

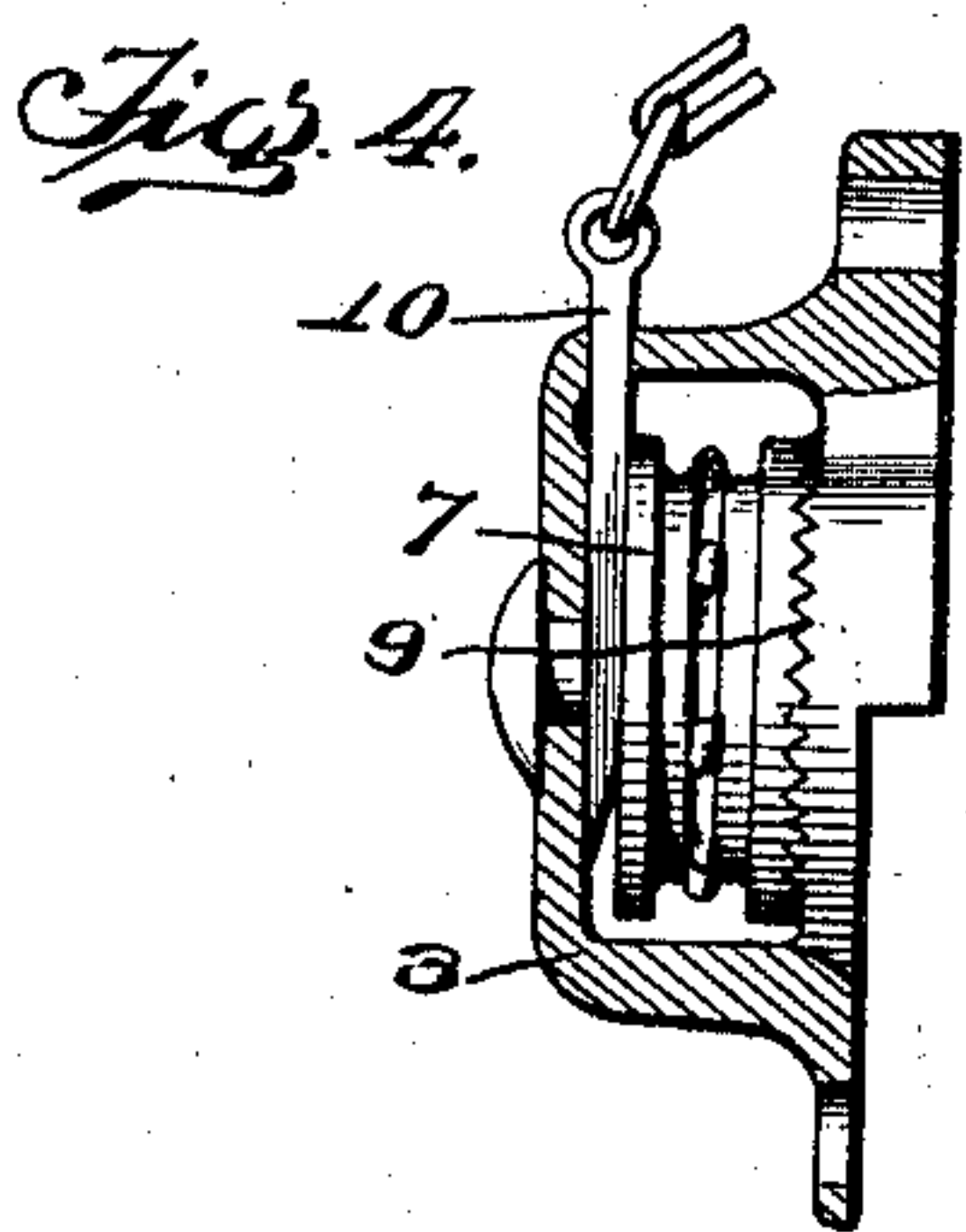
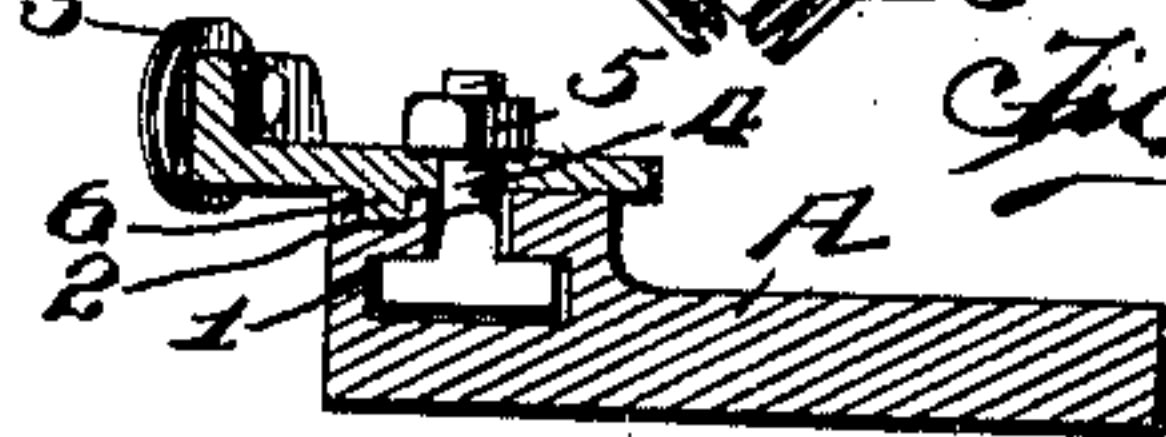
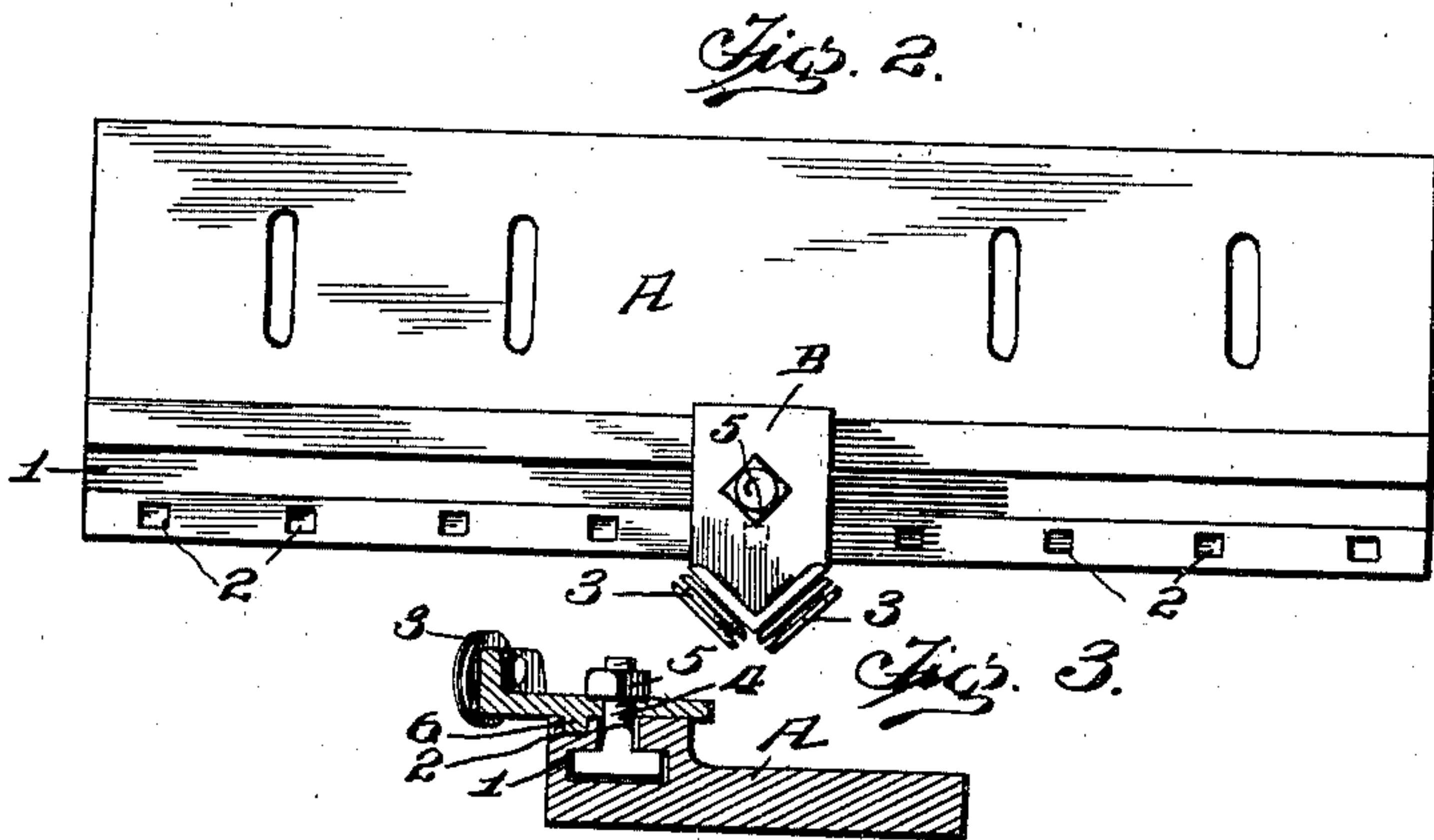
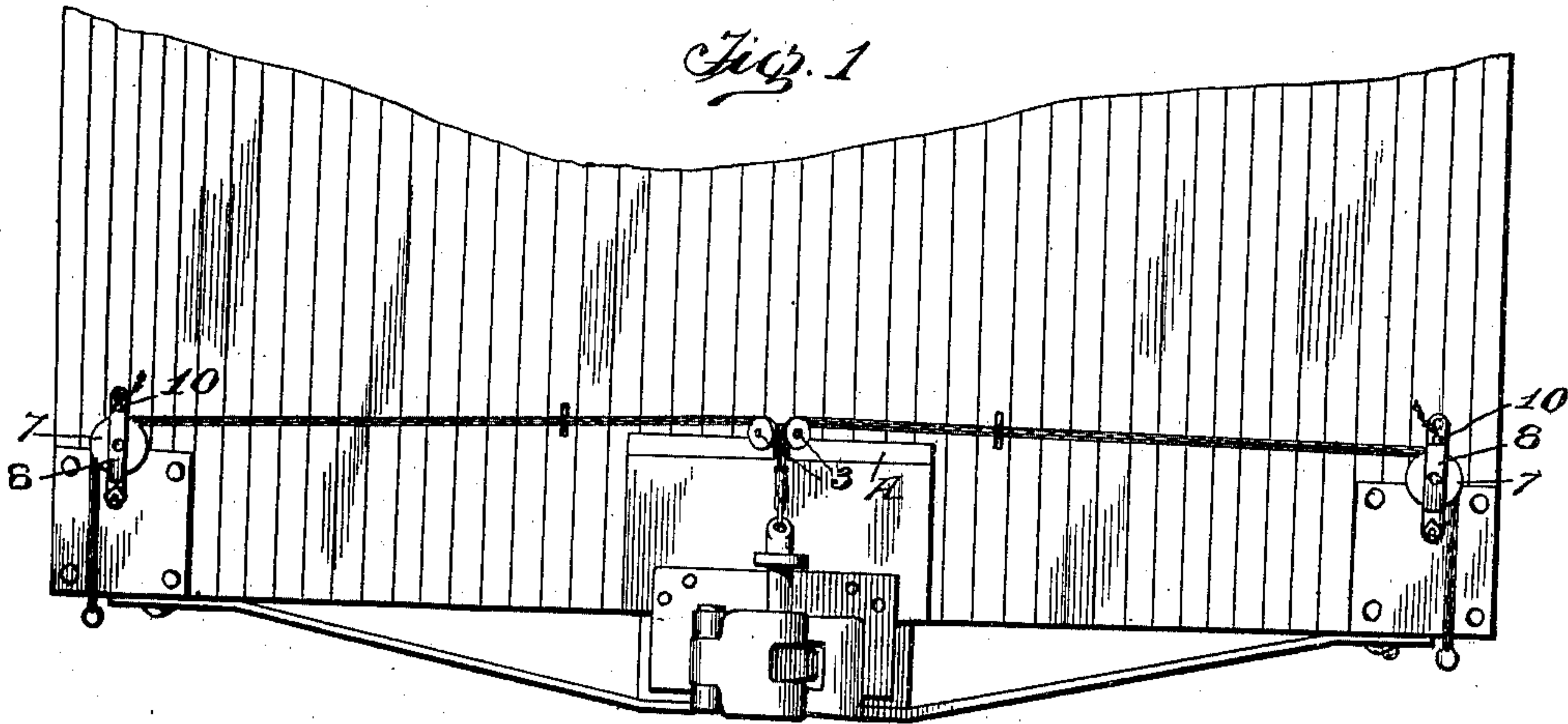
No. 709,707.

Patented Sept. 23, 1902.

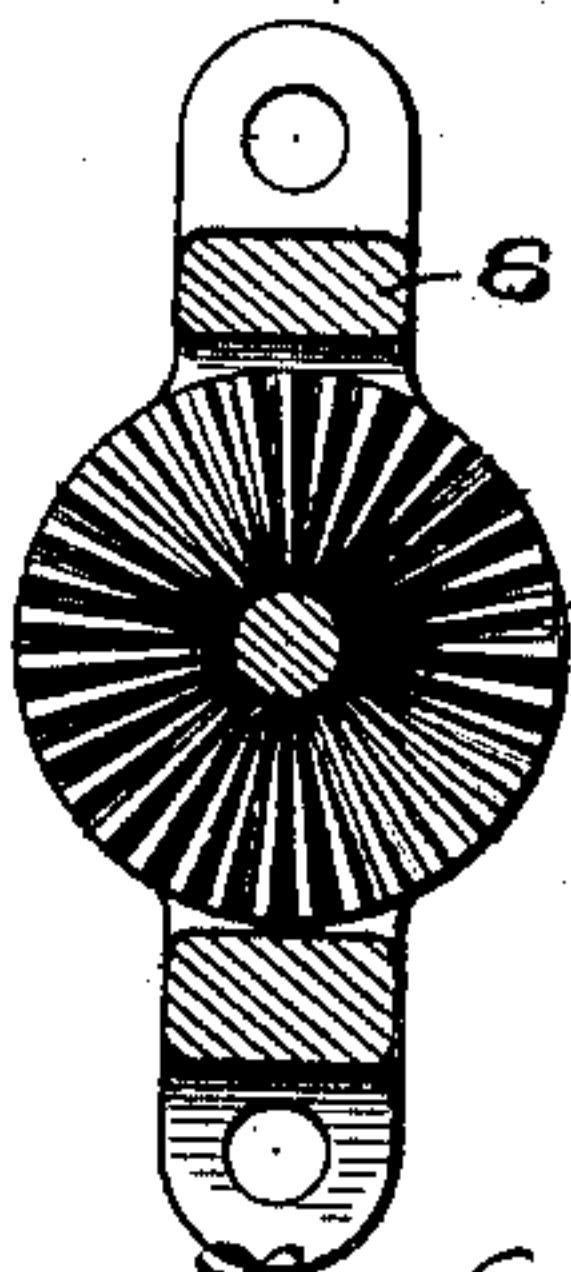
G. GROOBEY.  
MEANS FOR UNCOUPLING CARS.

(Application filed Nov. 14, 1901.)

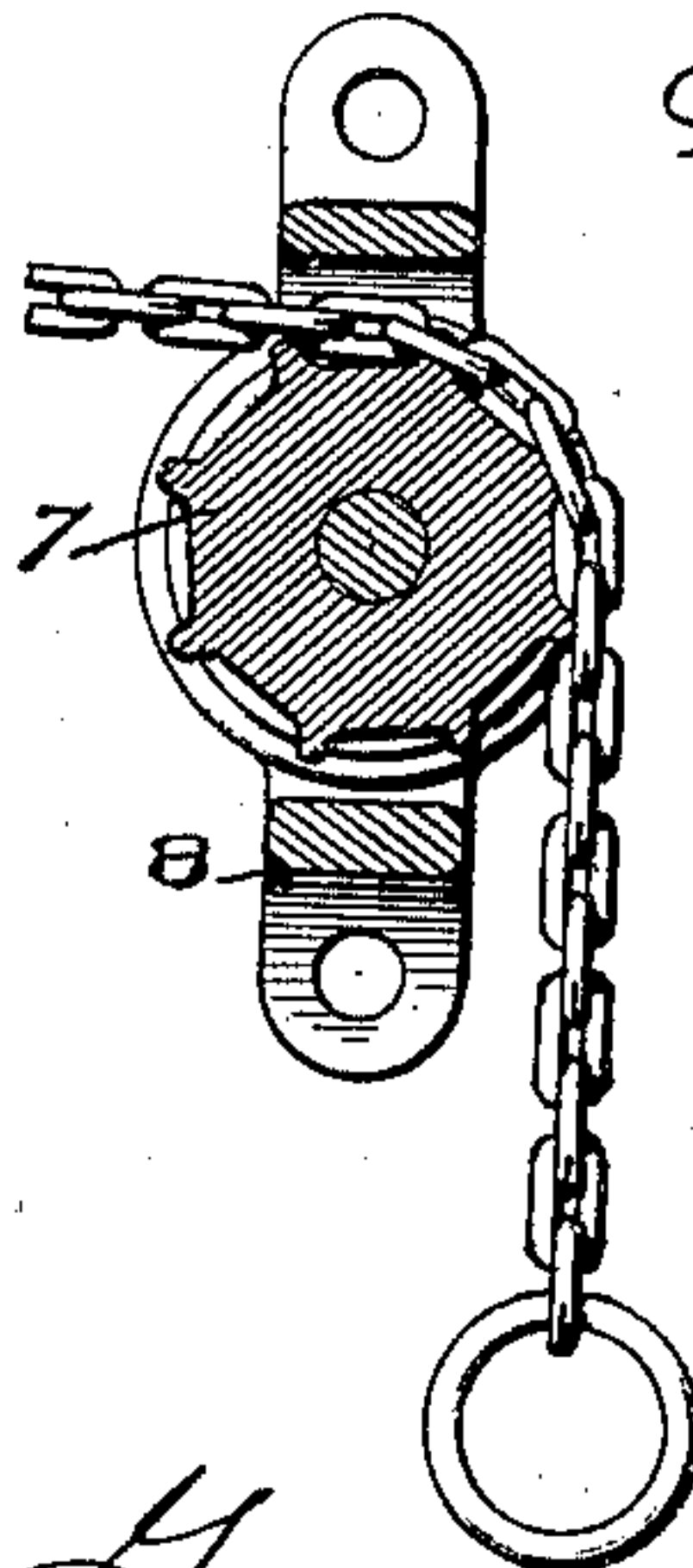
(No Model.)



*Fig. 6.*



*Fig. 5.*



Witnesses  
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# UNITED STATES PATENT OFFICE.

GEORGE GROOBEY, OF CHICAGO, ILLINOIS.

## MEANS FOR UNCOUPLING CARS.

SPECIFICATION forming part of Letters Patent No. 709,707, dated September 23, 1902.

Application filed November 14, 1901. Serial No. 82,266. (No model.)

*To all whom it may concern:*

Be it known that I, GEORGE GROOBEY, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Means for Uncoupling Cars, of which the following is a specification.

My invention relates to an improvement in railway equipments, and more particularly to improvements in means for uncoupling cars, the primary object being to provide a ready means of adjustment for the uncoupling mechanism for a wide range of different types of couplings. In some the uncoupling means is in one position, whereas in others it is in altogether a different position; and it is the purpose of my present invention to provide for this exigency and in so doing employ flexible means for operating the coupling.

With the foregoing in view my present invention consists of a guide-plate used in conjunction with a sheave-block adjustably connected with the plate and carrying sheaves which afford a guide for the flexible connection which unfastens the coupling and which block is always capable of being placed in position to accommodate the particular coupling being used; and it further consists in certain novel features of construction and combinations of parts, which will be hereinafter described, and particularly pointed out in the claims.

In the accompanying drawings, Figure 1 is a view showing my improvement applied to the end of a freight-car. Fig. 2 is a detail view of the guide-plate with the sheave-block in position thereon. Fig. 3 is a transverse vertical section through the guide-plate and sheave-block, and Figs. 4, 5, and 6 are detail views of the fastening mechanism.

The guide-plate A is preferably cast of malleable iron and is provided with an undercut groove 1, which extends preferably throughout its length, and a number of notches 2 2—say eight in all—are located adjacent to this groove. The number of notches is not essential; but there are, of course, as many notches as adjustments.

The letter B denotes the sheave-block. This block carries two sheaves 3 3, set at an angle

to each other, and connected with the block is a bolt 4, the head of which fits the undercut groove 1, whereas the threaded end extends upward through the groove and a hole in the sheave-block and is adapted to receive a nut 5 thereon, by means of which the block is securely clamped to the plate. As a further means of making this attachment of the block to the plate rigid a depending lug 6 is cast on the lower surface of the block, and this lug is dropped into one of the notches—the notch opposite the uncoupling pin or means—after which the block is clamped down tight by turning the nut fast upon the bolt. A change of adjustment is effected by unscrewing the nut, loosening or removing the bolt, and then the block is placed in position and secured. This change of adjustment is only necessary when a different type of coupling is attached to the car, and then by the use of my improvement the sheave-block may be moved to any desired position with facility.

From the uncoupling device a chain or other flexible connection extends over the two sheaves outward in opposite directions to the opposite sides of the car, and here the locking-sheaves 7 7 are provided. These sheaves are journaled in housings 8 8, and their peripheries are constructed to fit the links of the chains or flexible connections, so as to prevent their slipping thereon and at the same time afford a bearing for the connection when the latter is pulled to raise the uncoupling device. Each sheave is provided with a rosette 9 on the inner face to engage a corresponding rosette on the housing, and a key or wedge 10 is provided for insertion in the housing outside of the sheave to wedge and lock the sheave to the housing. In this way the uncoupling device is easily controlled from either side of the car and as easily and quickly locked against accidental displacement. In other words, the chain is to all intents and purposes locked to the locking-sheaves, at least against sliding, although as the sheave turns a portion constantly removes itself, and the wedge or key locks the sheave, thus holding the parts in readiness for uncoupling again. The key or wedge is merely



removed, and the uncoupling device drops, due to its greater weight and that of the chain, between it and the locking-sheave.

Should the key or wedge not be inserted, 5 from oversight or from other cause, it is calculated that the teeth 9 9 alone will lock the parts together, as the function of the key or wedge is not to lock the parts against turning, but merely to prevent the sheaves 7 7 10 from moving endwise so they can turn. By omitting the wedge or key the parts would remain locked together; but a sudden impact would cause them to separate, and the weight of the chain and uncoupling device 15 would cause the sheave to turn and drop the uncoupling device, which action might at times be advantageous; but to insure permanency the key or wedge must be in place.

It is evident that slight changes might be 20 made in the form and arrangement of the several parts described without departing from the spirit and scope of my invention, and hence I do not wish to limit myself to exact construction herein set forth; but,

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

1. In uncoupling mechanism, the combination with a guide-plate, and a sheave-block 30 adjustably connected therewith and carrying sheaves, of a flexible connection adapted to extend over said sheaves in opposite directions to the sides of the cars.

2. The combination with a guide-plate, and 35 a sheave-block, adjustably connected therewith and carrying sheaves, of a flexible connection adapted to extend over said sheaves in opposite directions to the sides of the cars, and means for locking said connection or con- 40 nections.

3. The combination with a grooved plate having notches therein, of a sheave-block having a lug adapted to enter one of said 45 notches, and a bolt and nut for securing the block to the plate.

4. The combination with a grooved plate having notches therein, of a sheave-block having a lug adapted to enter one of said 50 notches, and a bolt and nut for securing the block to the plate, said sheave-block carrying a pair of sheaves at an angle to each other, and flexible connection extending over said sheaves.

5. The combination with an uncoupling 55 device, and a flexible connection extending therefrom, of a locking-sheave over which

said connection passes, said sheave mounted both to turn and move endwise on its support or bearing, and means for locking the sheave.

6. The combination with an uncoupling 60 device, and a flexible connection extending in opposite directions therefrom, of an adjustable sheave-block, a pair of locking-sheaves, having rosettes of teeth thereon, housing having similar teeth thereon and keys 65 or wedges for locking the sheaves to the housings.

7. The combination with a guide-plate having an undercut groove extending lengthwise thereof, and notches in said plate, of a sheave- 70 block having a lug adapted to enter one of said notches, a bolt the head of which is fitted to the groove and the opposite end of which passes through the groove and block, a nut adapted to screw on the bolt to fasten 75 it in place to clamp the block, and a flexible connection adapted to extend over said sheaves to the device to be operated.

8. In uncoupling mechanism, the combination with a guide-plate, of a sheave-carrying 80 plate having a pair of sheaves journaled thereon, said plate capable of several adjustments upon said guide-plate whereby to bring the adjacent points of the sheaves in line with the uncoupling device of different types of 85 car-couplings.

9. The combination with a car, uncoupling means thereon, and a block adjustably connected widthwise of or across the car, and adapted to be located in line with the uncou- 90 pling means, said block carrying sheaves, of a flexible device connected with the uncoupling means, thence extended upwardly over a sheave on the block and finally to an edge of the car within easy reach of the trainman. 95

10. In an uncoupling mechanism, the combination with a guide-plate having a groove extending longitudinally thereof, a block, and means extending through the block into the groove by which the block is adjustable 100 lengthwise of the groove, and a flexible device connected with the uncoupling means, thence extended to the block and finally to an edge of the car within easy reach of the trainman. 105

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

GEORGE GROOBEY.

Witnesses:

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WATTS T. ESTABROOK.