

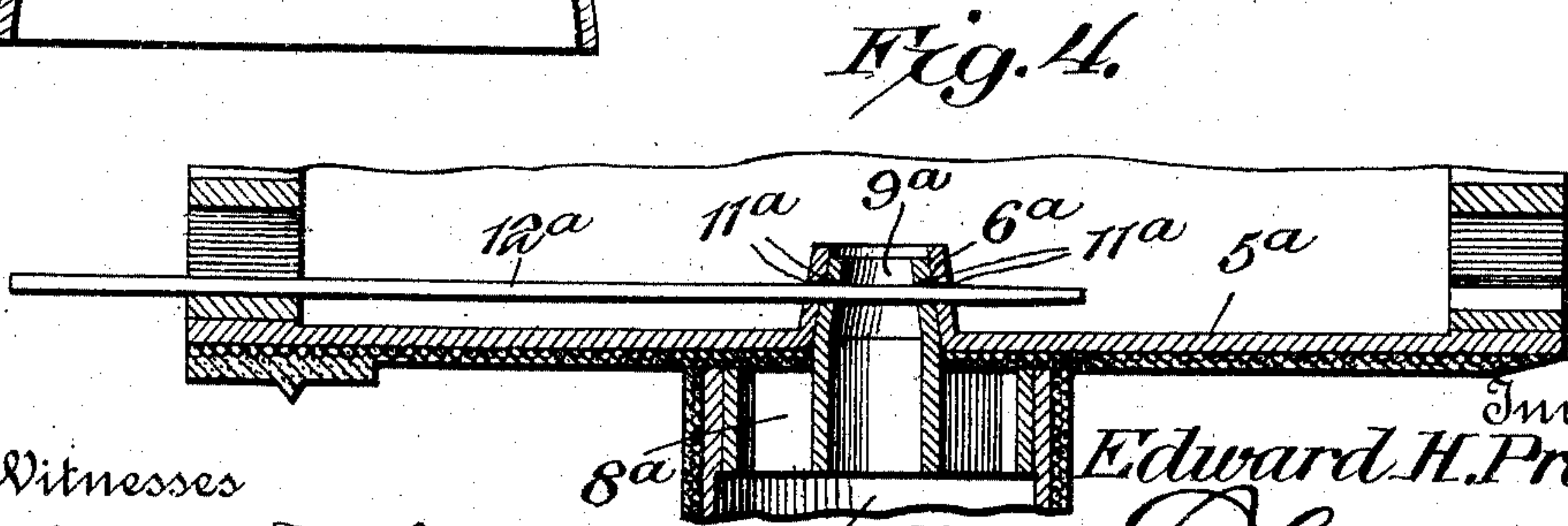
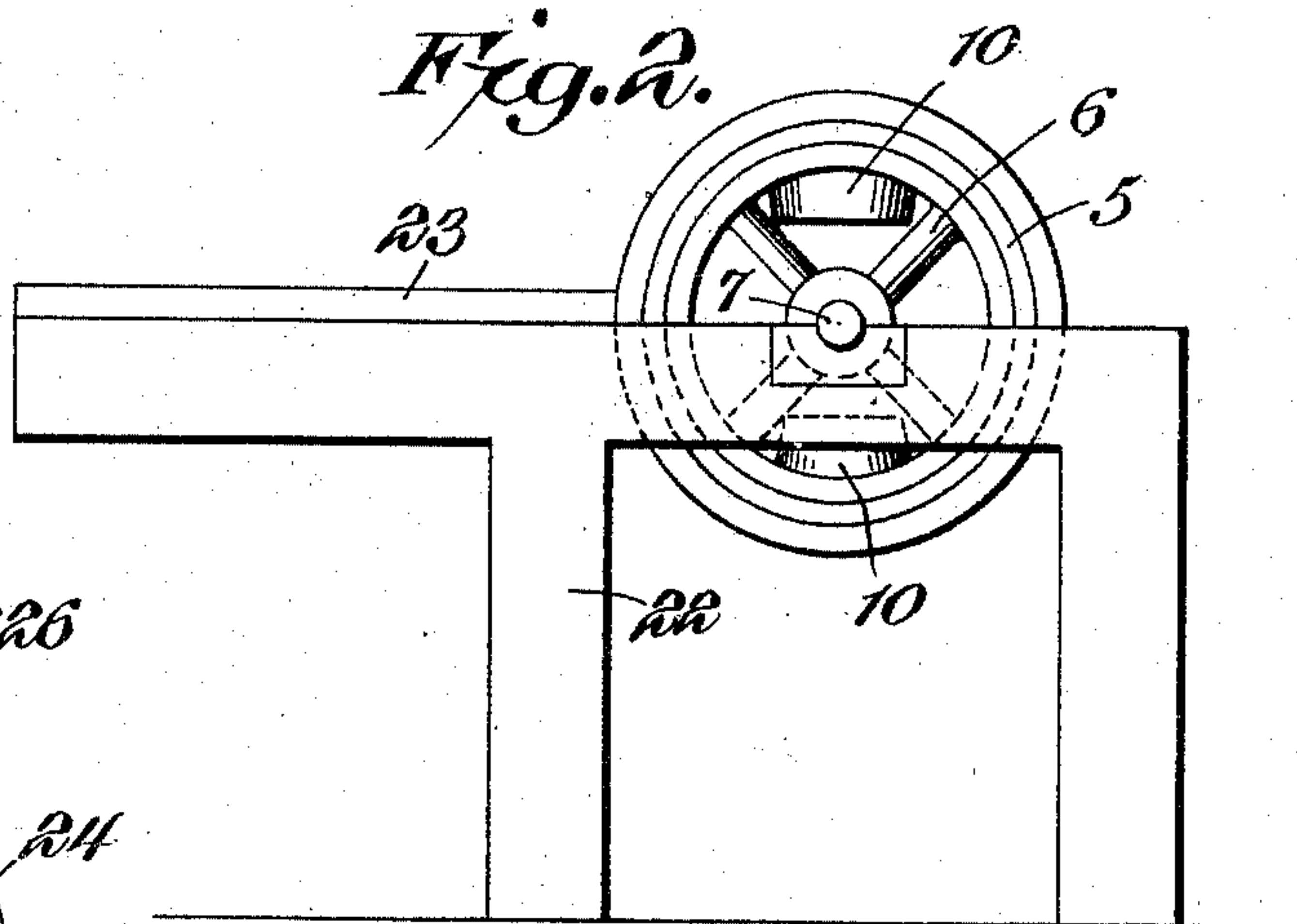
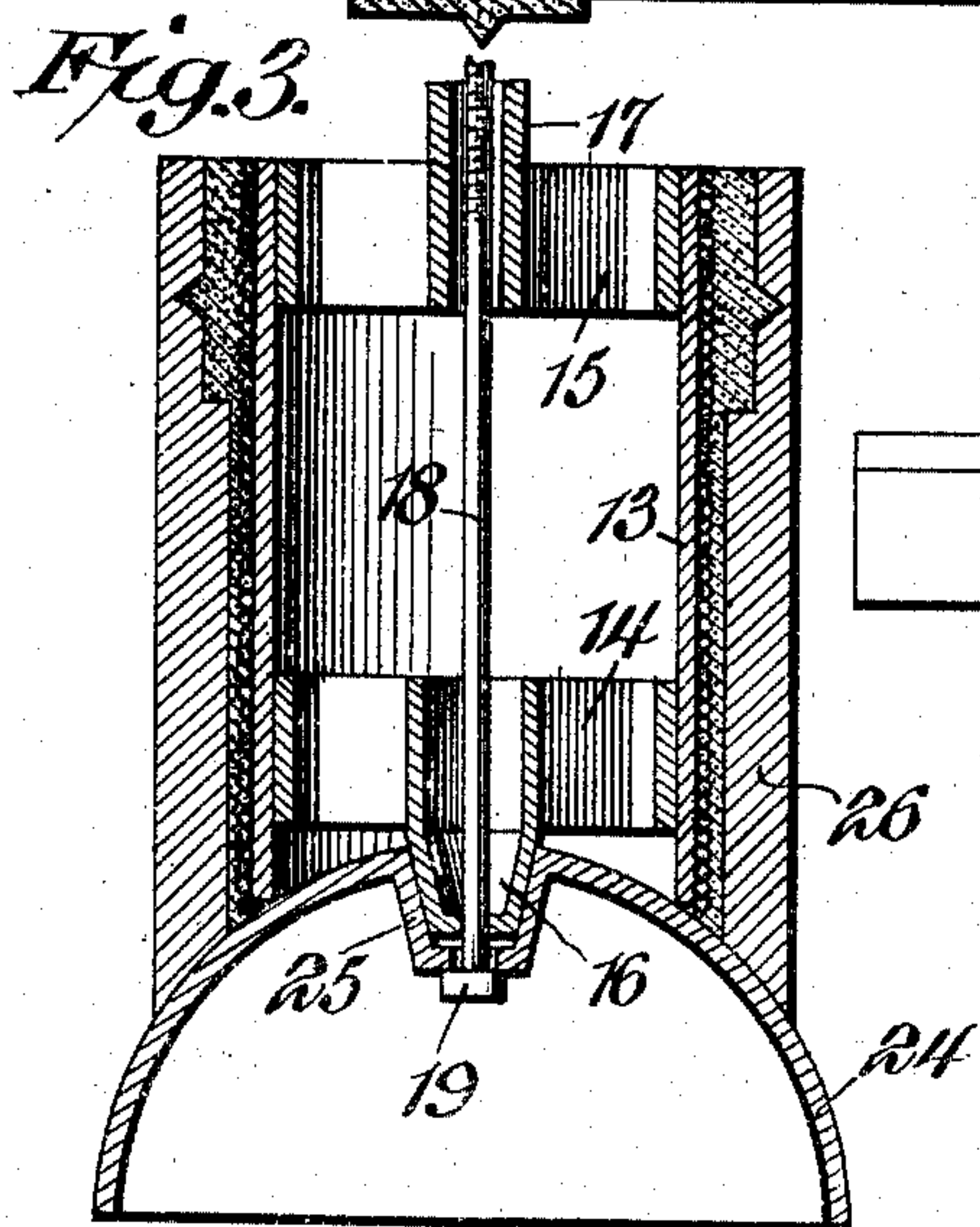
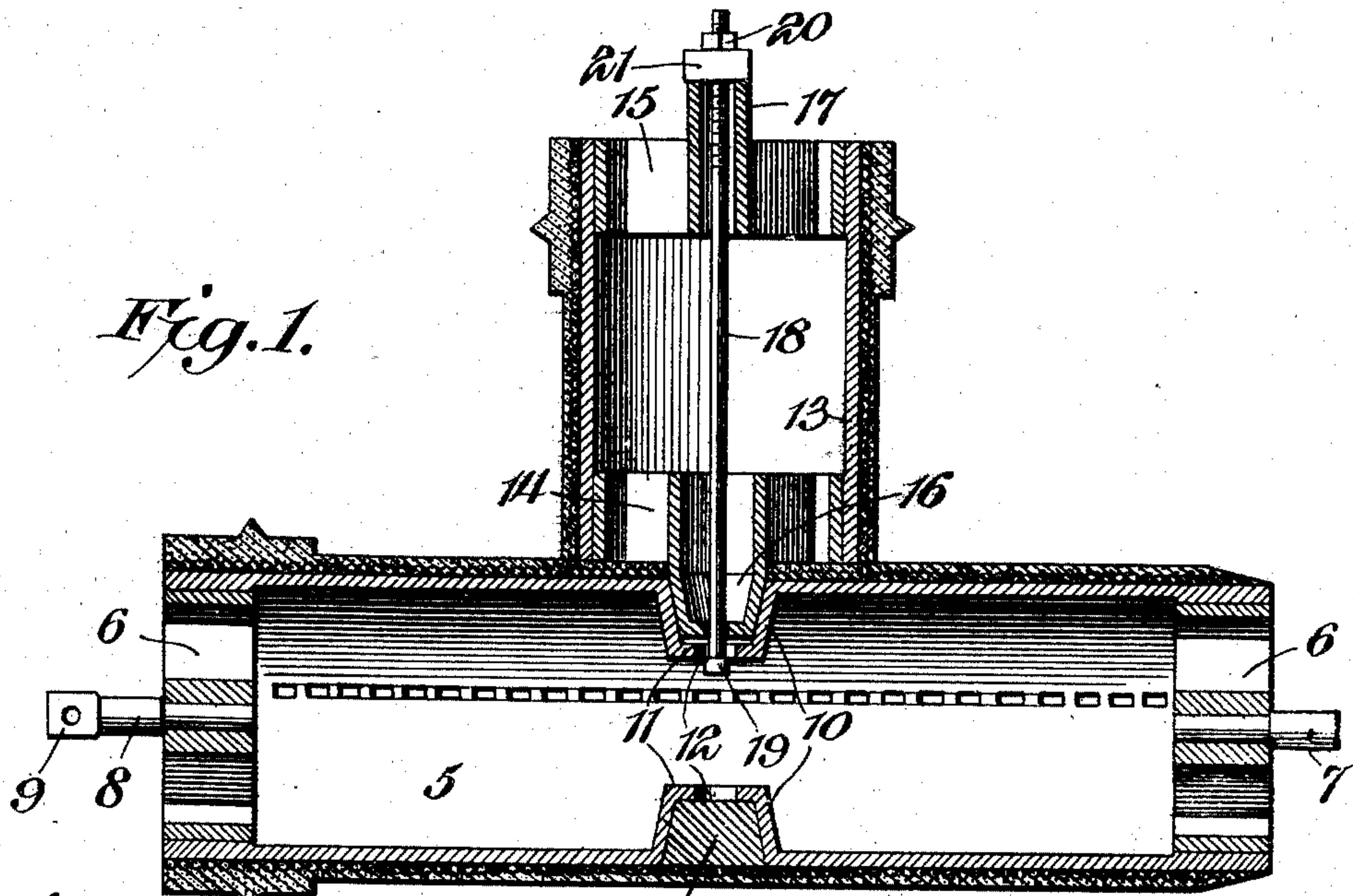
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CORE.

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928,538.

Patented July 20, 1909.



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UNITED STATES PATENT OFFICE.

EDWARD HILL PROFFITT, OF RADFORD, VIRGINIA.

CORE.

No. 928,538.

Specification of Letters Patent.

Patented July 20, 1909.

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To all whom it may concern:

Be it known that I, EDWARD H. PROFFITT, a citizen of the United States, residing at Radford, in the county of Montgomery and State of Virginia, have invented a new and useful Core, of which the following is a specification.

The present invention relates to cores for pipes and tubular structures of an analogous nature, and more particularly those employed in the manufacture of tees, crosses, and the like, and the primary object is to provide a core made of sections that can be separately prepared for casting purposes and afterward joined, said core being very simple in construction and cheap both to manufacture and use.

The preferred embodiment of the invention is illustrated in the accompanying drawings, wherein:—

Figure 1 is a longitudinal sectional view of a core ready for use. Fig. 2 is an end elevation illustrating the manner of preparing the main body. Fig. 3 is a sectional view showing the manner of forming one of the lateral or branch sections. Fig. 4 is a detail longitudinal sectional view of a modified form of the core.

Similar reference numerals designate corresponding parts in all the figures of the drawings.

In the embodiment illustrated, a main body 5 is employed that is tubular in form, and has a smooth unobstructed exterior face. In the ends of said tubular body are fitted spiders 6, from which project centrally disposed gudgeons 7 and 8, the latter having an angular end 9. The said body is furthermore provided in its opposite sides with inwardly extending tapered sockets 10 having inner end walls 11 provided with oblong openings 12.

One or more branch or lateral sections are employed, and each comprises a tubular body 13 having an external smooth face and provided at its ends with spiders 14 and 15. One of the ends of the body 13 conforms to the curvature of the main body 5 when coated, and the spider 14 in this end is provided with a tapered central projection 16 that is adapted to snugly fit into either of the sockets 10. The other spider 15 is preferably provided with a projecting tubular hub or gudgeon 17. A holding bolt 18 passes centrally through the hub 17 and projection 16, and has at its inner end an elongated head

19 which will pass through the opening 12 when alined therewith, but can be placed transversely of said opening, as illustrated in Fig. 1. The outer end of the bolt 18 is threaded, and has a nut 20 thereon, which preferably bears against a suitable washer 21.

The manner of preparing a core for use is substantially as follows: The sections 5 and 13 are separated and the main body is rotatably supported on a suitable frame, as 22 in Fig. 2. Said body is then rotated, and a layer of hay rope is wrapped thereupon, after which a coating of loam is applied to the rope, and is properly finished off by means of a core board or striker 23. In like manner, the section 13 can be rotatably mounted by means of the gudgeons or projections 16 and 17, and a layer of rope applied thereto, after which a coating of loam can also be applied. Preferably, however, the loam is applied by the means disclosed in Fig. 3. A former 24 is provided having a curvature conforming to the curve of the coated body. This former also has a socket 25 to receive the projection 16 and the bolt 18 is engaged in the lower end wall of the socket. A core box 26 is then placed about the body 13 and the intervening space is filled with the loam. When the two sections have been completed, they are secured together, as illustrated in Fig. 1 by means of the bolt 18, the head of which is passed through the opening 12 and turned, after which the nut 20 is tightened. By tightening the nut 20, the two sections of the separately-finished core are drawn tightly together so that the joint between the loam coating of the two sections will be tightly closed. Since the former 24 is of the same diameter as the coated main section of the core, the inner end of the branch section of the core will provide a tight joint with the body section of the core when the bolt 18 is drawn tight. This is an important feature of the present invention, since the resulting casting will be formed without an internal flange at the juncture between the main body and branch.

There are a number of decided advantages for this structure. In the first place, by having the parts so that they can be separately coated, each can be rotatably mounted, and the application of the coating by this method is much cheaper than with the core box. At best, however, only the branches need be coated with such boxes.

If a tee is to be formed, only one branch is employed, as illustrated in Fig. 1, in which case, the socket is filled with a plug, as 10^a. Of course if a cross is to be manufactured, the plug is removed and sections are applied to opposite sides of the main body.

The means for securing the sections to the main body may be modified. For instance, in Fig. 4, said body is designated by the reference numeral 5^a, and has an inwardly tapered socket 6^a. The lateral or branch section 7^a is provided with a spider 8^a carrying a tapered projection 9^a that snugly fits within the socket. The side walls of the socket and the projection are provided with aligned openings 11^a, through which can be passed a holding pin 12^a, the outer end thereof projecting from the end of the barrel, so that it can be readily withdrawn.

From the foregoing, it is thought that the construction, operation and many advantages of the herein described invention will be apparent to those skilled in the art, without further description, and it will be understood that various changes in the size, shape, proportion and minor details of construction, may be resorted to without departing from the spirit or sacrificing any of the advantages of the invention.

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent, is:—

1. A core comprising a main body provided with a coating of core material, said coating having a smooth unobstructed outer surface, said body being provided between its ends with an inset socket located wholly within the body, a lateral branch section separable from the body and having a coating of core material applied when detached from the body and having one end shaped to conform with the curvature of the coated main body, the said end of the branch section being provided with a projection to engage in the socket of the main body, and means for holding the projection in the said socket and at the same time clamp the separately-coated main body and branch section together.

2. A core comprising a main body having gudgeons at its ends whereby it may be rotatably mounted, said body having sockets at different points, a lateral or branch section having a projection that engages in one of the sockets, means for securing the projection in said socket, and a removable plug filling the other socket and having its outer end flush with the external surface of the body.

3. The combination with a tubular body having a smooth peripheral face and spiders at its ends, said spiders being provided with gudgeons, the body furthermore having opposite inset sockets, of a branch or lateral section having an end conforming to the curvature of the body, said end having a

spider provided with a central projection that detachably engages in the socket, and means for holding the section on the body with the projection in the socket.

4. The combination with a tubular body having spiders at its ends and gudgeons projecting from the spiders, said body having a socket in one side, of a lateral or branch section having one end shaped to conform to the exterior of the body and provided with spiders in its ends, a projection carried by one of the spiders and detachably engaging in the socket, and a holding rod extending longitudinally through the lateral or branch section and through the spiders thereof, said rod having a head that detachably engages the inner end wall of the socket.

5. A core comprising separately-formed main and branch sections and each consisting of a body having a coating of core material adhering thereto, the end of one of the sections being shaped to conform with the outer surface of the coating of the other section, and means for clamping the sections together with the said end of the branch section abutting and in contact with the coating of the main section to form a unitary core before placing in a mold.

6. A core comprising separately-formed main and branch sections, said main section consisting of a body provided with a socket and having a coating of core material, said coating being open at the socket, said branch section consisting of a body having a coating of core material, one end of the coating being shaped to conform with the curvature of the coating of the main section, a projecting member adapted to fit in the socket, and means for securing the member in the socket and for clamping the separately-formed sections together to tightly close the joint between the coatings of the two sections.

7. A core comprising a body constituting a form, a coating of core material applied to the outer surface thereof, means on the body for engagement with a branch core, in combination with a branch core consisting of a body having one end shaped to conform with the exterior of the first-mentioned body after the latter is coated, a coating on the branch core body applied while the latter is unattached, the coating on the branch core being flush with the said end to fit the coated body of the first-mentioned core, means on the branch core body for engagement with the first-mentioned means, and a device for detachably fastening the separately-coated core bodies together.

8. A core comprising separately-formed main and branch sections, said main section comprising a body having means for rotatably supporting the body on its axis, a coating of core material covering the outer surface of the body, and means for binding the

coating to the body; said branch section consisting of a body having one end shaped to conform substantially with the curvature of the main section, a coating of core material
5 covering the body and having one end given the same curvature as the finished main section, and a binding means for holding the coating on the body of the branch section; and a device for securing the separately-
10 formed sections together with the said curved end of the branch section snugly fitting the coating of the main section.

9. A branch core section comprising a tubular body having an external smooth face
15 and provided at its ends with spiders, one of

the ends of the branch core section conforming to the curvature of the main core section after the latter is coated, the spider at said end of the branch core section having a tapered central projection, and a bolt passed
20 centrally through the said projection and branch core section and extended from both ends thereof.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature
25 in the presence of two witnesses.

EDWARD HILL PROFFITT.

Witnesses:

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G. H. FUDGE.