

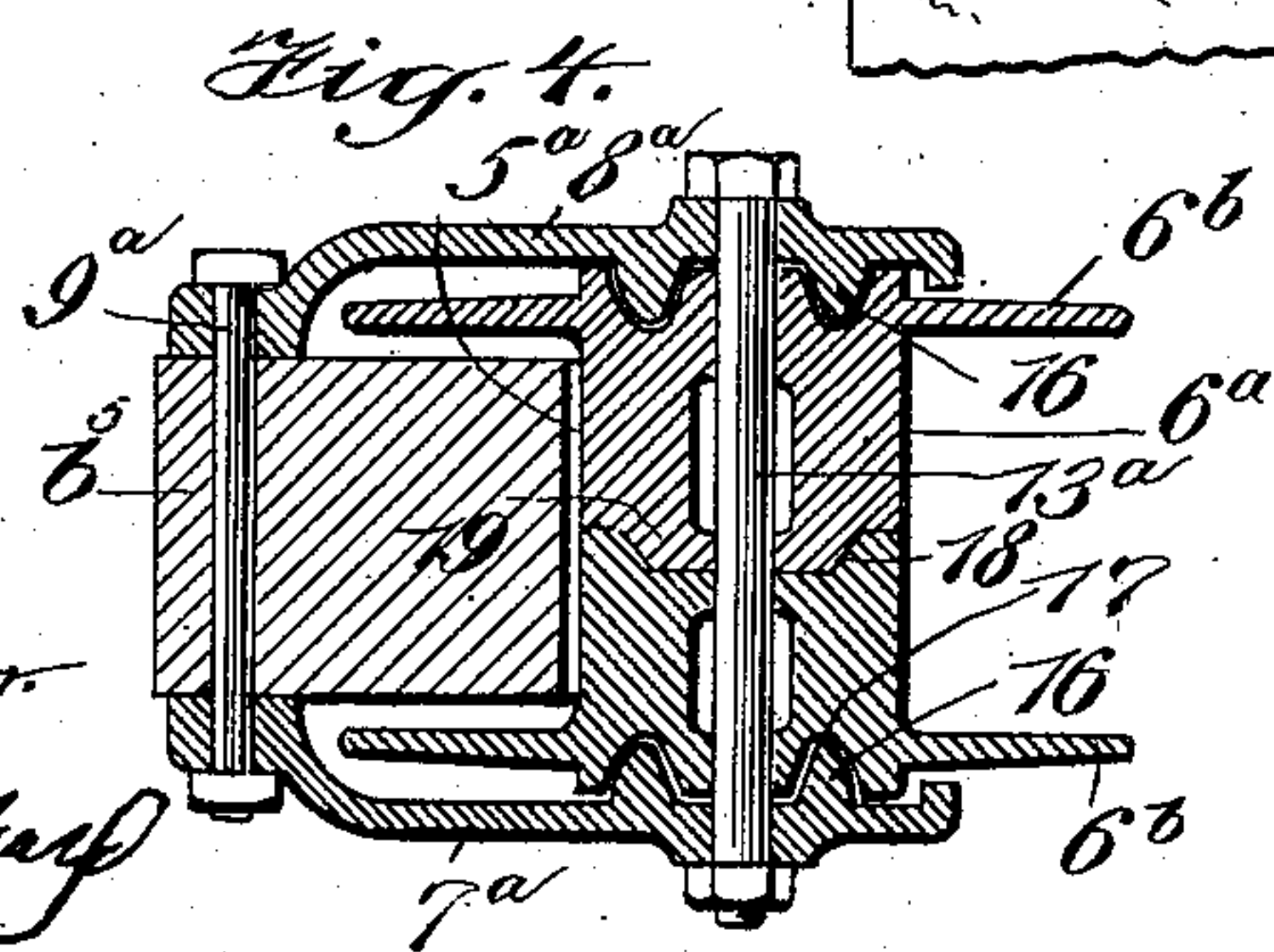
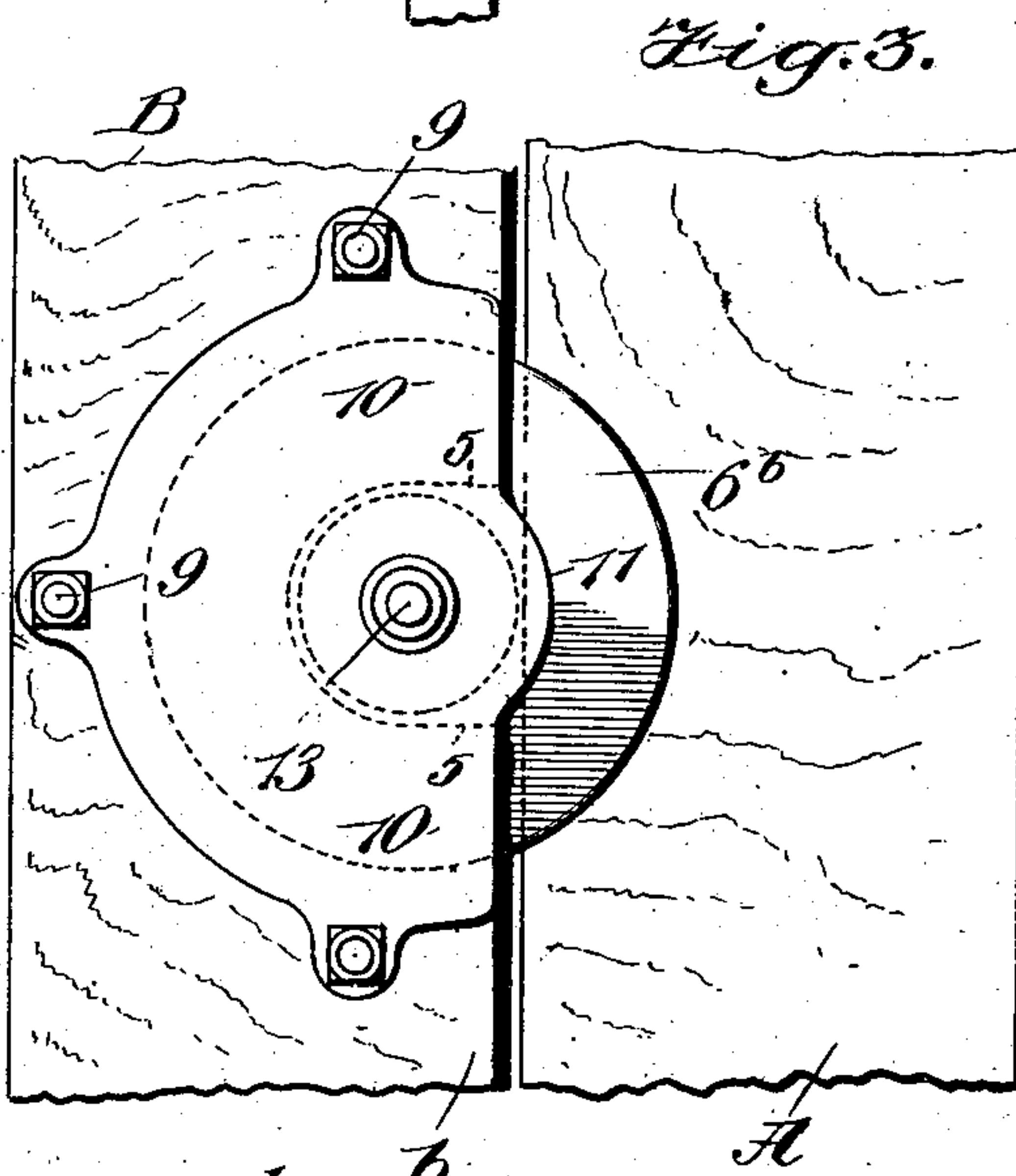
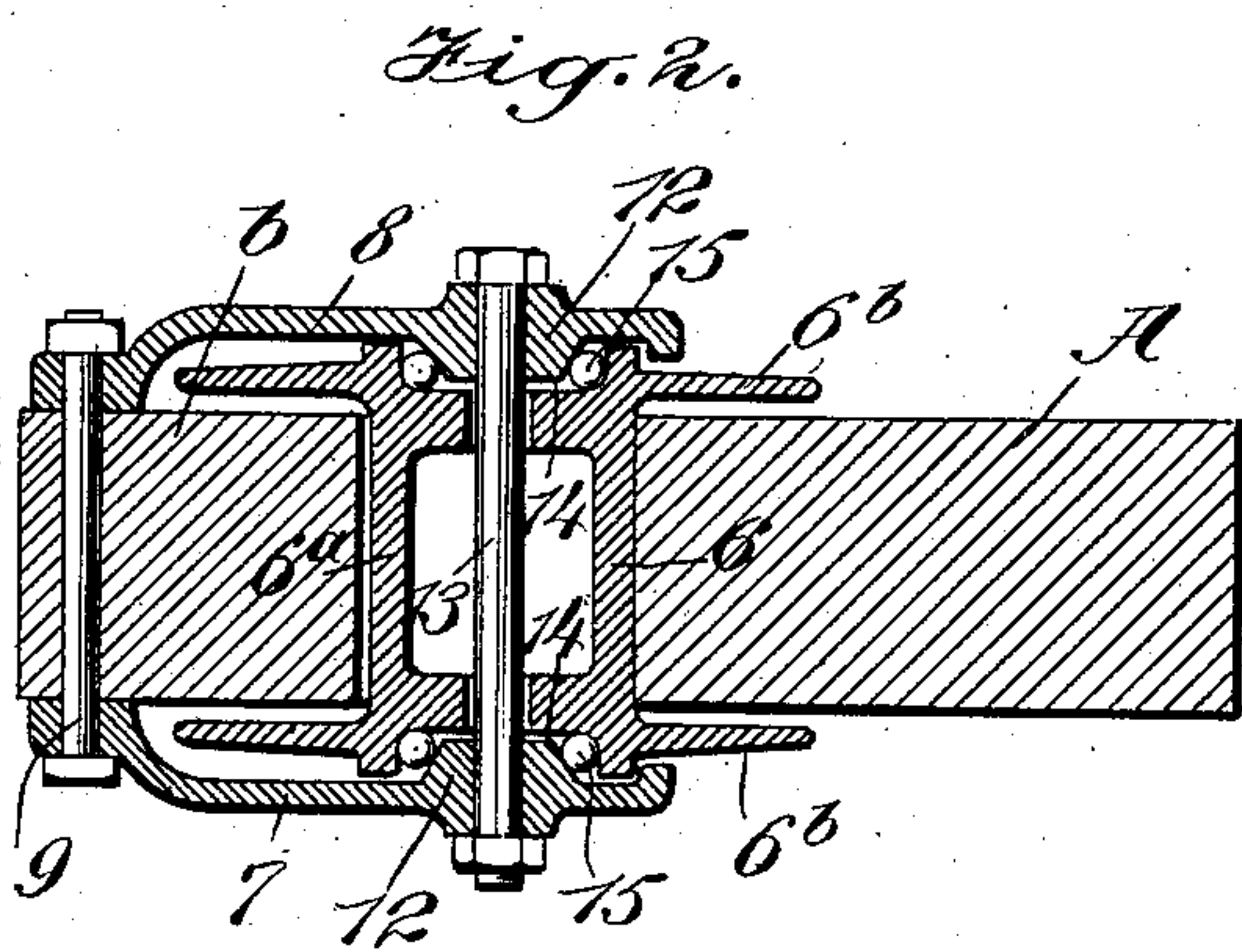
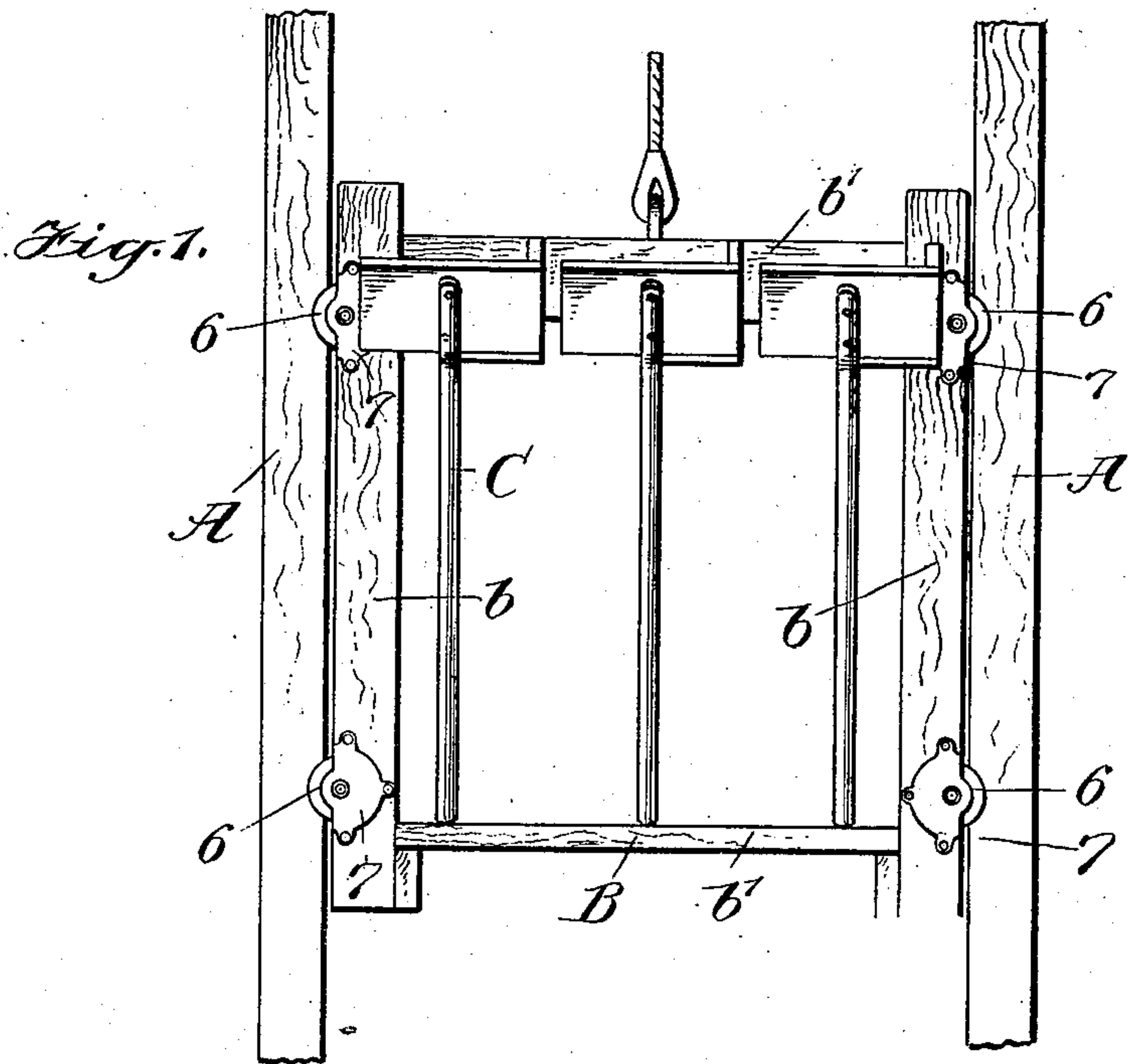
No. 755,344.

PATENTED MAR. 22, 1904.

J. BARRETT.
BEARING FOR ELEVATOR CARRIAGE ROLLERS.

APPLICATION FILED AUG. 8, 1903.

NO MODEL.



WITNESSES:

Geo. W. Taylor.
H. J. Brinkley

INVENTOR

James Barrett

BY

Mumford

ATTORNEYS.

UNITED STATES PATENT OFFICE.

JAMES BARRETT, OF NEW YORK, N. Y.

BEARING FOR ELEVATOR-CARRIAGE ROLLERS.

SPECIFICATION forming part of Letters Patent No. 755,344, dated March 22, 1904.

Application filed August 8, 1903. Serial No. 168,787. (No model.)

To all whom it may concern:

Be it known that I, JAMES BARRETT, a subject of the King of Great Britain, and a resident of the city of New York, borough of Manhattan, in the county and State of New York, have invented a new and Improved Bearing for Elevator-Carriage Rollers, of which the following is a full, clear, and exact description.

My invention relates to improvements in elevators, and the object that I have in view is to provide a simple construction which minimizes friction on the engaging surfaces, thus preventing binding and cutting of the parts.

A further object is to so construct the parts as to produce a strong and light structure, owing to the fact that it is not necessary to cut away the stiles of the elevator-carriage to any material extent in order to mount the rollers thereon.

Further objects and advantages of the invention will appear in the course of the subjoined description, and the actual scope thereof will be defined by the annexed claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures.

Figure 1 is an elevation of a portion of an ordinary hod-elevator equipped with my improvements. Fig. 2 is an enlarged cross-sectional view through one of the rollers and its supporting means, by which the roller is mounted on the carriage. Fig. 3 is an elevation of the parts shown by Fig. 2, and Fig. 4 is a cross-section of another embodiment of the roller and its supporting means.

A designates the guides, and B a slidable carriage forming a part of an ordinary hod-elevator employed by workmen in transporting materials—such as mortar, brick, and the like—from the ground to the floors of a building in the course of erection. As shown by the drawings, the carriage B consists of the stiles *b* and the cross-pieces *b'*, and this carriage is also equipped with means whereby one or a plurality of hods, such as C, may be supported thereon in order to be carried by the elevator to the workmen engaged in the upper part of

a building. The detailed construction of the carriage, however, and the means for mounting the hods C thereon may be modified within wide limits, because they do not form any part of the invention.

In ordinary hod-elevators it is customary to provide the stiles *b* of the carriage with deep recesses for the reception of guides by which the carriage is slidably fitted to the side members A of the upright or inclined frame; but so far as I am aware these stiles have been recessed to such a depth that they are materially weakened by the formation of the recesses which accommodate the guides. In the present invention I aim to overcome this objection and to provide an improved means for guiding the carriage, said means serving to reduce the frictional engagement between the carriage and the frame to such an extent as to prevent binding or cutting of the guides, to restrain the carriage from having any sidewise or lateral vibration or play, and to allow the antifriction devices to be mounted in the carriage without cutting away the stiles thereof to such an extent as to weaken said carriage. Each stile *b* of the carriage is provided with a recess 5, which should not extend into or across the stile to any appreciable depth, and this recess receives a part of a guide-roller 6. Against the respective faces of the stile *b* of the carriage are rigidly secured the bracket-plates 7 8, (see Figs. 2 and 4,) each bracket plate being offset from the face of the stile and the two bracket-plates being secured to the respective sides of the stile by means of bolts 9. These bolts serve to fasten both bracket-plates to the carriage; but it is evident that the bracket-plates may be individually fastened in place, if desired. The bracket-plates are spaced laterally with respect to the carriage-stile, and said plates are provided with straight edges 10 and with a curved edge 11, as shown by Fig. 3. The curved edge of each plate extends slightly beyond the edge of the carriage-stile, and the middle portions of the pair of plates are opposite to the recess 5 in the stile. These plates at their middle portions are provided with inwardly-extending bosses 12, which are formed on the opposing faces of the plates and are

disposed in concentric relation. Through the
bosses of the pair of plates passes a bolt or
arbor 13, on which is loosely mounted the
roller 6, whereby the arbor serves to con-
nect the roller to the bracket-plates, which in
turn are fastened solidly on the carriage-stile.
The roller is shown as consisting of a drum 6^a
and face-plates or flanges 6^b, said drum and
the flanges being made in one piece, as rep-
resented by Fig. 2, although this detailed con-
struction of the roller is not an essential fea-
ture of the invention. The drum of the roller
is arranged to fit snugly in the recess 5 of the
carriage-stile, whereas the flanges or face-
plates of said roller are adapted to fit around
the edges of the carriage-stile and the guide
A, as shown by the drawings. The roller is
thus mounted on the carriage to travel there-
with, and it is arranged to ride upon the edge
portion of the guide A, which opposes a simi-
lar portion of the carriage-stile; but the flanges
or face-plates of said roller fit around the stile
and the guide A in a way to confine the car-
riage against lateral movement or displace-
ment with respect to the guides.

In the construction shown by Fig. 2 the end
portions of the roller 6 are provided with
channels 14, which form cups adapted to re-
ceive the bearing-balls 15. The cups of the
roller also receive the conical bosses 12 of the
stationary bracket-plates, said bosses being
adapted to engage with the bearing-balls, and
thereby constitute ball-bearings between the
bracket-plates and the end portions of the
roller.

In Fig. 4 of the drawings I have illustrated
another embodiment of the roller and the
means for mounting the same on the carriage-
stile 7^b, the latter being provided with the re-
cess 5^a and having the pair of companion
bracket-plates 7^a 8^a bolted solidly thereto, as
at 9^a. The companion bracket-plates are pro-
vided on their opposing faces with annular
tapering ribs 16, which are disposed in con-
centric relation, and the end portions of the
roller have grooves 17, adapted to snugly re-
ceive the annular flanges which form the bear-
ings for the roller, said parts being fitted com-
pactly for the exclusion of dirt and dust from
the roller-bearings. The roller is free to turn
on the arbor 13^a and the bearings afforded by
the annular flanges 16, and in the construc-
tion shown by said Fig. 4 I dispense with the
series of bearing-balls 15, thus simplifying
the construction. Said Fig. 4 also represents
another form of roller wherein the drum por-
tion 6^a thereof is divided transversely, so as
to produce complementary sections or members
of the roller. One section of the roller is pro-
vided with a flange or face-plate and with a
socket 18, while the other roller-section has
the other flange or plate and a conical projec-
tion or boss 19, the latter being fitted snugly
in the socket 18 when the roller-sections are

assembled, as shown by Fig. 4 of the drawings.

Although I have shown and described the
roller as having the flanges or face-plates made
in one piece therewith or with the sections of
the roller, I do not desire to limit myself to
this particular construction, because I am
aware that the flanges or face-plates may be
made in separate pieces from the roller-drum
and that they may be secured thereto in any
suitable way.

Although I have described my improved
roller in connection with an elevator of the
kind known as "hod-elevators," I would have
it understood that the improvements may be
used on freight, passenger, and other kinds of
elevators.

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

1. In an elevator, the combination with a
guide, and a carriage having a recessed stile,
of a roller mounted on said carriage to partly
occupy the stile, said roller having flanges or
face-plates disposed for engagement with the
stile and with said guide.

2. In an elevator, the combination with an
upright frame, and a carriage, of a roller pro-
vided with flanges or face-plates, said roller
being mounted on the carriage to ride upon
the frame, and the flanges or face-plates of
the roller being disposed for engagement with
the respective sides of the carriage and a guide.

3. In an elevator, a carriage, complementary
bracket-plates fixed thereto, an arbor support-
ed by said bracket-plates, and a roller mounted
on said arbor.

4. In an elevator, a carriage, complementary
bracket-plates fixed thereto and provided with
bearings on their opposing faces, an arbor
supported by said bracket-plates, and a re-
cessed roller revoluble on said arbor and hav-
ing engagement with said bearings of the
bracket-plates.

5. In an elevator, a carriage, bracket-plates
fixed thereto and provided with bearings on
their opposing faces, an arbor supported by
said bracket-plates, and a roller revolubly
mounted on said arbor; said roller having re-
cesses or grooves in its ends for the reception
of the bearings of the bracket-plates.

6. In an elevator, a carriage, bracket-plates
fixed thereto and provided on their opposing
faces with bearings, an arbor supported by
said bracket-plates, and a divided flanged
roller revolubly mounted on said arbor and
engaging with the bearings of the bracket-
plates.

In testimony whereof I have signed my name
to this specification in the presence of two sub-
scribing witnesses.

JAMES BARRETT.

Witnesses:

BERNARD RING,
ERNEST E. KENDALL.