

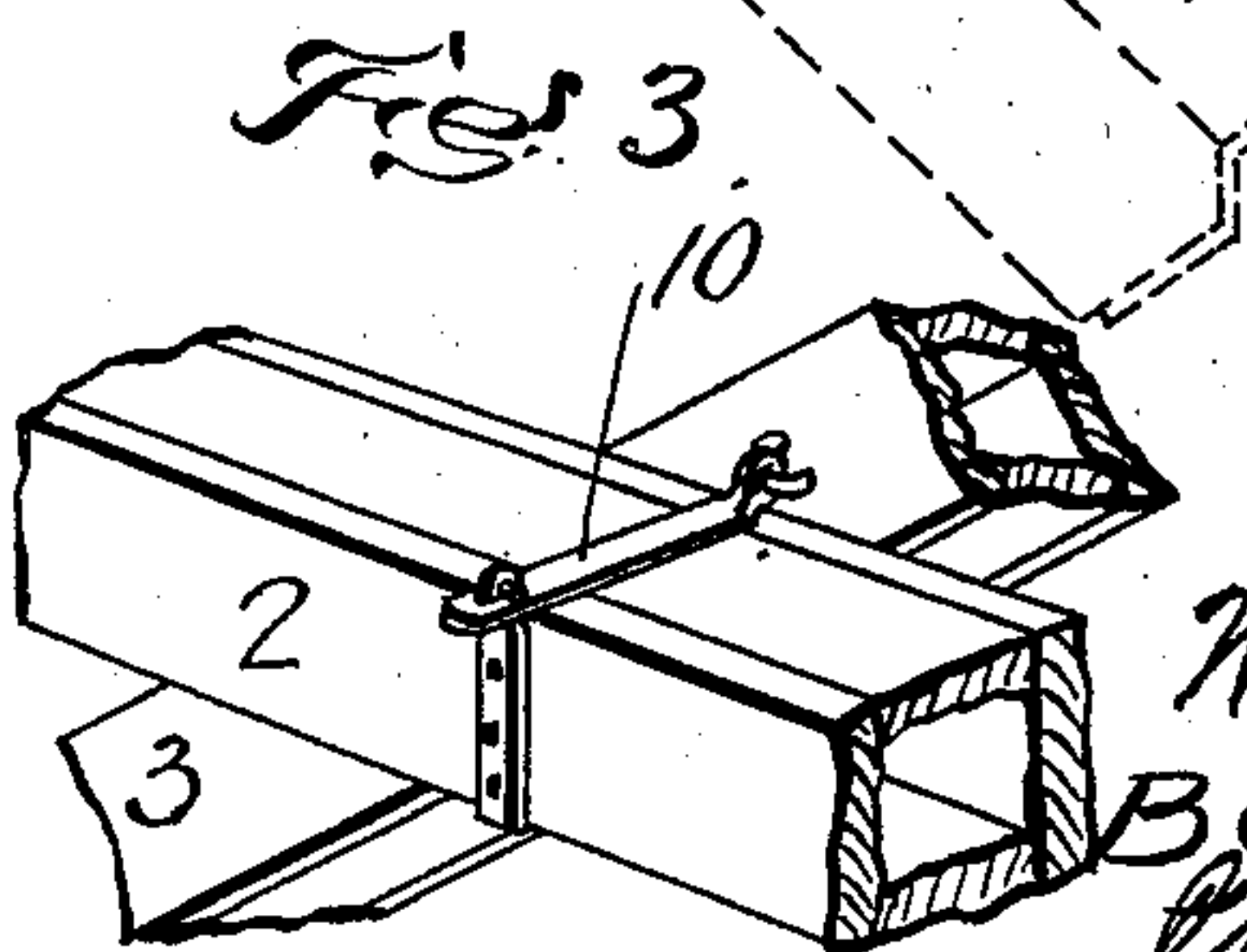
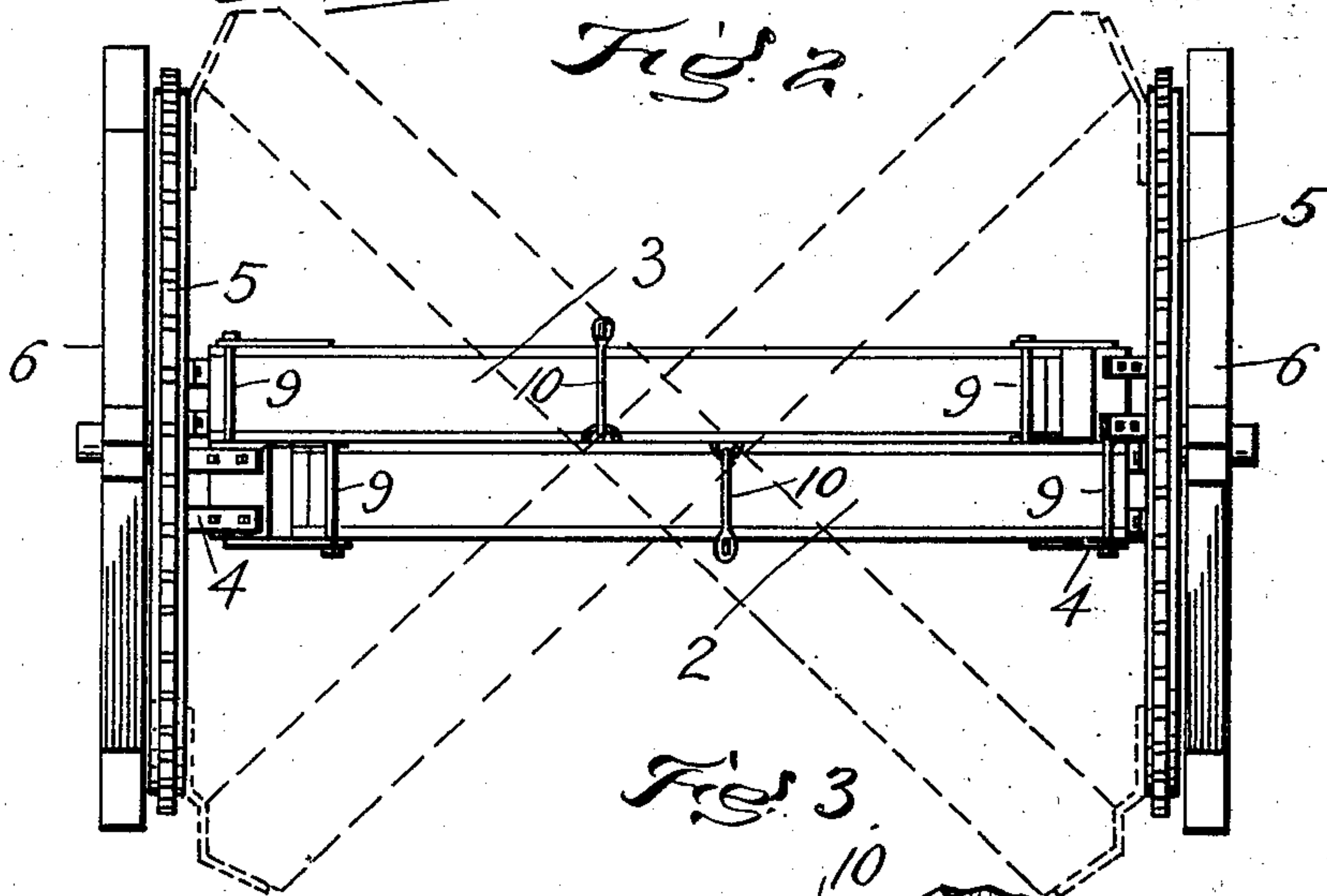
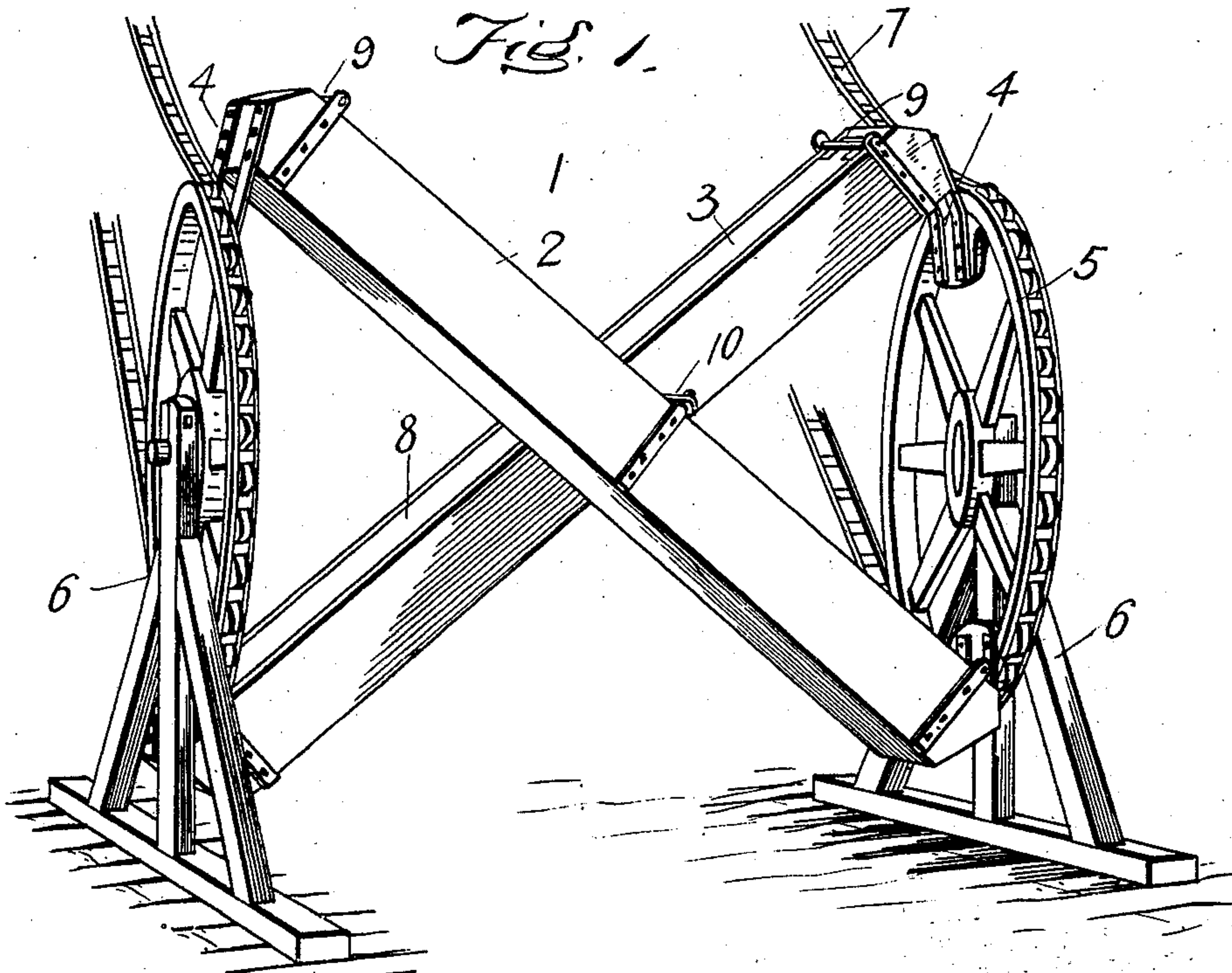
No. 691,802.

Patented Jan. 28, 1902.

W. F. PATTON.
TUMBLING BOX.

(Application filed July 13, 1901.)

(No Model.)



Witnesses:
E. Cross,
Chas. M. Ball

Inventor,
William F. Patton
By
Chas. T. Miller
Att'y.

UNITED STATES PATENT OFFICE.

WILLIAM F. PATTON, OF TOLEDO, OHIO.

TUMBLING-BOX.

SPECIFICATION forming part of Letters Patent No. 691,802, dated January 28, 1902.

Application filed July 13, 1901. Serial No. 68,230. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM F. PATTON, a citizen of the United States, residing at Toledo, in the county of Lucas and State of Ohio, have
5 invented new and useful Improvements in Tumbling-Boxes; of which the following is a specification.

This invention relates to improvements in tumbling-boxes adapted for receiving metallic castings and keeping them in motion to remove the irregularities of surface therefrom by an energetic rubbing action or attrition and for other analogous uses.

The object of the invention is to provide a
15 device of this character in which the rubbing action is facilitated by giving the castings and confined rubbing material a rotary tumbling as well as a sliding motion, thus causing the castings to simultaneously move in
20 two different paths and effectually bringing their surfaces into contact with each other and with the rubbing material; and a further object of the invention is to provide a device adapted for other uses, such as for imparting
25 rotary motion to molds for making hollow seamless bodies, as set forth in my application filed of even date herewith for "Process of making hollow bodies," Serial No. 68,690. With these and other objects in view the in-
30 vention consists of certain novel features of construction, combination, and arrangement of parts, as will be hereinafter more fully described, and particularly pointed out in the appended claims.

35 In the accompanying drawings, Figure 1 is a perspective view of a tumbling-box constructed in accordance with my invention. Fig. 2 is a top plan view of the same; and Fig. 3 is a fragmentary detail perspective view of
40 the box-sections, showing the same at their points of connection.

Referring now more particularly to the drawings, the numeral 1 designates the box, which comprises in its construction two cor-
45 responding comparatively long and narrow boxes or chambers 2 and 3, which are crossed to form a substantially X-shaped rotating box or frame. These box-sections 2 and 3 are connected at their ends by straps or brackets
50 4 to sprocket-wheels 5, journaled to rotate upon the supporting-standards 6 and having applied thereto sprocket-chains 7, whereby

rotary motion may be communicated to the wheels from any suitable source of power. Each box section or compartment is provided
55 with a removable cover 8, held closed at its ends by suitable keeper-pins or cross-bolts 9 and at the center by a hasp or other suitable fastening device 10. The hasp 10, which closes the cover of each section, is preferably
60 hinged to the other section, so that the two hasps when connected to close the covers will also serve to connect the two boxes or compartments 2 and 3 at their point of crossing and to reinforce them at said point.

65 In operation the covers 8 are removed and the castings, together with broken particles of iron, filings, or other friction or rubbing material, placed inside the boxes or compartments 2 and 3 of the tumbling device, the
70 covers 8 then closed and fastened, and rotary motion communicated to the tumbling device. As the box or tumbling device 1 revolves it will be seen that it will not only communicate a tumbling action to the castings by its cir-
75 cular path of movement, but that the sections or compartments 2 and 3 will form inclined planes, down which the castings and confined rubbing material will slide from one end of each box to the other, and that a con-
80 tinuous back-and-forth sliding motion of the castings and rubbing material will thus be set up, causing all the surfaces of the castings to be exposed and to be brought into contact with each other and with the rubbing mate-
85 rial, whereby the operation of smoothing or finishing the surfaces of the castings and reducing all roughness and irregularities will be speedily and effectually performed.

The device is also adapted for a number of
90 other uses and may be, as set forth in my other pending application hereinbefore referred to, employed for imparting rotary motion to molds for making hollow seamless bodies. Hence I do not limit the invention
95 for use in removing the irregularities of surfaces from castings, but reserve the right to employ it for any purpose for which it is now or may hereafter be found adaptable.

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

1. In a tumbling-box, the combination of a box composed of sections crossed to form an

X-shaped rotating box or frame, sprocket-wheels to which said box-sections are connected and means for communicating motion to said sprocket-wheels, substantially as described.

5
2. In a tumbling-box, the combination of sprocket-wheels, means for communicating motion thereto, a tumbling-box composed of sections crossed to form a rotating box-frame,
10 brackets connecting the ends of said sections to the sprocket-wheels, removable covers for

the box-sections, and means for holding said covers closed and connecting the box-sections to each other, substantially as described.

In testimony whereof I have hereunto set
my hand in the presence of two subscribing
witnesses.

WILLIAM F. PATTON.

Witnesses:

CHAS. R. MILLER,

CHAS. M. BALL.