(No Model.)

L. LIPP.

COMBINED STRAP AND PIVOT HINGE.

No. 502,306. Patented Aug. 1, 1893.

Fig. 1.

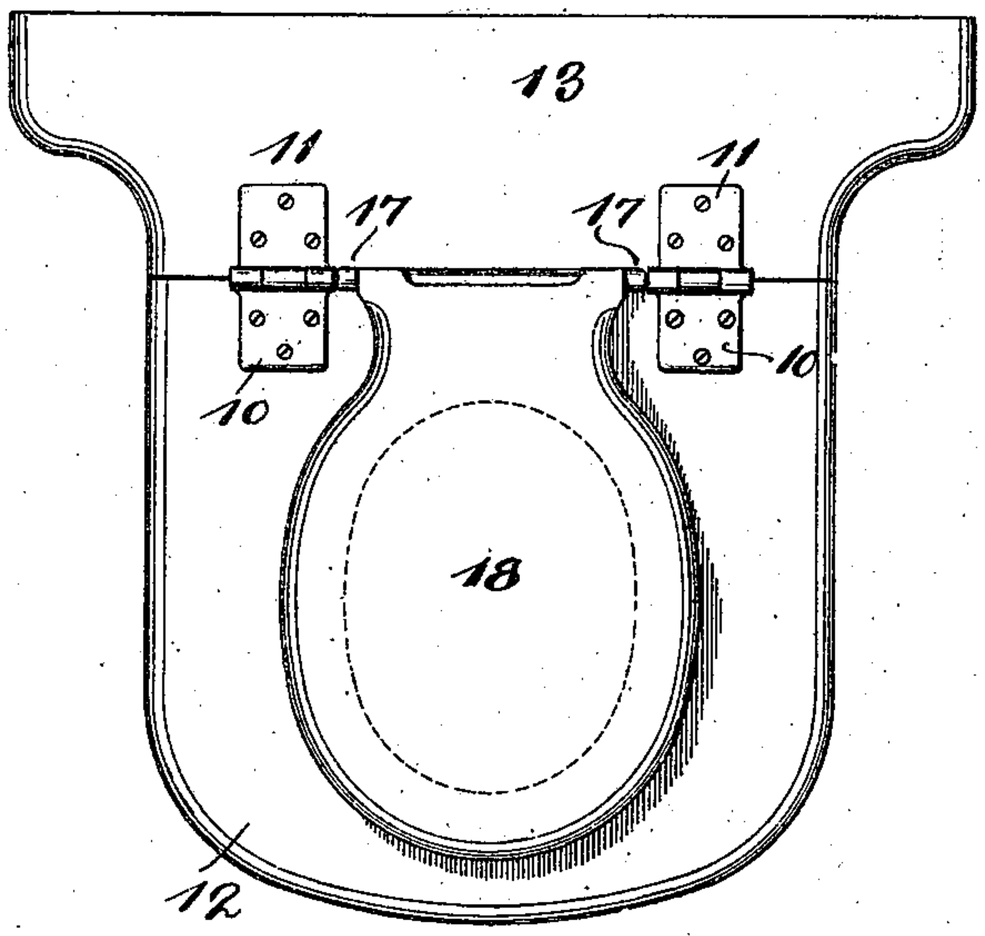


Fig. 4.

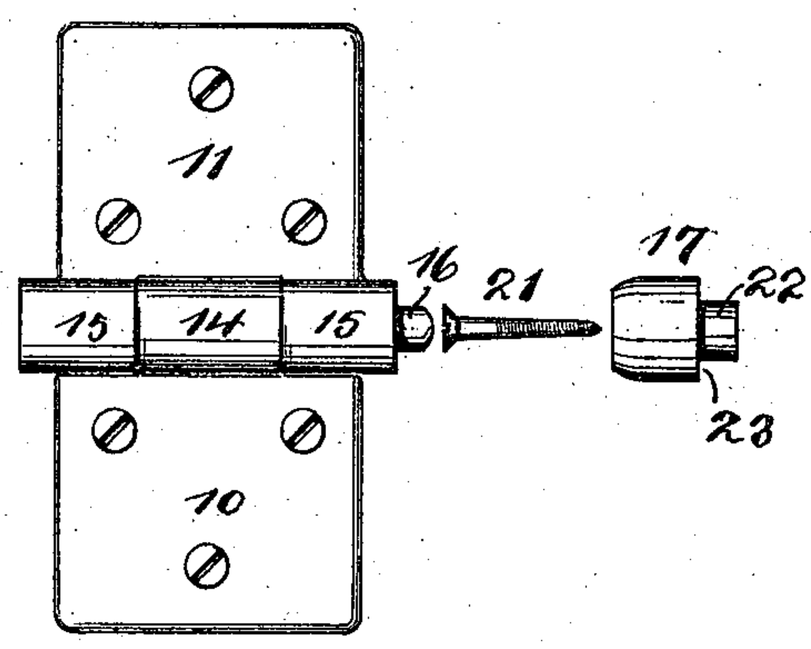


Fig. 5.

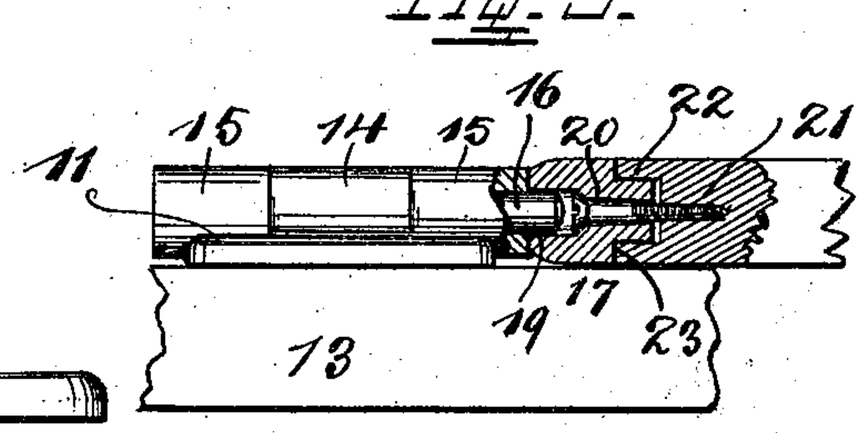


Fig. 2.

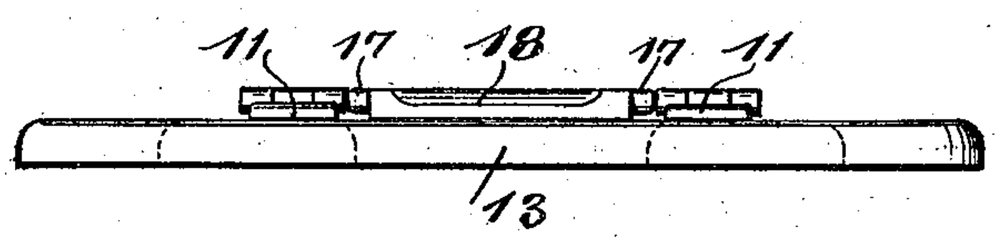


Fig. 3.

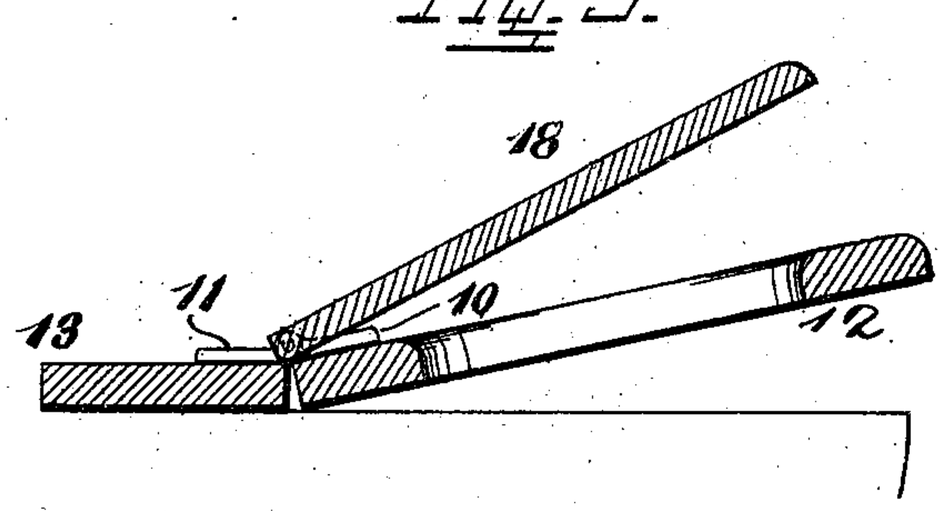
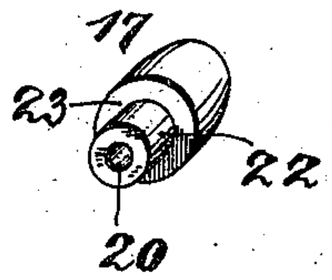


Fig. 6.



Attest
L. H. Coffin
Chas McCarthy

Inventor
Louis Lipp
by C. Spengel Atty.

UNITED STATES PATENT OFFICE.

LOUIS LIPP, OF CINCINNATI, OHIO.

COMBINED STRAP AND PIVOT HINGE.

SPECIFICATION forming part of Letters Patent No. 502,306, dated August 1, 1893.

Application filed April 21, 1893. Serial No. 471,251. (No model.)

To all whom it may concern.

Be it known that I, LOUIS LIPP, a citizen of the United States, residing at Cincinnati, in the county of Hamilton and State of Ohio, have invented a certain new and useful Combined Strap and Pivot Hinge; and I do 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, reference being had to the accompanying drawings, and to the figures of reference marked thereon, which form a part of this specification.

This invention relates in general to fastenings like hinges and the particular object is to construct a hinge to be used where two swinging objects are to be connected or hinged in one place and in such a manner as to swing on one common center.

It consists substantially of a new contrivance for such purpose and in combination therewith, with the objects which are connected to each other by it.

In the following specification is found a full description of my invention, the same being also particularly pointed out in the claims at the end thereof and its construction illustrated in the accompanying drawings, in which—

Figure 1 shows a top view of a water-closet seat with my improved hinges applied. Fig. 2 is a rear edge-view of the same parts shown in the preceding figure. Fig. 3 is a central longitudinal section of Fig. 1, showing the two hinged objects partly raised. Fig. 4 is an enlarged top-view of one hinge detached and its parts separated. Fig. 5 is an enlarged end-view of a hinge in position, parts of it shown in section. Fig. 6 is a perspective view of a detached part of my improved hinge.

A condition where a hinge improved according to my invention may be used exists for instance in many of the modern water-closet constructions, where in addition to the hinged lid, the seat is also hinged and may be lifted up.

My hinge is principally devised for use in such connection, but it is of course not limited to it, and may be used for any other similar purpose. In such connection either four hinges are generally used, two for the seat and two for the lid, or two hinges with three straps each and each strap connected to a different object. Two of my improved hinges will accomplish the same object and each requiring only two straps.

Referring to the drawings, 10 and 11 are the two straps of a hinge and secured to the objects which are to be hinged together. In this case strap 10, secures seat 12, to the stationary top 13, to which strap 11 connects. These straps are provided with barrels 14 and 15, through which a pivot pin 16, passes, which unites straps 10 and 11 and completes a hinge of customary form. On one side this pin extends beyond barrel 15, and serves as a pivot to bearings 17, one of which is secured at each side of the lid 18, thus forming its support and medium of connection. These bearings consist substantially of cylinders having in their ends openings 19, of sufficient size to receive the projecting ends of pins 16. The inner part of this opening or bore is contracted as shown at 20, to receive and fit a screw 21, which passes through it and into the wood of the lid, thereby securing the bearing in place. Part 22 of the latter is best sunk into the wood, for the purpose of obtaining a firmer connection and taking any lateral strain off of screw 21. Where the thickness of the wood is limited, it is preferable and may be necessary to reduce that part of the bearing which is to be sunk in, as shown in the drawings. The off-set or shoulder 23, which results by reason of this partial reduction of size, serves as an important medium to assist the even adjustment of these bearings when first placed in position, after which it further furnishes a firm support for them, retaining their alignment and preventing displacement therefrom.

As will be observed either one of the two hinged objects may be manipulated as readily as if secured by independent and complete hinges, and the same effect is attained with a much simpler construction, requiring only two straps to be placed.

I have considered the question of reversing parts 16 and 17, that is extending part of the adjoining barrel instead of pin 16, and securing the pivot to the lid, the so extending barrel taking the place of bearing 17. I find however that the present construction is simpler and cheaper, especially as to its attachment, the bearing 17 being more readily con-

nected to the edge of the lid than a pin or pivot could be. Such reversal however I consider as fully within the scope of my invention and only an inferior substitute for it.

Having described my invention, I claim as new—

1. The combination of a top 13, seat 12, and lid 18, a hinge for uniting the first two, having its pin extending out sidewise to form a pivot and a bearing to secure the lid in place, having two bores, one adapted to engage with said pivot, the other to receive the means for securing it in place on the lid.

2. The combination of a top 13, seat 12, and lid 18, a hinge for uniting the first two, having its pin extending out sidewise to form a pivot and a bearing to secure the lid in place, provided with the reduced part 22, to be inserted into the wood, and having two bores, one adapted to engage with the pivot, the other to receive the means for securing it in place to the lid.

3. The combined strap and pivot-hinge for hinging three parts together consisting of two straps, a bearing and a pivot for the latter, such bearing consisting substantially of a cylinder with a perforation, which receives at one end the pivot and at the other the means to secure it in place and the pivot formed by an extension of the pin, which unites the two straps.

4. The combined strap and pivot-hinge for hinging three parts together, consisting of two straps united by a pin, a pivot formed by an extension of the latter, and a bearing having two bores, one adapted to engage with the pivot, the other to receive the means for securing it in place on the third part.

5. The combined strap and pivot-hinge for hinging three parts together, consisting of two straps united by a pin, a pivot formed by an extension of the latter, and a bearing having two bores, one adapted to engage with the pivot, the other to receive the means for securing it in place and further provided with a shoulder 23, to facilitate its even adjustment and aid it in retaining its alignment.

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

LOUIS LIPP.

Witnesses:
C. SPENGEL,
CHAS. MCCARTHY.