No. 662,604. Patented Nov. 27, 1900.

W. B. SHUMAKER.

GATE LATCH.

(Application filed Apr. 10, 1900.)

(No Model.)

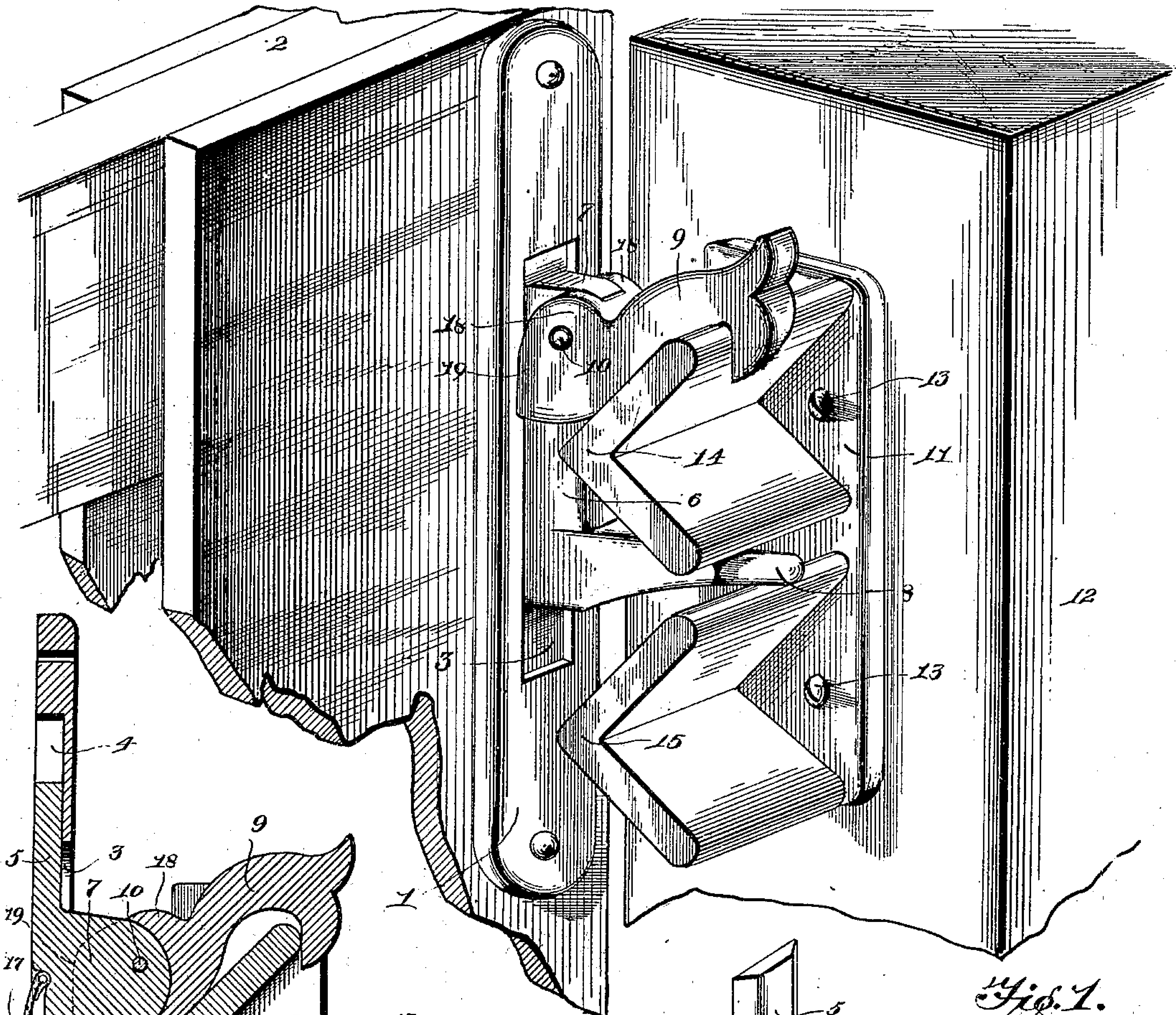

Fig. 1.

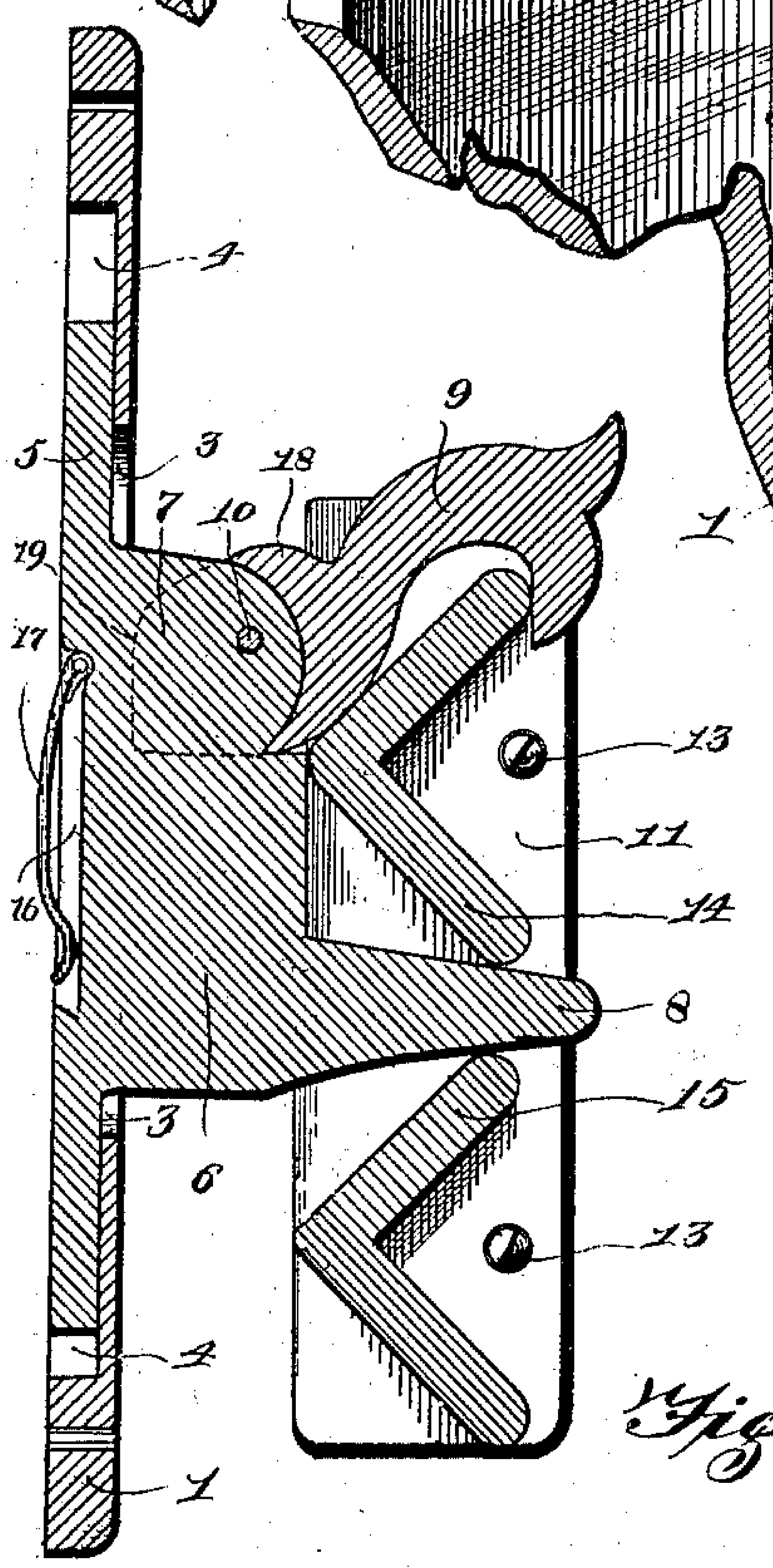

Fig. 2.

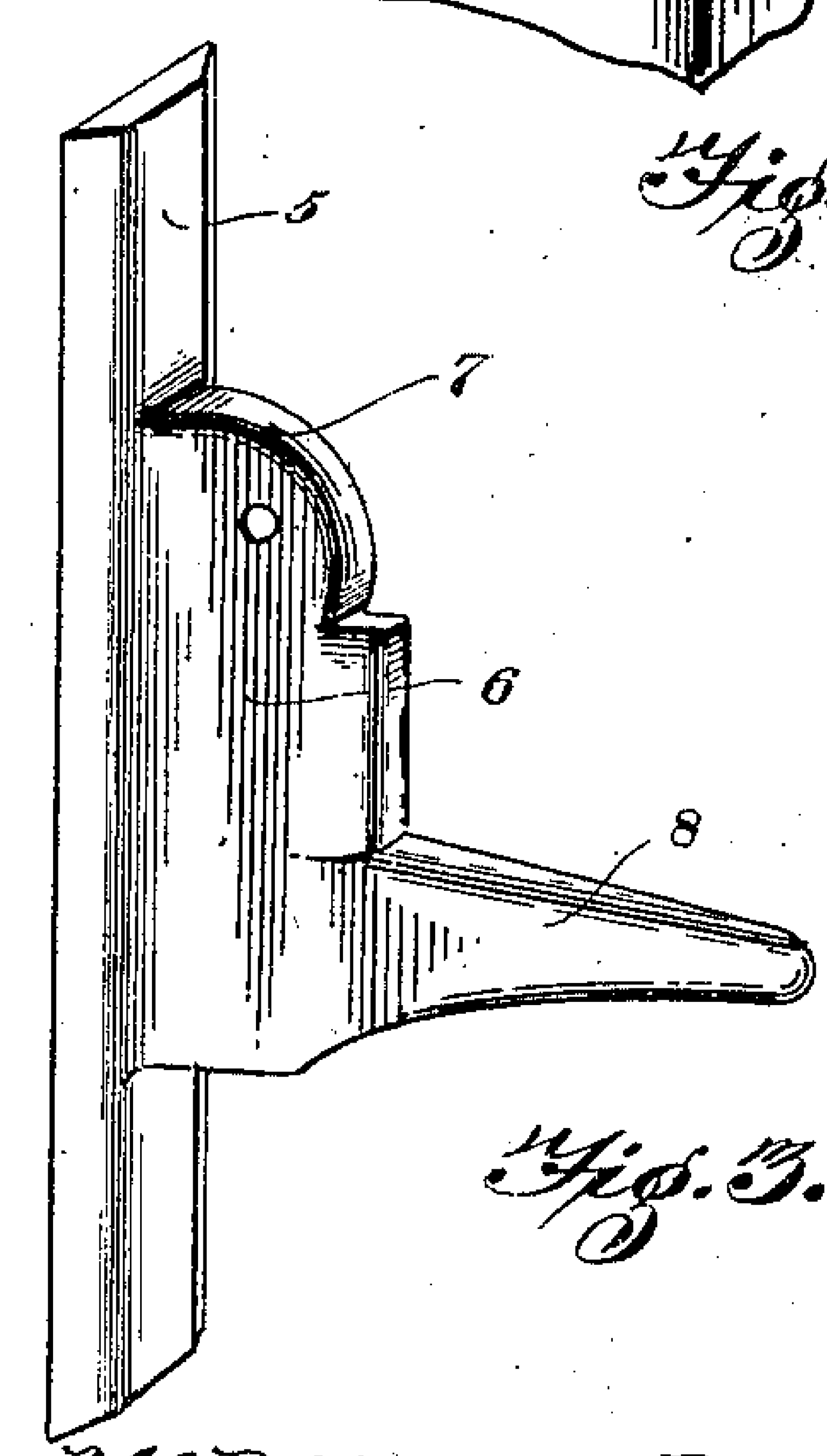

Fig. 3.

Witnesses

J. S. Donnelly [signature]

[signature] Shepard.

W. B. Shumaker, Inventor

By his Attorneys,

C. A. Snow & Co.

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

WILSON B. SHUMAKER, OF FORDYCE, ARKANSAS.

GATE-LATCH.

SPECIFICATION forming part of Letters Patent No. 662,604, dated November 27, 1900.

Application filed April 10, 1900. Serial No. 12,353. (No model.)

To all whom it may concern:

Be it known that I, WILSON B. SHUMAKER, a citizen of the United States, residing at Fordyce, in the county of Dallas and State of Arkansas, have invented a new and useful Gate-Latch, of which the following is a specification.

This invention relates to latches, and has for its object to provide an improved gate-latch which is designed to automatically take up any sag or shrinkage of the gate, so as to insure a positive locking of the latch when the gate is closed. It is furthermore designed to prevent the latch from being disengaged from its keeper by an upward prying of the gate, so as to prevent the latter from being unlatched by hogs and similar small rooting animals, and finally to prevent an accidental opening of the gate in any manner without first positively releasing the latch.

With these and other objects in view the present invention consists in the combination and arrangement of parts, as will be hereinafter more fully described, shown in the accompanying drawings, and particularly pointed out in the appended claims, it being understood that changes in the form, proportion, size, and minor details may be made within the scope of the claims without departing from the spirit or sacrificing any of the advantages of the invention.

In the drawings, Figure 1 is a perspective view of a gate-latch constructed and arranged in accordance with the present invention. Fig. 2 is a longitudinal sectional view thereof. Fig. 3 is a detail perspective view of the elevating latch-slide.

Corresponding parts in the several figures of the drawings are designated by like characters of reference.

Referring to the drawings, 1 designates an attaching-plate which is to be connected to the gate 2 and is provided with the longitudinal slot 3, through which the operating parts of the latch are designed to project. The rear face of this attaching-plate is provided with a recess 4, so as to form a housing for the reception of the freely and automatically slidable block 5, which is longer than the slot 3, so that it may not be displaced outwardly therethrough. A central longitudinal rib 6 is provided upon the outer face of the slide and projects outwardly through the slot and is shorter than the latter, so that it may move longitudinally with the slide. The upper end of this rib is rounded outwardly to form a bearing-ear 7, and the lower end of the rib is provided with an outwardly-directed pointed finger 8, for a purpose as will be hereinafter more fully described.

The gravity-latch 9 is of common or ordinary form and is bifurcated at its inner end, so as to receive the bearing-ear 7, to which it is pivoted by means of a suitable pivot-pin 10. It will thus be apparent that in addition to the swinging movement the latch is also vertically slidable with the slidable block.

The keeper 11, which is attached to the gate-post 12, as usual, is in the form of a flat plate having perforations for the reception of fastenings 13. Projecting laterally outward from the plate are the upper and lower catch lugs or projections 14 and 15, each of which is formed by a pair of angularly-related plates that converge toward the latch, or, in other words, each catch projection has an upwardly-inclined upper face extending away from the latch and a downwardly-inclined lower face extending away from the latch. So far as the operation of the latch is concerned the catch projections may be in the form of solid lugs having the oppositely-beveled faces; but they are preferably made as shown, so as to provide a comparatively light and strong keeper and to accommodate the fastenings without employing a very large attaching-plate.

The operation of the latch is as follows: When the gate closes toward the gate-post, the finger 8 engages the upwardly-beveled face of the lower catch projection, thereby automatically elevating the slide, so that the pivotal latch may properly engage the upper catch projection should the gate have sagged to bring the latch too low for an effective engagement with the keeper, as will be readily appreciated. Thus the device automatically compensates for any shrinkage or sagging of the gate and insures a positive locking of the latch. In the locked position of the device the finger 8 underlies the upper catch projection, so as to prevent an upward movement of the latch should the gate be elevated or pried upwardly by small animals. This

is made possible by reason of the independent slidable movement of the block carrying the finger and the latch, as hereinbefore described. It will be understood that the respective catch projections are duplicates, so that the keeper may be inverted and applied to either a right-hand gate-post or a left-hand post, thus obviating the necessity of providing right and left keepers.

The rear side of the slidable block 5 is provided with a recess 16, in which is mounted a bowed leaf-spring 17 to prevent looseness of the slide should the gate become shrunk or the attaching housing or plate become loose.

By reference to Figs. 1 and 2 it will be seen that the opposite bearing-ears 18, which are formed by the bifurcation at the rear end of the swinging latch, have their respective rear edges made straight, as at 19, so as to bear against the outer face of the attaching-plate 1 and at opposite sides of the slot therein, so as to form a stop to hold the latch in a normally-horizontal position when not in engagement with the keeper.

What is claimed is—

1. In a latch, the combination of attaching means, a vertically-swinging latch member projecting laterally therefrom, and also slidable vertically thereon, a keeper for the swinging latch member, and means for preventing a vertically-slidable movement of the swinging latch member, during a vertical movement of the attaching means.

2. In a latch, the combination of attaching means, a vertically-swinging latch member projecting laterally therefrom, and also slidable vertically in opposite directions thereon, a laterally-projecting finger located below and connected to the swinging latch member, and a keeper, having a pair of superposed projections arranged in the paths of the swinging latch member and the finger, respectively.

3. In a latch, the combination of attaching means, a vertically-swinging latch member projecting laterally therefrom, and also slidable vertically in opposite directions thereon, a laterally-projecting finger connected to and located below the latch member, and a keeper having a pair of superposed projections, the finger being located between the projections and the latch member being in engagement with the upper projection in the locked position of the latch.

4. In a latch, the combination of attaching means, a vertically-swinging latch member projecting laterally from the attaching means, and also slidable vertically in opposite directions thereon, a laterally-projecting finger located below the latch member and also connected thereto, and a keeper having a pair of superposed projections for engagement with the latch member and the finger, respectively, the lower projection having its upper face inclined upwardly and away from the finger, forming a guide to raise the latter and the latch.

5. In a latch, the combination of attaching means, a vertically-swinging latch member projecting laterally therefrom, and also slidable vertically in opposite directions thereon, a finger located below and connected to the latch member, and a keeper, having a pair of superposed projections for engagement with the latch member and the finger, respectively, each projection being substantially V-shaped in cross-section.

6. In a latch, the combination with an attaching housing-plate, having a longitudinal slot, of a block slidable freely within the housing-plate, and having an intermediate rib projecting outwardly through the slot, and an intermediate recess in the back of the block, a bowed spring having one end fixed within the recess and its opposite end playing loosely against the back thereof, a vertically-swinging latch member carried by the projecting portion of the rib, and a keeper for the latch member.

7. In a latch, the combination with an attaching housing-plate, having an intermediate longitudinal slot, of a block freely and automatically slidable within the housing-plate, and provided with an intermediate rib projecting outwardly through the slot, a laterally-projecting vertically-swinging latch member pivoted or hinged to the upper end of the rib, and an integral outwardly-projecting finger at the lower end of said rib, and a keeper, comprising an attaching-plate, having a pair of superposed projections arranged transversely across the paths of the latch member and the finger, respectively, each projection being substantially V-shaped in cross-section, with the apex thereof disposed toward the slidable block.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

WILSON B. SHUMAKER.

Witnesses:
CHAS. MCKEE,
JNO. R. HAMPTON.