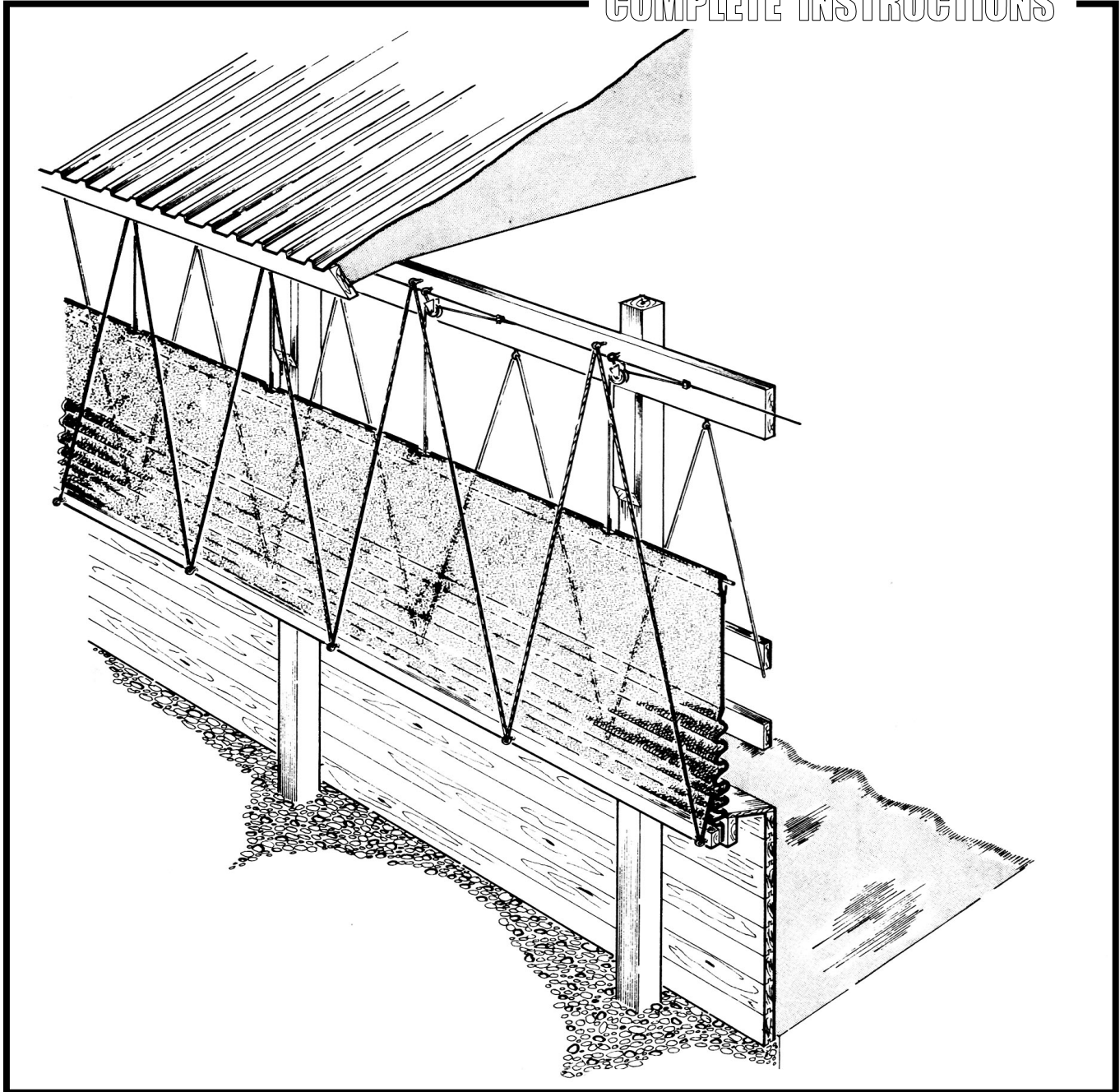




PLASTIC CURTAIN WALL VENTILATION

COMPLETE INSTRUCTIONS



DEVELOPED BY CANADA PLAN SERVICE

PLASTIC CURTAIN WALL VENTILATIONS

CPS
PLAN M-9351 REVISED 84:04

To control the rate of ventilation, most naturally-ventilated barns have windows or movable panels for ventilation of cold-tolerant livestock such as beef and dairy cattle and sheep. These panels can be opened or closed as weather conditions change. Most of these openings however take too much effort to change, consequently they are seldom changed often enough for optimum control of the animal environment.

The 'turkey curtain' provides a superior alternative. It was first used for ventilating turkey barns in southern U.S.A., hence the name. The turkey curtain consists of a tough woven plastic fabric (called 'Lumite') which replaces most of the wall (or at least the upper part). If the Lumite is not available, other fabric-reinforced plastic tarpaulin materials such as Fabrene® STPNN (or equal) could be used. Check with the manufacturer for estimated durability when exposed daily to direct sunshine. Advantages of the turkey curtain include:

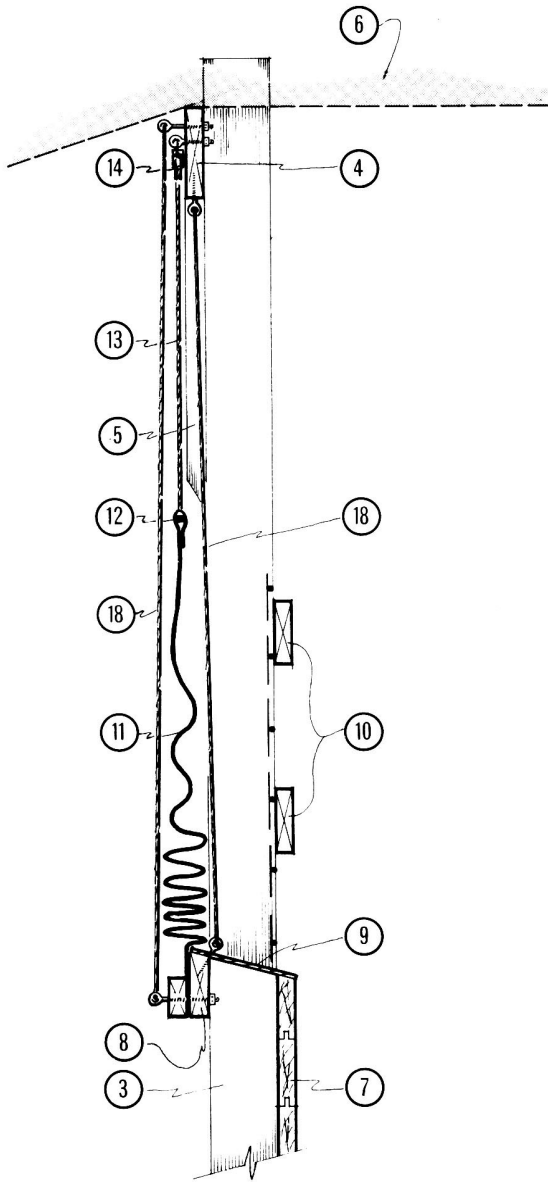
- Easy, rapid adjustment for changing weather, using a system of cables, pulleys and boat winch. One winch controls up to 75 m of curtain;
- Maximum opening area takes advantage of summer breezes for hot weather ventilation;

- Translucent material admits natural sunlight;
- Costs less than comparable ventilating wall systems (Fabrene® costs \$1.50 - \$2.00/m², hardware excluded, 1983 price);
- Opens first at the top, so that cold air is admitted well above the livestock inside.

Disadvantages are that the components may not be available in all parts of Canada, and that the fabric must be protected from chewing by the livestock. This latter problem is easily resolved by placing the curtain outside the wall posts and placing suitably-spaced planks or wire fencing inside the posts.

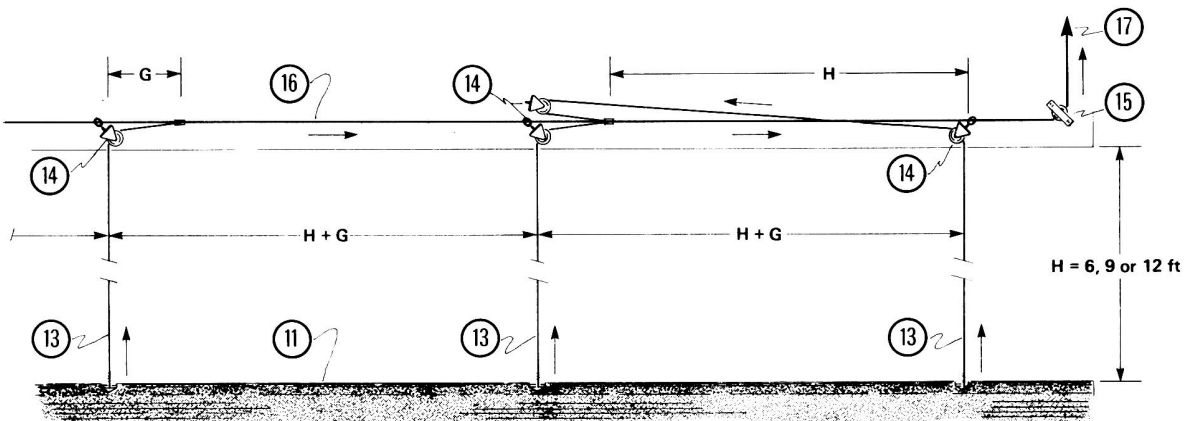
The plastic curtain acts like a huge sail when the wind blows; it must be very securely supported to prevent wind damage. This support is provided with strong nylon or polyester plastic rope which is tightly threaded in zig-zag pattern between eye-bolts at the top and bottom of the opening. One set of roping inside the curtain prevents blow-in and another set outside prevents blow-out. Do not use the cheaper polypropylene rope, as it will deteriorate rapidly when exposed to sunlight.

® Registered trademark by Dupont Canada Inc. This woven polyolefin products was developed for greenhouses cover; the STPNN designates its resistance to UV radiation sunlight.



1

- 1 pole frame wall section with curtain
- 2 typical control cable layout at end of opening
- 3 wall poles or studs
- 4 plate beam, see leaflet M-9312 for plate beam requirements
- 5 scab (if required) is slope-cut at bottom to allow passage of curtain rod
- 6 roof trusses, to suit local design snow loads, see leaflet M-9102
- 7 38 x 140 mm pressure-treated tongue and groove planking to bottom of wall
- 8 38 x 140 mm nailing strip, continuous, nailed to wall poles or studs with 4-4 x 102 mm spiral nails per 2400 mm of wall
- 9 12.5 mm exterior sheathing plywood, face grain perpendicular to wall
- 10 38 x 140 mm planking, or 150 x 150 welded wire mesh (Stelco Stockade or equal) to prevent livestock from chewing curtain
- 11 woven plastic fabric, lifted or lowered from top with cable and pulley system to control winch; 38 x 64 mm clamp strip secures bottom to (8) with lag screws
- 12 curtain rod; galv. steel thinwall electrical conduit threaded into sleeve sewn into top of curtain, rod ends coupled
- 13 5 mm nylon or polyester rope secured to (12), thru pulley (14), cable clamps on cable (16)
- 14 50 mm diam. marine steering cable pulley, hooked to 5/16" plated screw-eye, bolted into (4)
- 15 heavy-duty marine cheek block, align to exactly bisect the angle through which the cable turns
- 16 5 mm galv. steel cable, run thru screw-eyes
- 17 to boat winch at end of barn; winch lag-screwed to pole or studs; use winch rated to 454 kg for curtains to 30 m long
- 18 6.5 mm nylon rope zig-zag threaded thru eye bolts in (4) and clamp strip on outside of wall; second rope thru screw-eyes in (4) and (8) on inside



2