W. C. FURRY.

CENTERING FRAME FOR ARCH CONSTRUCTIONS.

APPLICATION FILED JUNE 15, 1915.

1,174,931. Patented Mar. 7, 1916.

Fig. 1

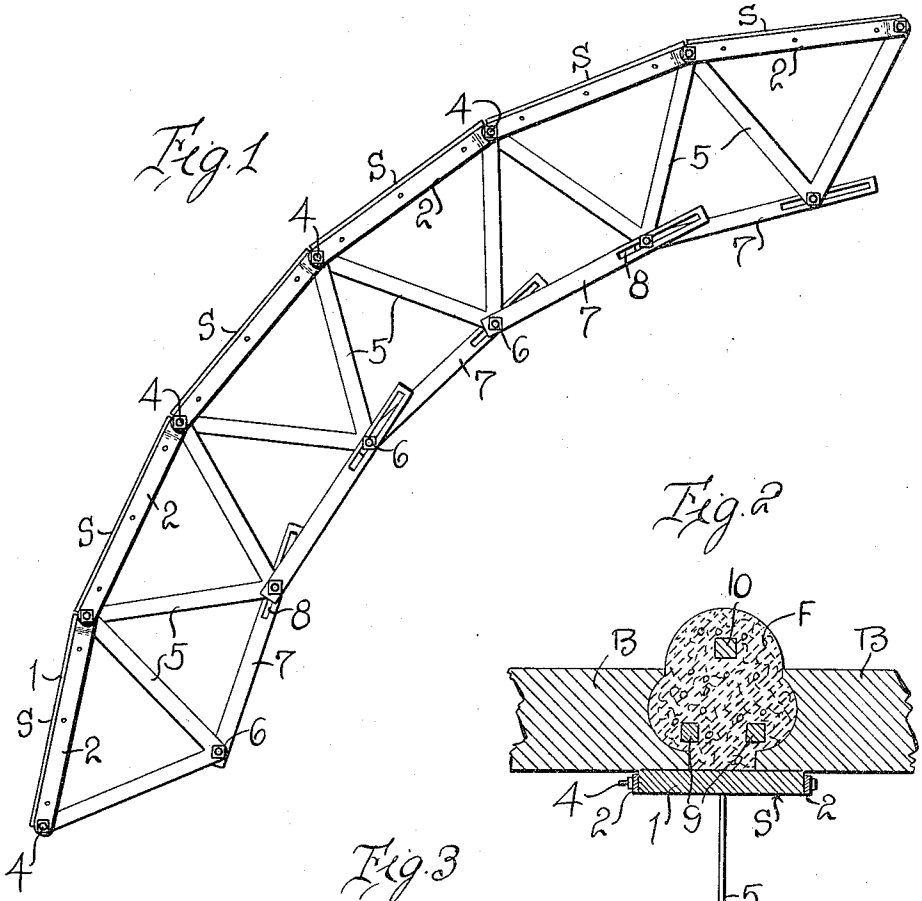


Fig. 2

Fig. 3

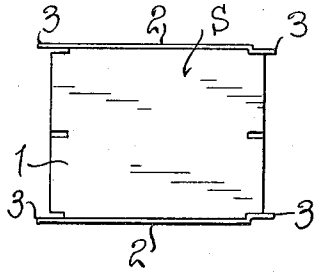


Fig. 4

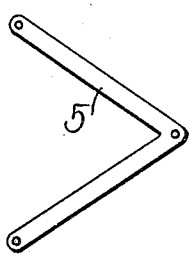
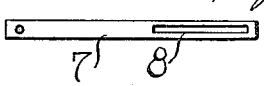


Fig. 5



Inventor

W. C. FURRY

By Watson E. Coleman

Attorney

THE COLUMBIA PLANOGRAPH CO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

WILLIAM CYRUS FURRY, OF TECUMSEH, OKLAHOMA, ASSIGNOR TO NATIONAL CONCRETE BRIDGE & CULVERT COMPANY, OF SHAWNEE, OKLAHOMA, A CORPORATION OF OKLAHOMA.

CENTERING-FRAME FOR ARCH CONSTRUCTIONS.

1,174,931. Specification of Letters Patent. Patented Mar. 7, 1916.

Application filed June 15, 1915. Serial No. 34,260.

To all whom it may concern:

Be it known that I, WILLIAM C. FURRY, a citizen of the United States, residing at Tecumseh, in the county of Pottawatomie and State of Oklahoma, have invented certain new and useful Improvements in Centering-Frames for Arch Constructions, of which the following is a specification, reference being had to the accompanying drawings.

This invention relates to certain improvements in centering frames for arch constructions, and it is an object of my invention to provide a device of this general character having novel and improved means whereby the center may be readily adjusted to any radius as the requirements of practice may necessitate.

Furthermore, it is an object of my invention to provide a novel and improved centering frame consisting of a plurality of sections detachably and pivotally connected one with the other and having means whereby the sections may be effectively locked against pivotal movement.

The invention consists in the details of construction and in the combination and arrangement of the several parts of my improved centering frame whereby certain important advantages are attained and the device is rendered simpler, less expensive and otherwise more convenient and advantageous for use, all as will be hereinafter more fully set forth.

The novel features of the invention will be carefully defined in the appended claim.

In order that my invention may be the better understood, I will now proceed to describe the same with reference to the accompanying drawings, wherein—

Figure 1 is a view in elevation of a fragment of a centering frame constructed in accordance with an embodiment of my invention; Fig. 2 is an enlarged fragmentary transverse sectional view taken through my improved frame as herein disclosed; Fig. 3 is a view in top plan of one of the center boards herein included, with the hinge plates attached thereto; Fig. 4 is an elevational view of one of the brace members herein included; and Fig. 5 is an elevational view of one of the adjusting plates herein embodied.

My improved centering frame, as herein disclosed, comprises a predetermined number of sections S detachably and pivotally connected one with the other and, as herein embodied, each of said sections comprises a center board 1 of predetermined dimensions and having secured to its opposite longitudinal edges the hinge plates 2 extending beyond the opposite ends of the board 1. The adjacent extended portions 3 of said plates are connected by the hinge bolts or pintles 4 which also project through the extremities of adjacent brace plates 5 substantially V-shape in form. By this arrangement, it will be readily perceived that a pivotal connection between adjacent center boards may be effected with convenience and facility. The apex portion of each of the brace plates 5 has disposed therethrough the clamping bolt 6 which is also disposed through one extremitiy of an adjusting plate 7 and through a longitudinally disposed elongated slot 8 produced in the extremity of a second adjusting plate, said adjusting plates being arranged at opposite sides of the brace plate 5.

It is thought to be self-evident that with the clamping bolts 6 loosened the various center boards may be adjusted about their pivots until the desired relative adjustment is attained whereupon said clamping bolts are tightened so that the adjusting plates 7 will effectively maintain said center boards 1 in their relative adjustment.

My improved centering frame, as herein embodied, is particularly designed for use in connection with the concrete arch structure set forth in pending application, Serial No. 21,329, filed April 14, 1915, and the center boards 1 are adapted to have positioned thereon the blocks or slabs B of a construction similar to the blocks or slabs set forth in the co-pending application hereinbefore referred to. By the use of the center boards 1 as disclosed in the present application, I find that the ends of the slabs or blocks B can be conveniently spaced apart a distance sufficient to embed within the concrete filling F for joining the adjacent ends of the slabs or blocks B, two intrados reinforcing rods 9 and one extrados rod 10, or the number of these rods 9 and 10 may be increased if the practice so requires.

From the foregoing description, it is thought to be obvious that a centering frame constructed in accordance with my invention is of an extremely simple and compara-

tively inexpensive nature and is particularly well adapted for use by reason of the convenience and facility with which it may be assembled, and it will also be obvious that my invention is susceptible of some change and modification without material departure from the principles and spirit thereof and for this reason I do not wish to be understood as limiting myself to the precise arrangement and formation of the several parts herein shown in carrying out my invention in practice.

I claim:

A centering frame for arch construction comprising a plurality of center boards, plates secured to the longitudinal side edges of said boards and projecting beyond the ends thereof, pintles disposed through the extended ends of the plates, a V-shaped brace plate, the pintles being disposed through the extremities of said brace plate, a clamping member carried by the apex portion of each of the brace plates, and an adjusting plate pivotally supported by each of the clamping members, said adjusting plate being provided with an elongated longitudinally disposed slot through which the clamping member of an adjacent brace plate is adapted to pass.

In testimony whereof I hereunto affix my signature in the presence of two witnesses.

WILLIAM CYRUS FURRY.

Witnesses:
J. KROUCH,
E. L. ROSEBUSH.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents. Washington, D. C."