

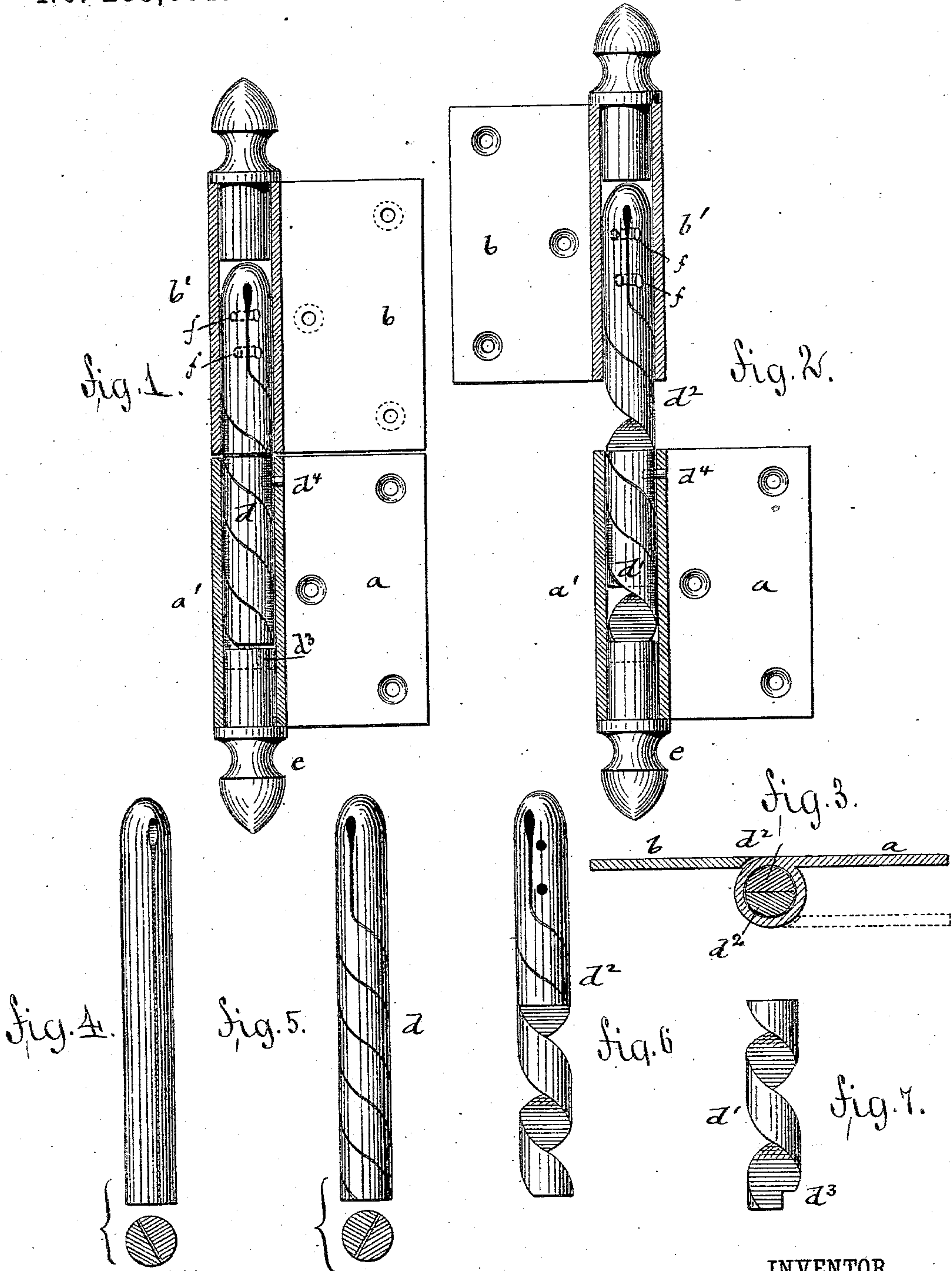
(No Model.)

H. HALTAUFDERHEIDE.

DOOR HINGE.

No. 283,601.

Patented Aug. 21, 1883.



WITNESSES:

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HEINRICH HALTAUFDERHEIDE, OF CASSEL, PRUSSIA, GERMANY.

DOOR-HINGE.

SPECIFICATION forming part of Letters Patent No. 283,601, dated August 21, 1883.

Application filed June 23, 1883. (No model.) Patented in Germany May 14, 1882, No. 22,226.

To all whom it may concern:

Be it known that I, HEINRICH HALTAUFDERHEIDE, a subject of the Kingdom of Prussia, Germany, and residing at the city of Cassel, in the Kingdom of Prussia, Germany, have invented certain new and useful Improvements in Door-Hinges, of which the following is a specification.

This invention relates to certain improvements in the construction of the so-called "rising door-hinges;" and the invention consists of a door-hinge the pintle of which is formed of two spirally-bent sections, of which the lower pintle-section is secured to the socket of the leaf applied to the door-casing, while the upper section is applied to the socket of the door-leaf, the lower end of the upper pintle section turning into the fixed pintle-section of the lower leaf, so as to rise or screw down in the same when opening or closing the door. The spirally-bent pintle is obtained by taking a steel or iron rod of semicircular cross-section and doubling it up while at red heat, so as to form a centrally-split cylindrical rod. One end of this doubled-up rod is placed into a vise, and the other end turned once or twice on its axis. When the so twisted rod has cooled off, one semi-section of the same is sawed transversely at a point midway of its length. The so cut-off portion is detached and secured to the leaf of the door-casing, while the longer part forms the intermeshing pintle-section of the door-leaf, as will more fully appear hereinafter.

In the accompanying drawings, Figures 1 and 2 represent side elevations, partly in section, of my improved door-hinge, showing it respectively in normal and in raised positions. Fig. 3 is a horizontal section of the hinge; and Figs. 4, 5, 6, and 7 are details illustrating the progress of the formation of the pintle and the sections of the same.

Similar letters of reference indicate corresponding parts.

Referring to the drawings, *a* represents the fixed leaf of my improved door-hinge, which is applied to the door-casing, and *b* is the movable leaf applied to the door. Each leaf *a* and *b* is provided with a sleeve or socket, *a'* *b'*, respectively, for the pintle *d*, which is composed of two spirally-bent pintle-sections, *d'* *d''*, that are made according to the method to be here-

inafter described. The lower shorter pintle section, *d'*, is retained by a recess, *d''*, at its lower end, on the recessed shoulder of the bottom plug, *e*, of the socket *a'*, as shown in Figs. 1 and 2. The lower pintle-section, *d'*, is further secured at its upper end to the socket *a'* by a pin, *d'*, that passes through the socket *a'*, so as to hold the pintle-section *d'* securely in position in connection with the shoulder of the bottom plug, *e*. The lower part of the socket *a'* forms at the same time a receptacle for the oil by which the pintle-sections *d'* *d''* are lubricated. The upper pintle-section, *d''*, is applied to the sleeve or socket *b'* of the door-leaf *b* by means of one or more pins or keys, *f*. To obtain the spirally-bent pintle-sections *d'* *d''* an iron or steel rod of semicircular cross-section is heated to red heat and then doubled up, so that the flat faces thereof come in contact, as shown in Fig. 4. A split cylindrical rod is thus obtained, which is next clamped at one end into a vise, and taken hold of at the other end by suitable tongs and twisted once or twice around its axis, as indicated in Fig. 5. After the so doubled up and twisted rod *d* has cooled off one-half of the same is cut transversely midway of its length by means of a metal saw, and the shorter pintle-section, *d'*, removed from the longer pintle-section, *d''*, as shown in Figs. 6 and 7. The longer pintle-section, *d''*, remains doubled up at its upper part, as shown in Figs. 2 and 6. The shorter pintle-section, *d'*, is, as before described, secured to the plug *e* of the socket *a'* of the leaf *a* of the door-casing, while the longer pintle-section, *d''*, is fastened to the socket *b'* of the leaf *b* of the door after the pintle-sections *d'* *d''* have first been screwed one into the other, as shown in Fig. 1. In opening the door the upper pintle-section, *d''*, rises on the lower pintle-section, whereby the door is raised, while in closing the door the upper pintle-section screws into the lower pintle-section.

The advantages of the described door-hinge are as follows: First, an easy automatical closing of the door; second, a strong and reliable rising hinge; third, any part of the pintle can be easily replaced when worn out by use, as it does not form a permanent part of the leaf.

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

1. An improved rising door-hinge, which

consists of a leaf, *a*, applied to the door-casing,
a leaf, *b*, applied to the door, said leaves hav-
ing sleeves *a'* and *b'*, respectively, and a pin-
tle composed of a lower spirally-bent pintle-
5 section secured rigidly to the sleeve of the leaf
a, and a longer spirally-bent pintle-section se-
cured to the sleeve of the leaf *b*, said spirally-
bent sections screwing into or out of each
other on opening or closing the door, substan-
10 tially as set forth.

2. In a rising door-hinge, a pintle composed
of a spirally-bent lower part of semicircular

cross-section and of an upper spirally-bent pin-
tle-section, the lower part of which screws into
the lower pintle-section and is doubled up at 15
its upper part, substantially as described.

In testimony whereof I have signed my name
to this specification in the presence of two sub-
scribing witnesses.

HEINRICH HALTAUFDERHEIDE.

Witnesses:

FRIEDRICH PHIL. SCHMITZSPAHY,
J. GRUND.