

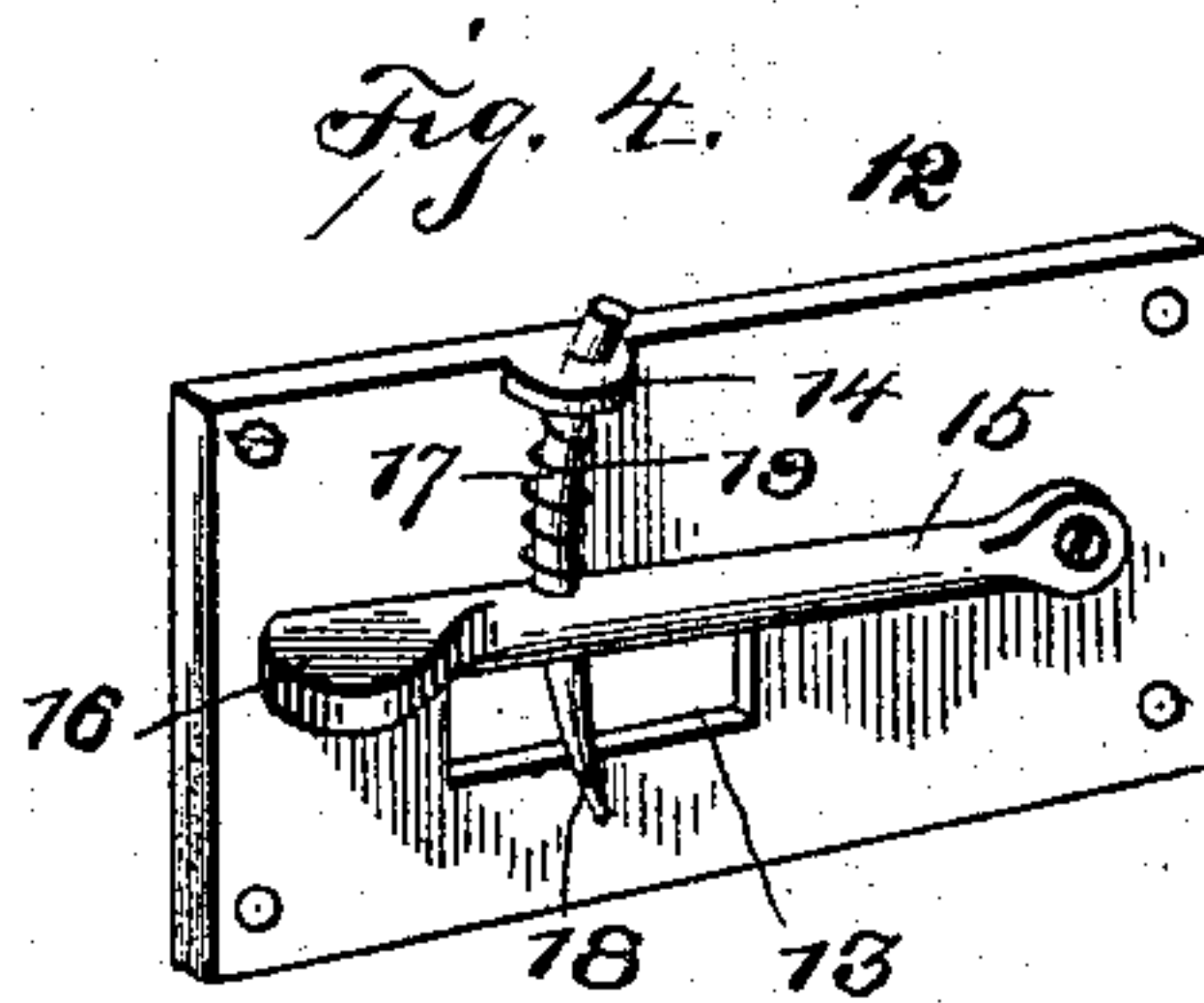
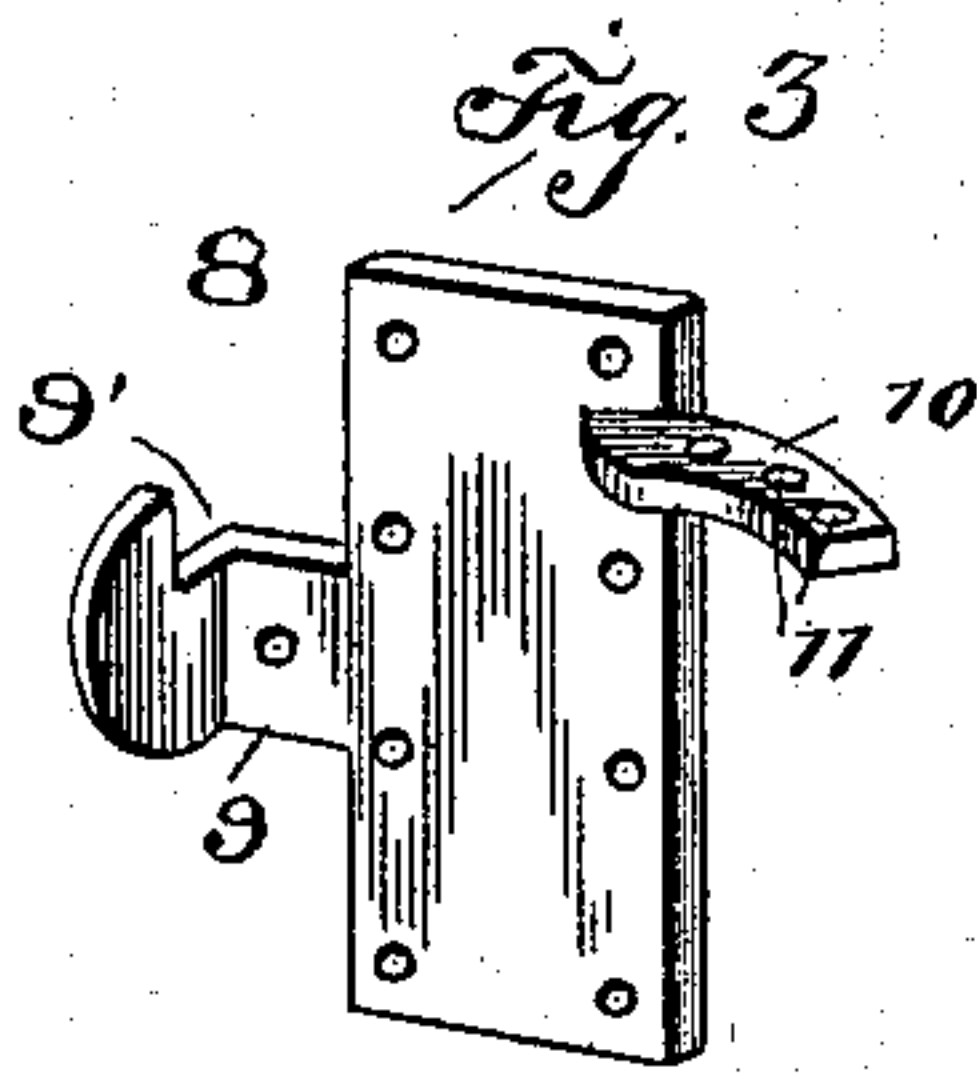
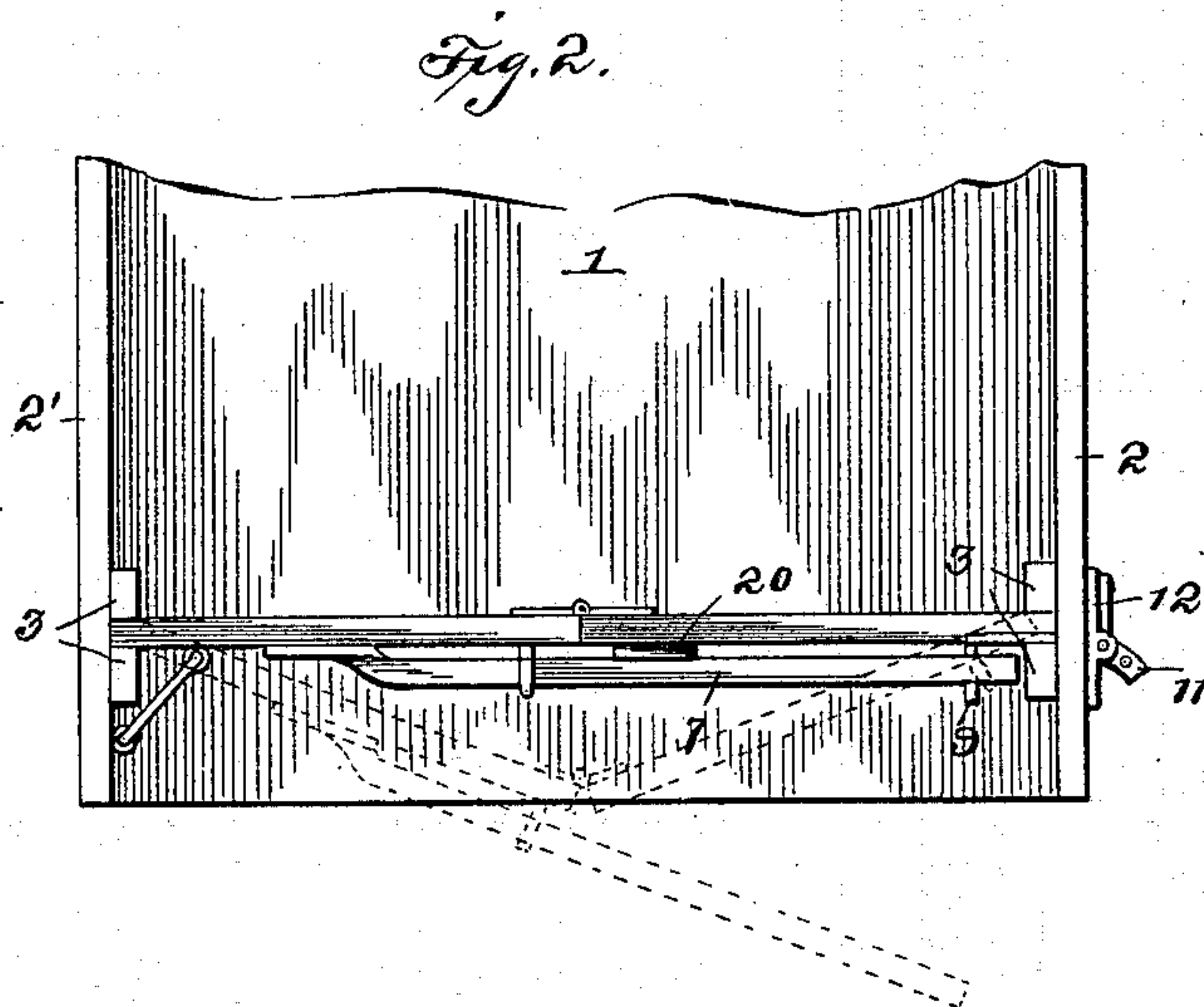
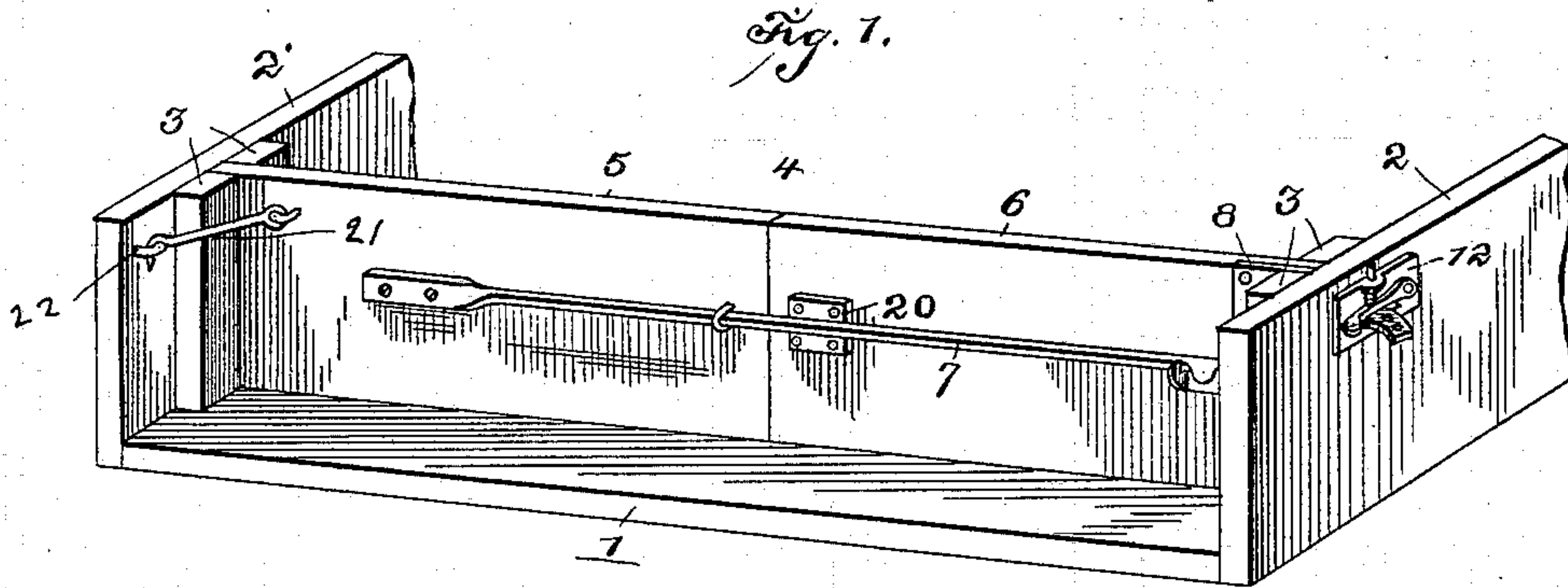
No. 615,366.

Patented Dec. 6, 1898.

O. C. SANGER.
END GATE.

(Application filed May 9, 1898.)

(No Model.)



Witnesses
Wm H. Edwards Jr.
J. W. Motherhead

Inventor:
Otto C. Sanger
By Edson Bros
Attorneys

UNITED STATES PATENT OFFICE.

OTTO C. SANGER, OF BLUE EARTH CITY, MINNESOTA.

END-GATE.

SPECIFICATION forming part of Letters Patent No. 615,366, dated December 6, 1898.

Application filed May 9, 1898. Serial No. 680,179. (No model.)

To all whom it may concern:

Be it known that I, OTTO C. SANGER, a citizen of the United States, residing at Blue Earth City, in the county of Faribault and State of Minnesota, have invented certain new and useful Improvements in End-Gates; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to improvements in end-gates for wagons and the like; and the object I have in view is to provide an end-gate which can be easily applied to or removed from the usual type of wagon without changing any part of the same and to provide means for securing the gate to the sides of the vehicle.

A further object is to provide a fastening device whereby the end-gate can be applied or removed at practically one operation.

To the accomplishment of these ends my invention consists in an end-gate composed of two or more parts having a spring-rod for fastening the sections rigidly in position, a plate on one section provided with arms, one arm serving as a catch for the spring-rod, while the other arm is adapted to be locked in position to a wagon-body by means of a spring-pressed lever-pin; and the invention further consists in the detailed construction and arrangement of parts, which will be hereinafter more fully described and claimed.

To enable others to understand my invention, I have illustrated the preferred embodiment thereof in the accompanying drawings, forming a part of this specification, and in which—

Figure 1 is a perspective view of my end-gate applied to a wagon. Fig. 2 is a top or plan view of a portion of a wagon-body, showing the operation of the end-gate by dotted lines. Fig. 3 is a detail view of the locking-plate. Fig. 4 is a detail view of the plate and lever-pin.

The end-gate is composed of two or more pieces hinged together and adapted to be fitted in the usual parallel cleats forming guides in the sides of the wagon-body.

To one section of the end-gate is securely attached a spring-bar which is adapted to

hold the sections together to form the usual rigid end-gate. On the other section of the end-gate is provided a plate having arms extending therefrom, one arm being bent to form a hook for the reception of the spring-bar, whereby the sections are held firmly in alinement, and the other arm being twisted to extend through an aperture in the side of the wagon-body and adapted to be engaged by a spring-pressed pin, thus holding the gate rigid with the wagon-body. Said pin is preferably T-shaped and is pivoted at one end to a wear-plate and provided at its other end with a thumb-piece. A spring is arranged on one of the arms which form the cross-piece, the normal pressure of which serves to force the other arm of the pin downwardly for engagement with the arm which passes through the side of the wagon-body.

If it is thought that the sides of the wagon-body would spread to allow the unsecured end of the gate to drop out, the locking devices just described could be duplicated at the other end or a hook may be provided on the gate and adapted to be fastened to an eye on the side of the wagon, or any other suitable means may be employed.

Referring to the drawings, in which like numerals denote like and corresponding parts, 1 denotes the bottom, and 2 2' the sides, of a wagon. The sides are provided with the usual cleats 3 3, forming guides for the end-gate 4. The end-gate is preferably composed of two sections 5 6, hinged together and preferably having suitable strengthening-cleats throughout its length, although this is not essential. A spring-bar 7 is secured to one of the sections 5 by means of staples, bolts, or other fastening means. The section 6 is provided at its outer end with a plate 8, having arms 9 10, preferably stamped from one piece of metal, secured thereto. The arm 9 is preferably made integral with the plate 8 and is bent outwardly, as shown. The outward-extended portion of this arm 9 is cut out, as at 9', to receive the spring-bar 7. The arm 10 is twisted or bent, as shown, and extends beyond the end of the gate. This arm is preferably provided with notches or apertures 11 to receive the end of the spring-pressed pin.

Fitted to the side 2, on the outside thereof,

is a plate 12, having a slot 13 therethrough to receive the arm 10, and also provided with an eye or guide 14 at its top portion. At one end of this plate is provided a lever-pin 15, 5 the free end of which has a thumb-piece 16. This lever-pin has two arms 17 18 joining it at right angles, which are in alinement one with the other. The upper portion or arm 17 is adapted to work in the eye or guide 14 10 and is provided with a coiled spring 19. The spring forces the pin downward and causes the other or lower arm 18 to engage with the apertures 11 in the arm 10 to lock the gate in position on the wagon. If desired, the 15 plate 12 may be provided with a stud to limit the downward movement of the lever, or the spring may be fastened to the eye 14 at one end and to the pin at the other end, the latter construction being preferable. In order 20 to hold the gate more securely in alinement, I place a wear-plate 20 under the spring-rod. The end of the section 5 may be fastened to the wagon side 2' in any desired manner or may simply rest between the cleats 3 3; 25 but to guard against the sides spreading when the wagon is heavily loaded I may provide a hook 21 on the section 5, adapted to engage with an eye 22 on the side 2' of the wagon-body, or a duplicate of the plate 8 and 30 pin 15 or any other suitable securing means may be employed.

It will be noticed that the end-gate can be easily and quickly removed or applied. The operator may use one hand to raise the spring- 35 bar 7 out of its catch, while the other hand can be employed in lifting the pin 15 from engagement with the arm 10, and by drawing outwardly on the bar 7 the gate will be released from the wagon-body. The gate being 40 in sections permits it to be readily freed from the cleats. The bar 7 serves to retain the two sections 5 6 in a rigid position, thus forming a strong and efficient end-gate.

The foregoing description, taken in connection with the drawings, will enable those 45 skilled in the art to understand the operation and advantages of my invention.

I am aware that changes in the form and proportion of parts and in the details of con-

struction herein shown and described as the 50 preferred embodiment of my invention may be made by a skilled mechanic without departing from the spirit or sacrificing the advantages thereof, and I therefore reserve the 55 right to make such changes and modifications as fairly fall within the scope of my invention.

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

1. The combination with a wagon-body and 60 a sectional end-gate, of a plate secured to one section of the gate, said plate having lateral arms, a lever adapted to have locking engagement with one of said arms, and a spring-rod 65 secured to another section of the end-gate and adapted to be secured to the other arm, substantially as and for the purposes described.

2. The combination with a wagon-body and a sectional end-gate, of a plate having lateral 70 arms secured to one section of the gate, one of said arms provided with apertures and bent to pass through the side of the wagon-body, a spring-pressed lever-pin on the wagon-body, for engagement with said arm, and a spring- 75 rod fastened to the other section and engaging with the notched arm of the plate, whereby the gate is confined with the wagon-body, substantially as described.

3. The combination with the wagon-body, a sectional end-gate and means for securing the 80 sections together, of a plate secured to one section of the end-gate and having a bent arm extending therefrom and adapted to pass through the side of the wagon-body, a plate 85 having a slot therethrough, a lever-pin pivoted to said plate, said pin having upwardly and downwardly extending arms, and a coiled spring inclosing the upwardly-extending arm to normally force the pin downward into en- 90 gagement with an aperture in the arm of the plate, substantially as and for the purposes described.

In testimony whereof I affix my signature in presence of two witnesses.

OTTO C. SANGER.

Witnesses:

DELLA LA DUKE,
FRANK E. PUTNAM.