

No. 740,197.

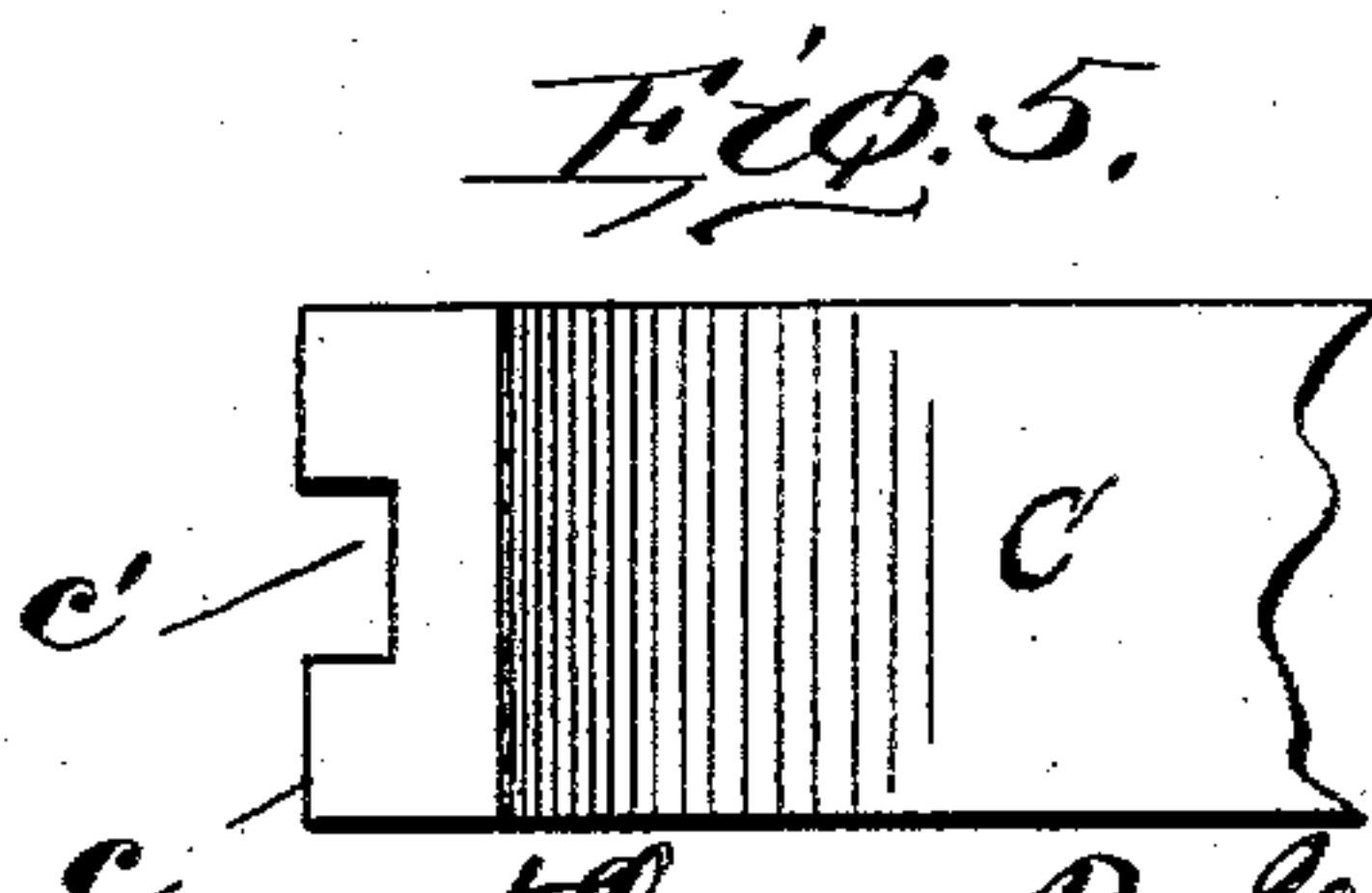
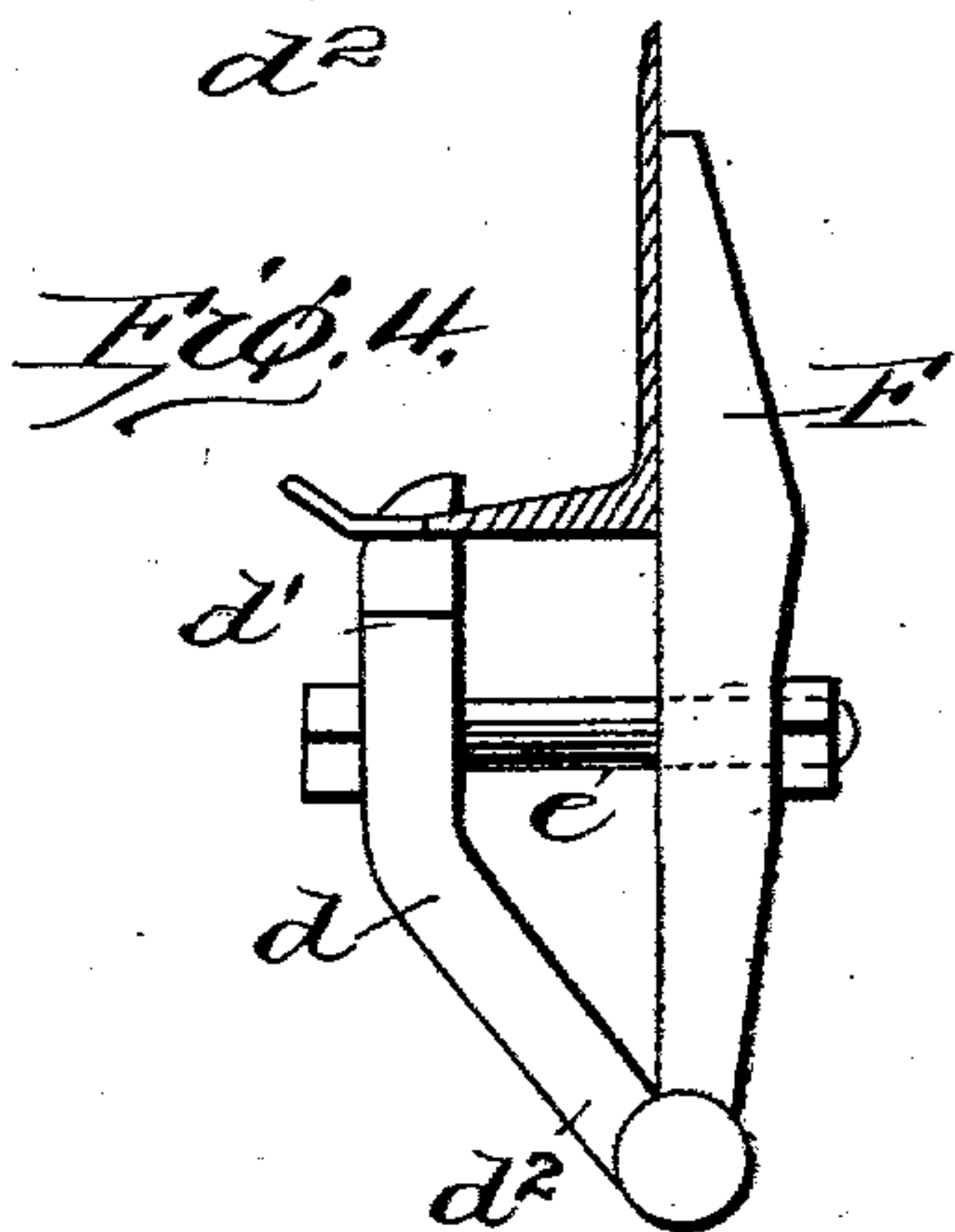
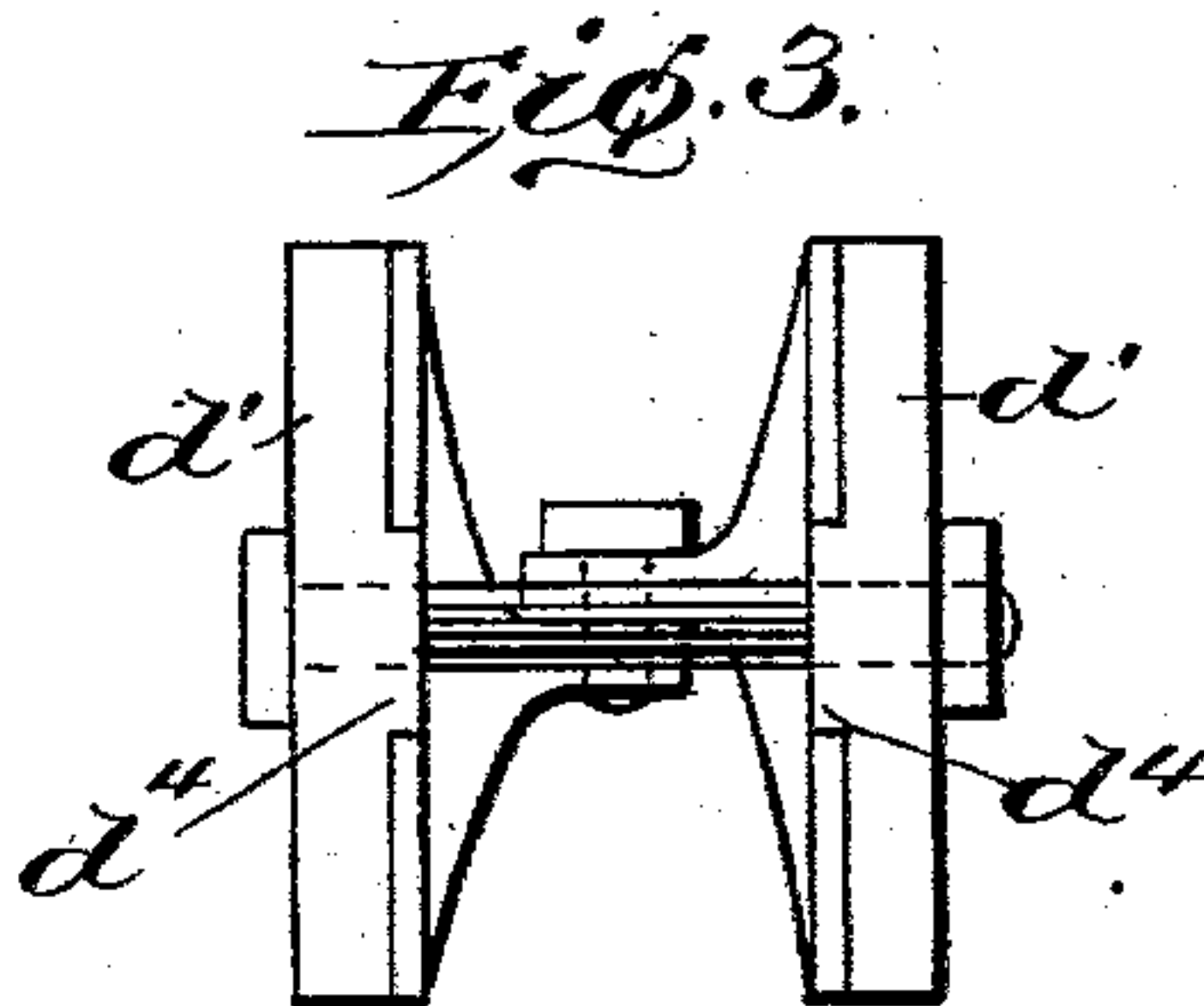
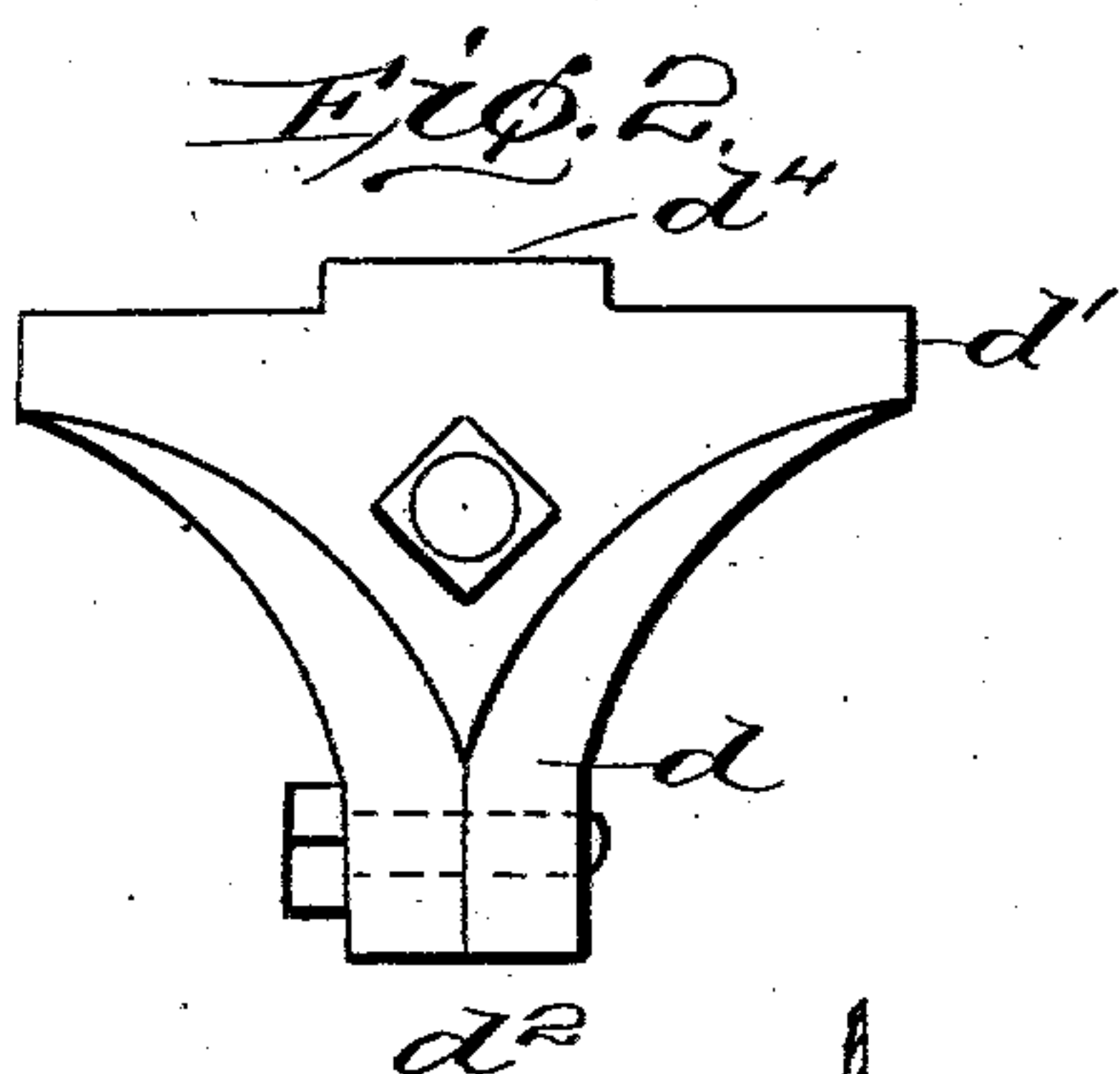
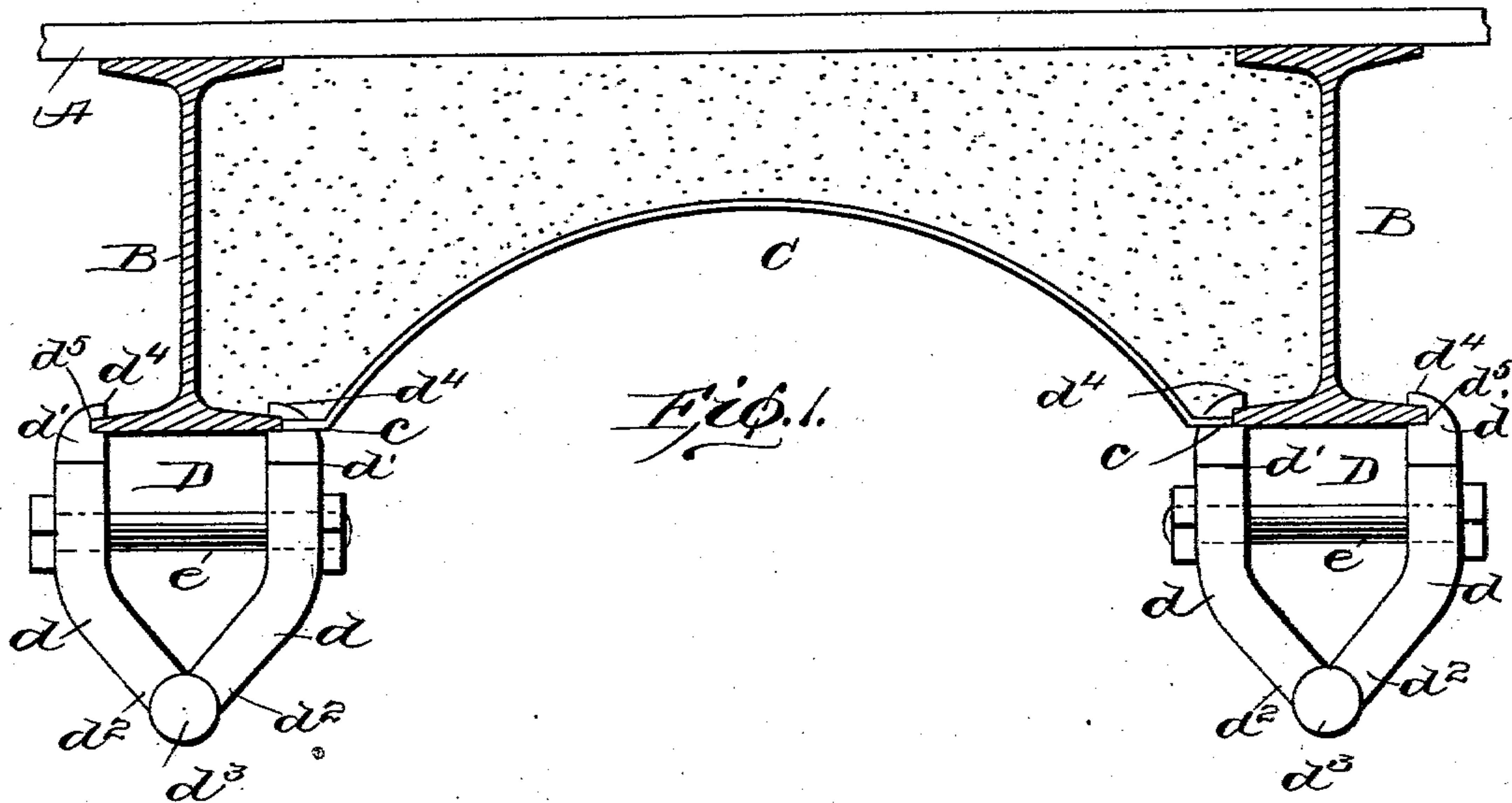
PATENTED SEPT. 29, 1903.

T. R. SPENCER.

DEVICE FOR USE IN CONSTRUCTING ARCHES.

APPLICATION FILED APR. 8, 1903.

NO MODEL.



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Witnesses

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UNITED STATES PATENT OFFICE.

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DEVICE FOR USE IN CONSTRUCTING ARCHES.

SPECIFICATION forming part of Letters Patent No. 740,197, dated September 29, 1903.

Application filed April 8, 1903. Serial No. 151,663. (No model.)

To all whom it may concern:

Be it known that I, THOMAS R. SPENCER, a citizen of the United States, residing at Oregonia, in the county of Warren and State of Ohio, have invented certain new and useful Improvements in Devices for Use in Constructing Arches; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to improvements in devices used in the construction of floors, bridges, and ceilings, especially those of the fireproof class, and is designed to support the concrete or other material placed in the floor or ceiling between the joists until the same shall become set or hardened, and said device may be removed and again used at other times and places; and the invention consists of the new and novel clamping means and a suitable supporting-plate.

The invention further consists in the novel construction and combination of the several parts of the device, as will be hereinafter described, illustrated in the drawings, and more particularly pointed out in the claims hereunto appended.

In the drawings, Figure 1 illustrates an arch and the adjacent beams in section and showing my improved device in position on said beams and forming a support for the arch. Fig. 2 is a side elevation of the clamping device. Fig. 3 is a top view thereof, and Fig. 4 is a modified form of said clamp. Fig. 5 is a view of an end of one of the plates.

Referring to the drawings by letters, A indicates the flooring, of any suitable material, and B B B the floor-supporting beams.

C indicates the "arch" former and supporter and which I herein designate as the "arch-plate." This plate is preferably made from a sheet or blank of steel of any suitable and convenient width and may be flexed to form an arch of any desired curve. In the ends *c c* of the plate C are suitable notches or cut-away portions *c' c'*, for the purpose hereinafter stated. This plate C when in position between the floor-beams has its notched ends resting against the lower flanges of said

beams and the under edges thereof either flush with or slightly below the under surfaces of the floor-beams. These plates C may be of any length or of any width as circumstances may require.

D indicates my improved clamp, and consists of the two jaws *d d*, broad at the top *d'* and contracted at the bottom *d''*, where they are pivoted together, as shown, by a removable bolt or pin *d'''*. The top of each of said jaws *d d* is provided with an upwardly-extending lip *d''* of less width than the top *d'*, said lip *d''* being provided on its inner side with a groove *d'''* for a purpose hereinafter stated, the top portions *d'* of the jaws on each side of said upwardly-extending lip serving as seats and rests for the ends of the plate C, as is shown in Fig. 1.

e indicates a bolt or other suitable adjusting and locking means located between the pivoted and free ends of the jaws *d d* for adjusting said jaws to any width of beam and to securely attach them in position thereon, as is evident. In Fig. 4 I have shown a modification of this clamp wherein one of the jaws is replaced by a long straight arm F. This form of clamp is employed when a half I-beam is used in the ceiling or floor construction and is found to be very desirable for this purpose.

The application of this device is as follows: The clamps D are adjusted to and secured on the lower flanges of the beams, the grooves *d'''* receiving and holding the edges of said flanges, as shown in Fig. 1 of the drawings. A plate C of the proper length is passed between the beams and set into position by passing the notches or cut-away portions *c' c'* in the ends *c c* over the lips *d'' d''* and setting the ends *c c* on the top portions *d'* of the jaws *d d*, where they will rest and abut against the flanges of the beams, as shown. The work of filling the space with concrete or other material is then proceeded with. When the material has sufficiently set, the bolt or pin *d'''* is removed, as is also the bolt *e* when each jaw separately is turned out of engagement with the flange of the beam, thus permitting the ready removal of the plate C without disruption. It will be readily understood that this device may be used repeatedly for the

purpose for which it is designed and that the clamps are adapted to receive and hold any size plates.

Having thus described my invention, what I claim is—

1. In a device of the character described, the combination with clamping devices provided on the tops thereof with upwardly-extending grooved lips of less width than said tops and seats on the tops of said clamps at each side of said lips, and means for adjusting and holding said clamping devices in fixed position to a beam, of a metallic supporting-plate having its ends recessed to straddle the jaw-lips and the extended ends of said plates to rest upon said seats and be supported thereby, so as to permit said recessed ends to abut against the flanges of the beams.
2. In a device of the character described, the combination with a clamp consisting of

jaws pivotally connected together at their lower ends, and provided with means for adjusting and holding said jaws in fixed position to a beam, said jaws having on their tops upwardly-extending grooved lips of less width than the tops of said jaws and seats on the tops of said jaws at each side of said lips, of a metallic supporting-plate having recesses in its ends, said recesses being adapted to set over said lips and the extended ends of said plate to rest on the seats on the tops of said jaws at each side of the lips and to abut against the beam, said plate being supported by said seats.

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

THOMAS R. SPENCER.

Witnesses:

JOHN BRADBURY,
FRANK BRANDON.