

By a Post-Dispatch Photographer

### Over the Top on Riverfront

A workman walking from the north to the south leg of the Gateway Arch on a gangplank installed yesterday

after the next-to-the-last section was placed in the north leg. The view is to the east.

## Workmen Join Forces Across Top of Arch

### Cross Gangplank — Two Sections Still Are Out

By ROY J. HARRIS  
Of the Post-Dispatch Staff

Workmen on the north and south legs of the Gateway Arch joined forces at the top yesterday as a gangplank was thrown across a 10½-foot gap at the 630-foot level.

Only two eight-foot sections remain to be inserted as the "keystone" of the stainless steel monument. Four sections were put in last week.

Crews at the top of the legs, nine men each, worked overtime yesterday, preliminary to undertaking the delicate task of closing the arch.

This job was described yesterday by Kenneth J. Kolkmeier, project manager for Pittsburgh - Des Moines Steel Co., construction subcontractors for MacDonald Construction Co., the prime contractors.

#### Closure Oct. 28

One more section — the final one in the south leg, designated 1 South — remains to be installed before the closure, or topping out, is accomplished by installation of 1 North. This is scheduled for Oct. 28 "give or take a day, depending on the weather," a Pittsburgh - Des Moines spokesman said.

"The weather will be an extremely important factor in the topping out," Kolkmeier noted. "We won't even try it if the wind is blowing say, 30 miles an hour or more."

The feat of inserting the final section will involve spreading the gap between the legs about six feet, from two and one half feet to eight and one half feet.

This will be achieved by means of two huge hydraulic jacks, each with a capacity of 300 tons pressure. They will be attached on either side of a heavy steel "K-frame," which will be laid horizontally about one foot above the arch, anchored to sections 2 North and 2 South—that is, the sections next to the final two keystone sections.

The jacks actually will be an-

TURN TO PAGE 24, COLUMN 3

# Arch

FROM PAGE ONE

chored to steel "V-frames" locked inside sections 2 North and 2 South and braced by connecting I-beams in sections 3 North and 3 South. These V-frames will project through openings in the top of the arch.

Kolkmeier said that about 450 tons of pressure, 225 tons for each jack, will be required to force the legs the desired distance apart. Most of this phase probably will be accomplished the day before the placing of the final section, he said.

The most critical part of the operation will be the maneuvering of the final section, 1 North, into position under the bulky K-frame and jacks which will be resting just over the gap.

After the opening is spread to eight and one half feet, a few inches more than the eight-foot length of the section, the final section will be raised by two slings swung from the crane on the north leg. Previously, a cantilever beam will have been attached to the extrados, or outer surface of this section.

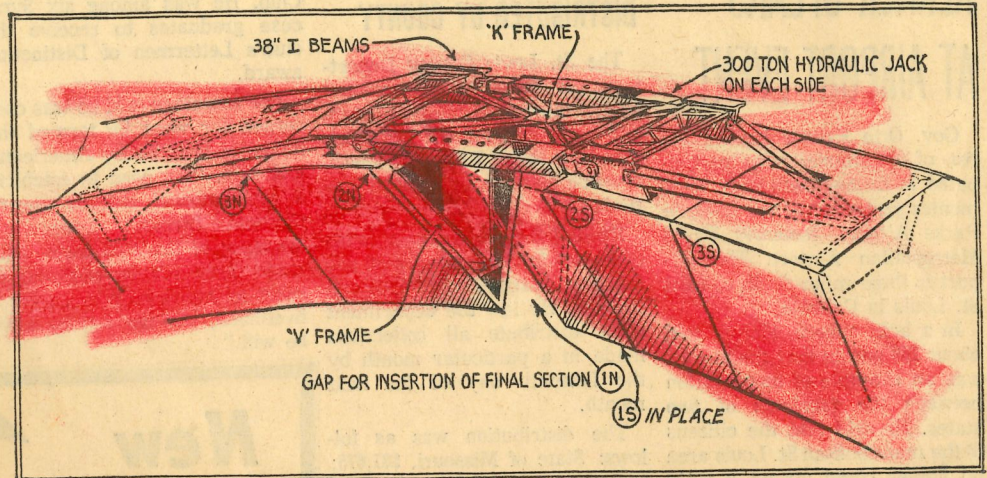
This beam will extend some distance out from the top of the section. As the member is raised to the desired elevation, the protruding beam will be maneuvered into the gap. Another sling from the crane then will be affixed to the beam and the section will be drawn into position.

## Inch Out of Line

Pressure in the jacks then will be lessened to permit the legs to make contact with the section. At this time any misalignment between the north and south legs will be corrected by use of turnbuckles and other equipment. Kolkmeier said the legs were expected to be less than one inch out of alignment, a minor consideration.

Pressure of the two legs on the final section, after the jacks complete their function, will be about 315 tons. Stresses will be distributed down through the two legs of the structure, Kolkmeier pointed out.

A major civic celebration has been planned for the "topping out," but detailed arrangements have been delayed because of uncertainty over the date.



By Albert L. Schweitzer, a Post-Dispatch Artist

## How Section Will Be Inserted

Illustration of the complex arrangements atop the Gateway Arch to permit insertion of the final section. Jacks attached to a "K-frame" will hold the legs apart while section is moved into position. View is to the east, with the north leg at left and south leg at right.

one  
inter