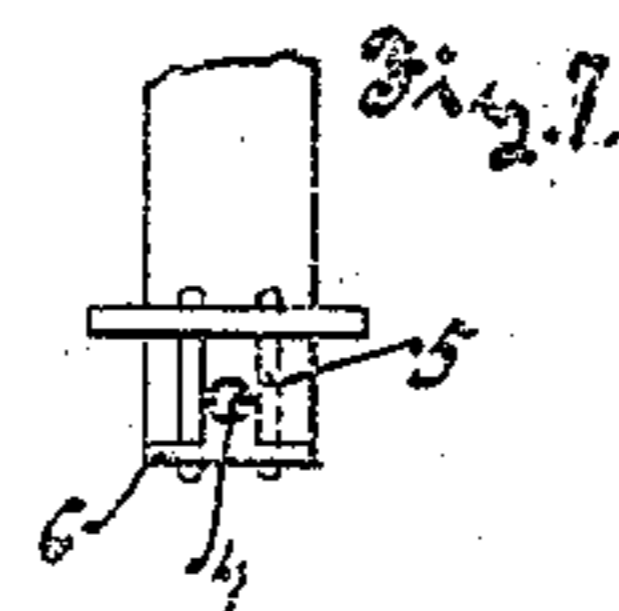
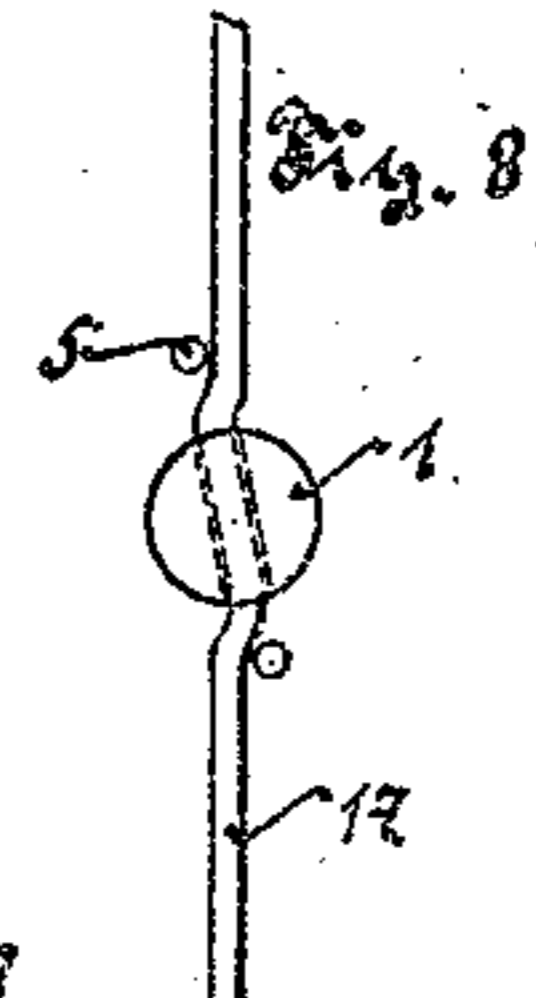
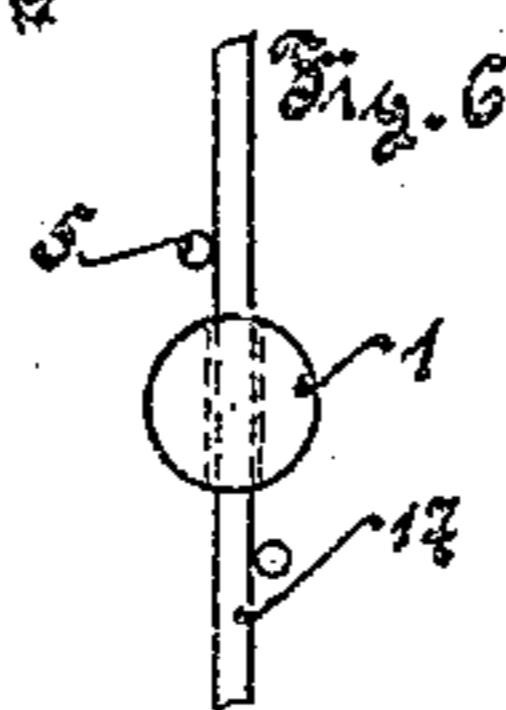
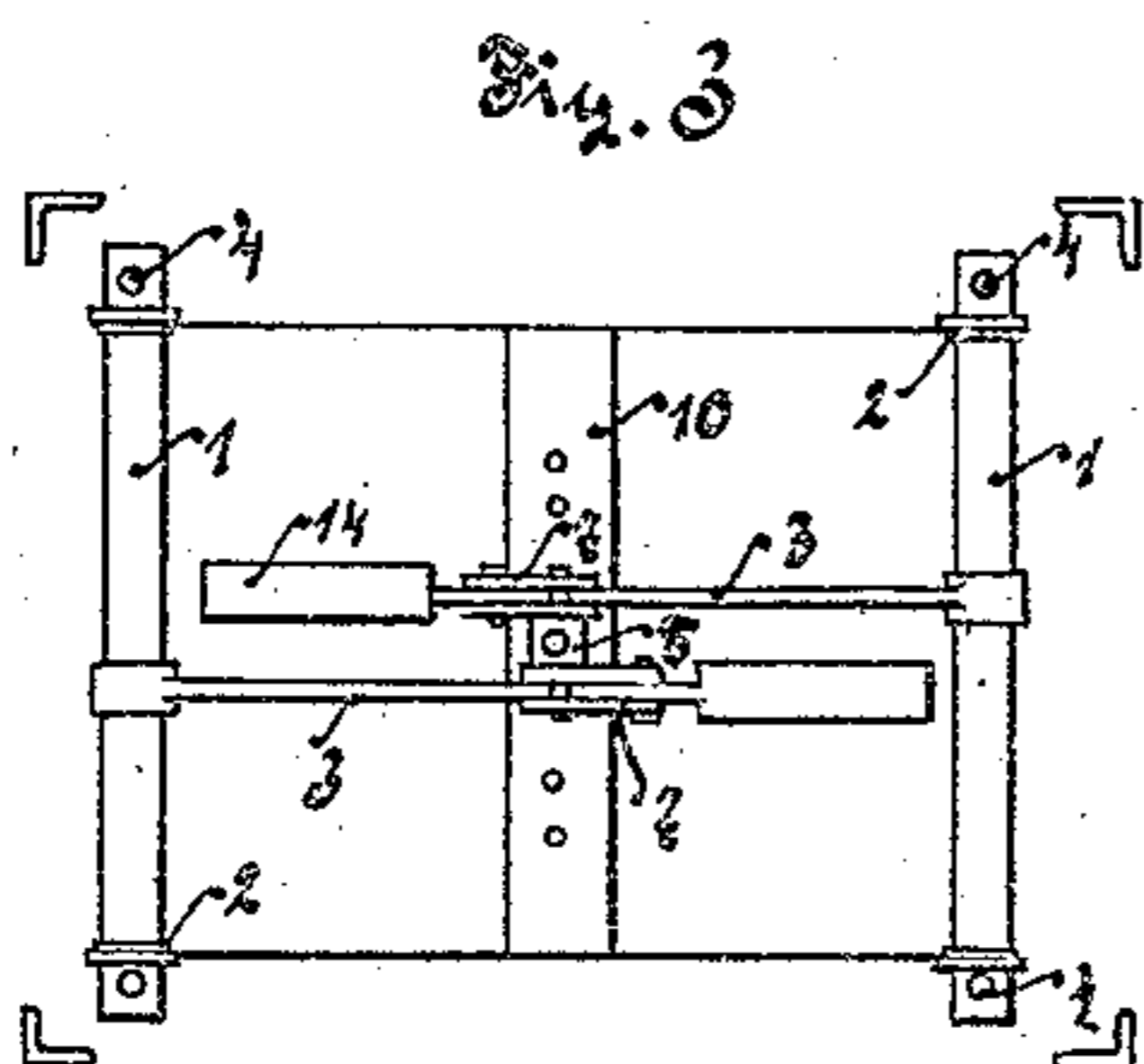
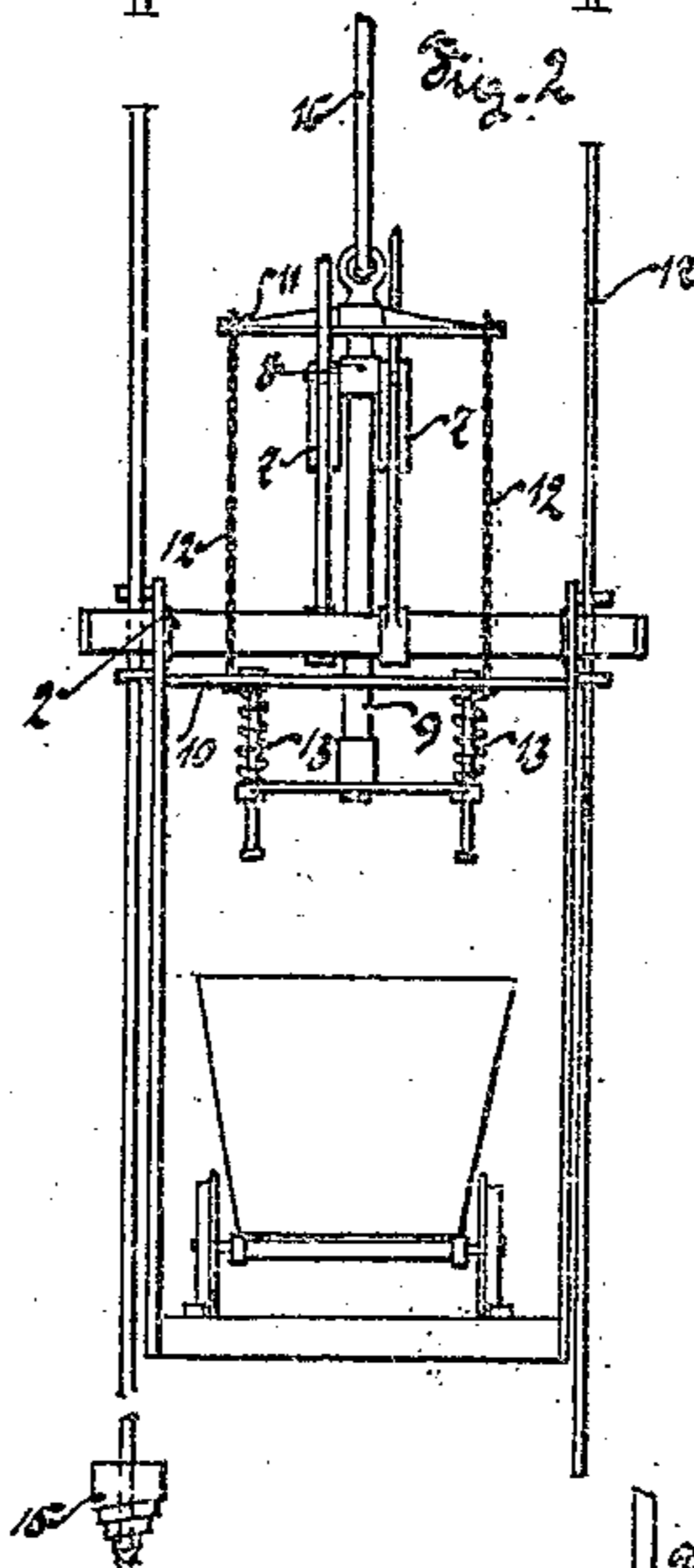
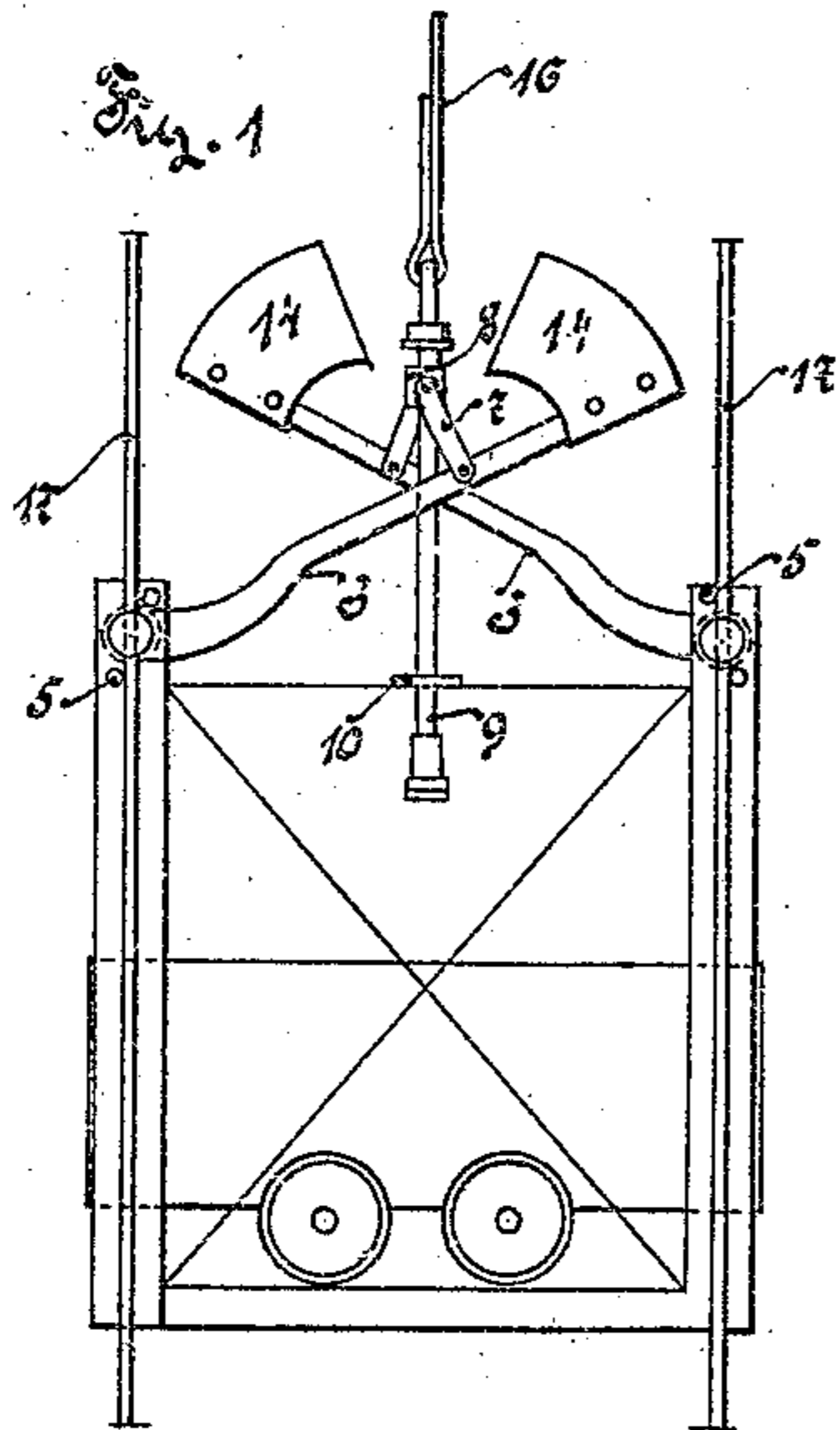
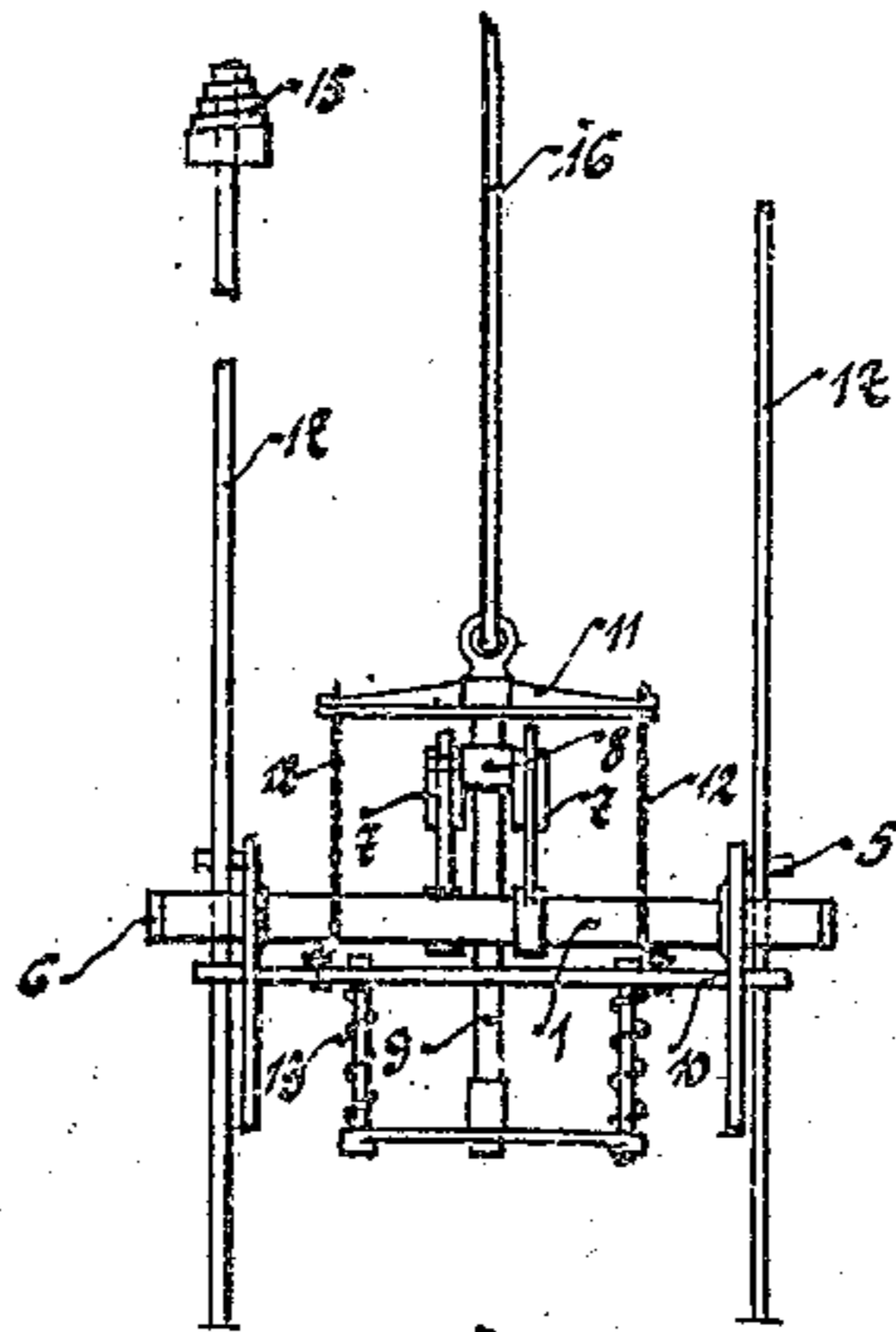
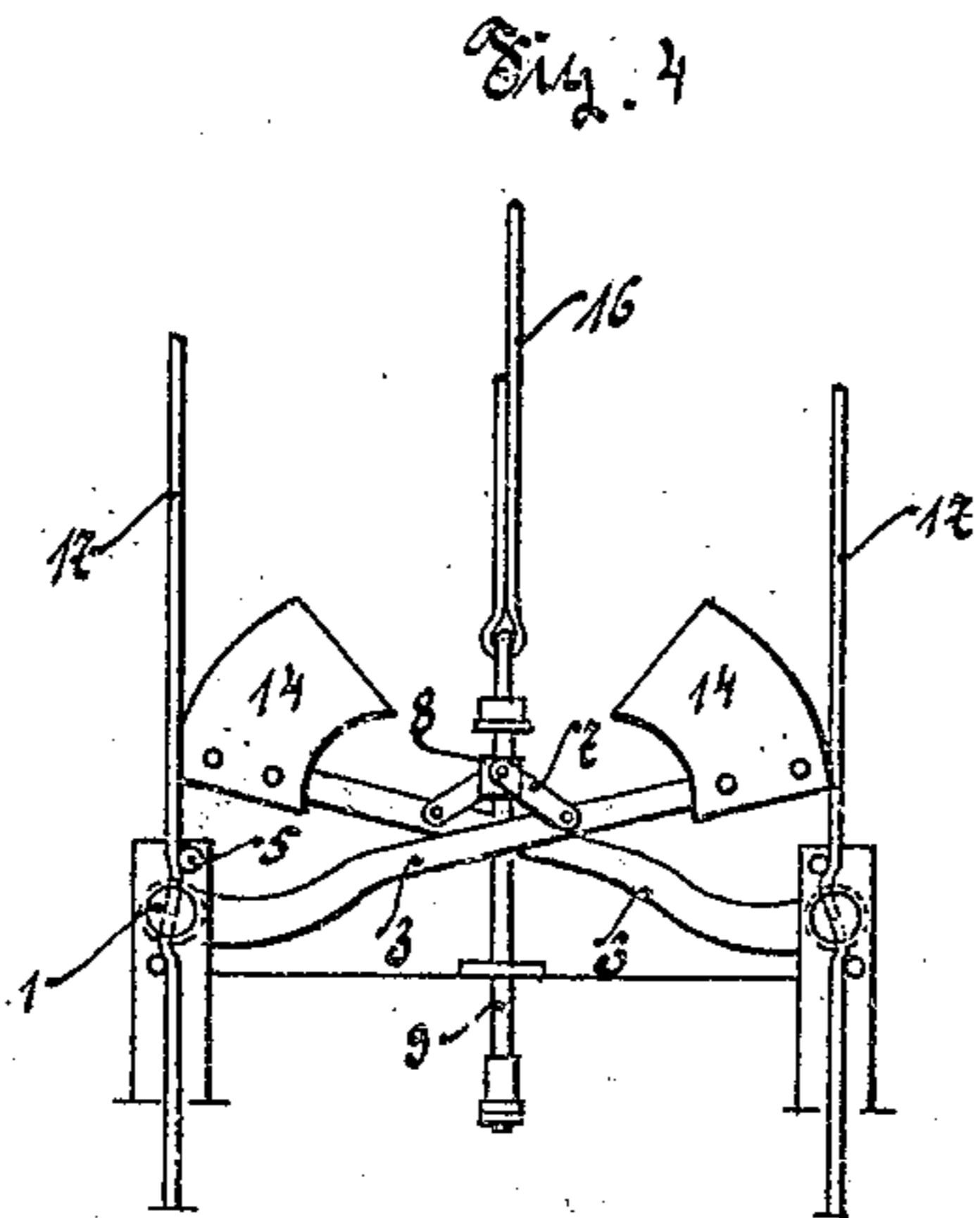


H. W. SOLFRIAN.
CATCHING DEVICES FOR CAGES.
APPLICATION FILED AUG. 19, 1909.

956,214.

Patented Apr. 26, 1910.



Witnesses:
Galter Hahn
Conrad Kockling

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UNITED STATES PATENT OFFICE.

HEINRICH WILHELM SOLFRIAN, OF HOLSTERHAUSEN, WANNE, GERMANY, ASSIGNOR
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CATCHING DEVICES FOR CAGES.

956,214.

Specification of Letters Patent.

Patented Apr. 26, 1910.

Application filed August 19, 1909. Serial No. 513,713.

To all whom it may concern:

Be it known that I, HEINRICH WILHELM SOLFRIAN, a subject of the German Emperor, and resident of Holsterhausen b. Wanne i. W., Germany, have invented certain new and useful Improvements in Catching Devices for Cages, of which the following is a specification.

The subject of this invention relates to those catching-devices by which the falling down of the cage, when the rope breaks, is prevented by the bending of the guide-rope on the cage.

Devices effecting the catching of the cages by the bending of the guide-rope are, it is true, already known. It is also known that the bending of the guide-rope is effected by brake-heads fastened on shafts. It is moreover no longer new to produce in devices of this kind several bends in the guide-ropes. The subject of this invention has the advantage over these known devices that the four bending-places provided for each guide-rope are formed by simple bores made through the axle and by two simple pins for each guide-rope, which are rigidly fixed to the cage. In the face of a device already known there is to be particularly pointed out that according to the present invention the pins are not rigidly fastened to the axles, so that it can never happen that the pins, especially if the edges are broken, do no longer touch the rope, so that only two bending-points are formed, which may perhaps not be sufficient to stop the cage, as may happen with the other device where the pins arranged above and below the catching-arms are firmly united with the same. By the subject of this invention an object already known is attained by more simple and more reliable means.

A sample form of construction of the invention is illustrated in the accompanying drawing, in which like letters refer to like parts throughout the different views.

Figures 1, 2 and 3 show views of the whole arrangement, the bending device being in an open position. Figs. 4 and 5 show the bending-device in the acting-position. Figs. 6, 7 and 8 show details of the device on an enlarged scale. Fig. 8 shows dis-

tinctly the four bending-places for each guide-rope.

On the axles 1 rotating on the cover of the cage in the connecting-pieces 2, which form journals, are fastened the two levers 3. The ends of the axles possess the holes 4, through which pass the guide-ropes. In the immediate vicinity of the journal of the axles 1 there have been arranged on the connecting-pieces 2 pins 5, two on each. The openings 4 are closed by the plate 6 which enters into the opening 4 and is screwed to the axle.

The levers 3 are movably jointed to the cross-piece 8 by means of the four fish-joints 7. The cross piece 8 which can be adjusted by screw threads is seated on the kingbar 9 which loosely passes through the traverse 10. By the traverse 11 and the chain-pieces 12 the cage is likewise movably united with the king-bar 9, whose upper end terminates in an eye through which the hoisting-rope 16 is put.

From Figs. 1 and 2 can be seen that the two chain-pieces 12 are taut, as they carry the weight of the cage; it can further be seen that the two springs 13 are pressed together and are therefore in their state of tension.

From Figs. 1, 5 and 6 can be seen that the direction of the guide-ropes coincides with the direction of the openings 4 and that the pins 5 are not fastened to the axles 1 but to the cage. If the hoisting-rope 16 breaks, the tension of the released springs 13 acts sooner than the downwardly acting weight of the cage. The tension of the two springs 13 is communicated to the two levers 3 through the cross-piece 8 and the fish-joints 7; the counterweights 14 draw the same along with them, so that the axles 1 are twisted toward the interior. By the twisting of the axles 1 also the openings 4 are brought out of their normal into an oblique position with regard to the middle, whereby the guide-ropes 17 are pressed, in the first place, against the pins 5, and are then easily bent without being damaged. The bending of the guide-ropes 17 in 16 places effects the stopping and fixing of the cage. The guide-ropes are at both ends made taut by strong buffer-springs 15, and the same remove also

the bends formed during the stopping of the cage.

What I claim as new and desire to secure by a United States Letters Patent, is:—

In catching devices for cages the combination with the cage and the guide ropes, of axles on the cage having bores therein, said ropes passing through the bores and adapted to be bent by the turning of said

axles, and pins on the cage against which the ropes impinge when bent.

In testimony whereof I have hereunto signed my name this 22nd day of July 1909, in the presence of two subscribing witnesses.

HEINRICH WILHELM SOLFRIAN. [L. s.]

Witnesses:

OTTO KÖNIG,
PAUL MÜLLER.