per Cent | *Outside Venetian Blind or Shutter Sun Load 25 Per Cent* | *Inside Venetian Blind Sun Load 58% or more* | *Half-Drawn Shade Sun Load 68% or more*



AMERICA'S LARGEST AVIATION FACTORY—Wright Aeronautical Corporation's new 60-acre plant at Cincinnati has more than 800 sun-exposed windows equipped with KOOLSHADE.

Economy. KOOLSHADE is strong, tough and should last for many years. Nothing to rot, rattle, or blow off.

Other Advantages include full insect protection, free ventilation, reduction of fading of fabrics, and fire-safety.

Specifications of Fabric. Made of fine quality bronze, with 17 horizontal wires per in. and vertical wires spaced ½ in. apart. In widths up to 72 in.

Framing and Installation. Framed and installed like ordinary insect screens. Frames may be either wood or metal—always full length and always outside the window glass. Re-wiring of present screen frames is entirely practical.

Where to Buy. Authorized KOOLSHADE distributors and dealers in all principal cities offer adequate facilities to assure correct frame design and proper installation.

Technical Proof of Performance. Reports of independent tests and calculations provide ample evidence of KOOLSHADE'S efficiency (one table from a report by the Pittsburgh Testing Laboratory is reproduced below). Of particular interest is a recent comparison test by Clyde R. Place, noted New York engineer, showing effect of KOOLSHADE on the operating cost and efficiency of air conditioning.

Full Literature, including these reports, will be sent on request.

DATA FROM PITTSBURGH TESTING LABORATORY

FROM CALCULATIONS BASED ON ACTUAL TESTS

Solar Radiation Transmitted Through Windows Equipped with KOOLSHADE Sun Screen

For 40 deg. latitude, on July 21st All figures given represent B.t.u. per sq. ft. per hour.

▼TIME▶	SOLAR RADIATION	NE	EAST	SE	SOUTH	
6 AM	Intensity Incident to Vertical Surface (1)	72	80	40		6 PM
	Transmitted thru Window with KOOLSHADE (2)	33	38.5	13		
7 AM	Intensity Incident to Vertical Surface	143	180	112		5 PM
	Transmitted thru Window with KOOLSHADE	38.5	60.5	22		
8 AM	Intensity Incident to Vertical Surface	143	211	155	8	4 PM
	Transmitted thru Window with KOOLSHADE	17	42.5	20.5	0	
9 AM	Intensity Incident to Vertical Surface	104	192	168	46	3 PM
	Transmitted thru Window with KOOLSHADE	8	22	17	2	
10 AM	Intensity Incident to Vertical Surface	46	143	156	77	2 PM
	Transmitted thru Window with KOOLSHADE	1.5	11.5	13	4	
11 AM	Intensity Incident to Vertical Surface		75	121	95	1 PM
	Transmitted thru Window with KOOLSHADE		3.5	8.5	5.5	
12 M	Intensity Incident to Vertical Surface			73	103	12 M
	Transmitted thru Window with KOOLSHADE			3.5	6	
		NW	WEST	SW	SOUTH	◀TIME▲

(1) Data from the A.S.H.V.E. Guide 1940.

(2) Figures represent Solar Heat Gain in EXCESS of heat gain by conduction through window glass.