

Jan. 12, 1926.

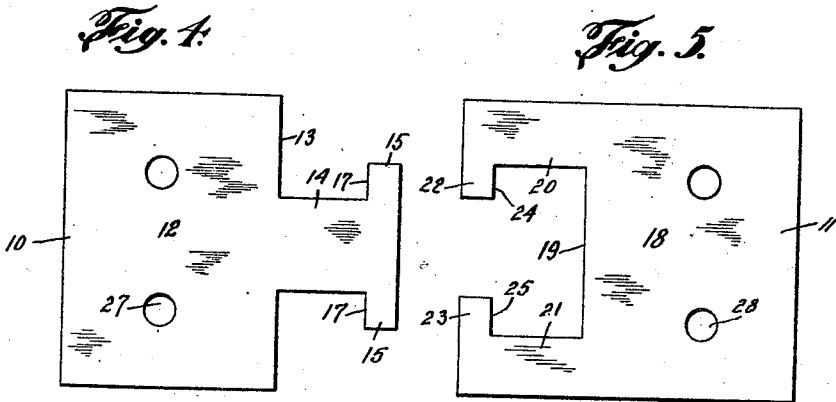
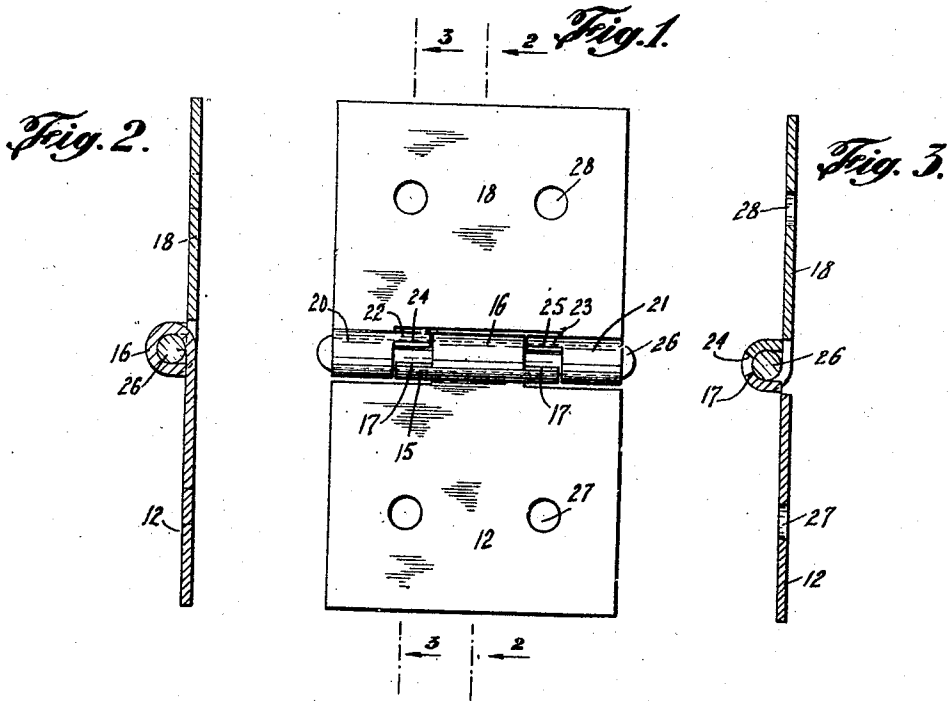
J. CRANZLER

1,569,619

HINGE

Filed April 22, 1924

2 Sheets-Sheet 1



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Jan. 12, 1926.

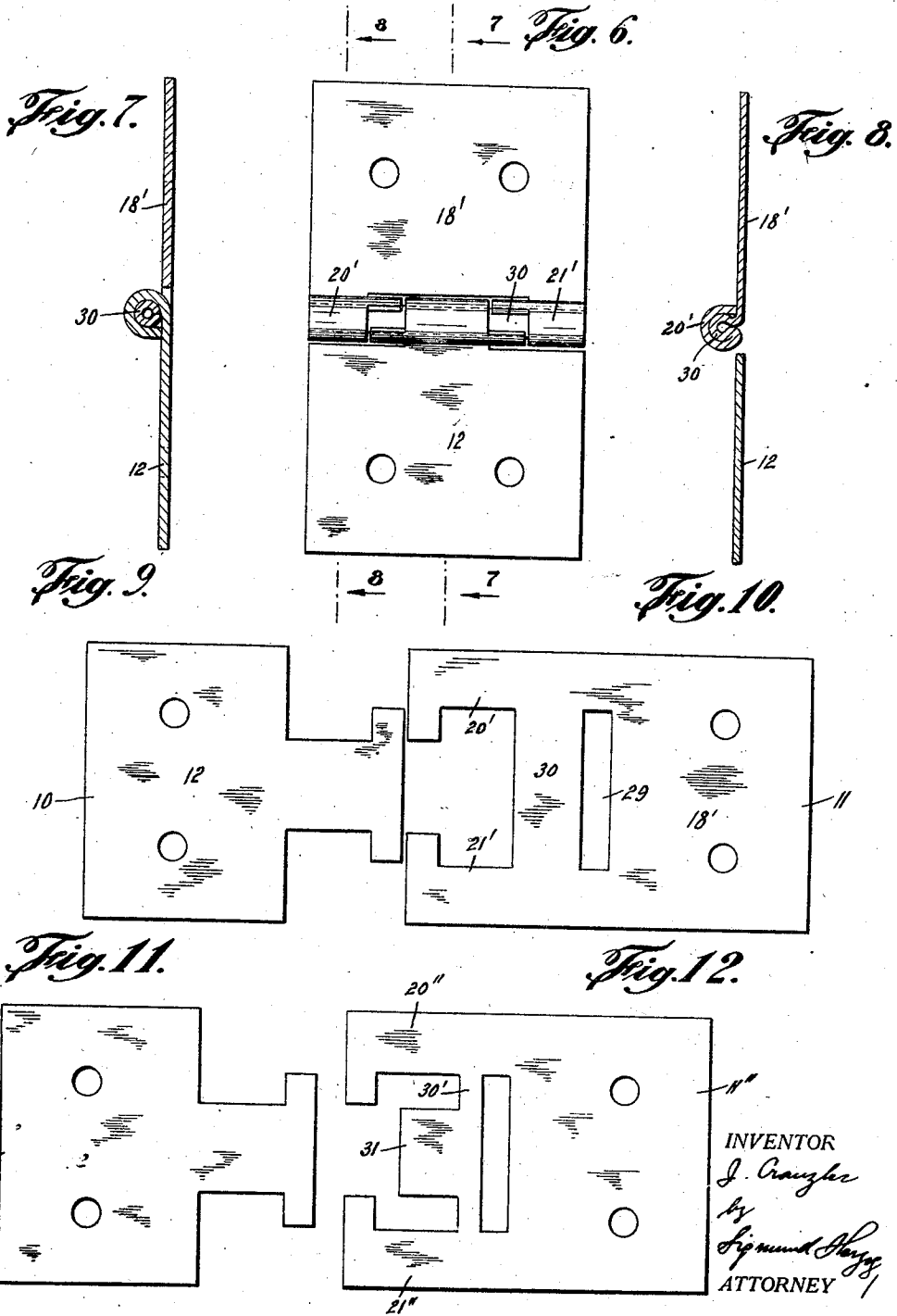
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2 Sheets-Sheet 2



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UNITED STATES PATENT OFFICE.

JACOB CRANZLER, OF NEW YORK, N. Y.

HINGE.

Application filed April 22, 1924. Serial No. 708,166.

To all whom it may concern:

Be it known that I, JACOB CRANZLER, a citizen of the United States, and resident of the city of New York, in the county of Kings and State of New York, have invented certain new and useful Improvements in Hinges, of which the following is a specification.

The present invention relates to improvements in hinges, and has for its main object to construct a hinge, for use on suit cases, boxes or the like, that will open a certain distance only.

Another object of the invention is to provide a hinge of the type mentioned, the pintle element of which is made integral with one of the leaves thereof, so that the hinge consists of two parts only.

A further object of the invention is to provide a hinge of the type mentioned which is simple in construction, efficient in operation, durable in use and capable of manufacture on a commercial scale, or in other words one which is not so difficult to make as to be beyond the reasonable cost of such a contrivance.

With these and other objects in view, which will more fully appear as the nature of the invention is better understood, the same consists in the combination, arrangement and construction of parts hereinafter described, pointed out in the appended claim and illustrated in the accompanying drawings, it being understood that many changes may be made in the size and proportion of the several parts and details of construction within the scope of the appended claim, without departing from the spirit or sacrificing any of the advantages of the invention.

A few of the many possible embodiments of the invention are illustrated in the accompanying drawings, in which:—

Figure 1 is a front elevation of the improved hinge in its closed state; Fig. 2 is a section taken on line 2—2 of Fig. 1; Fig. 3 is a section taken on line 3—3 of Fig. 1; Fig. 4 represents the flat metal blank of one of the leaves of the hinge; Fig. 5 represents the flat metal blank of the other leaf of the hinge; Fig. 6 is a view similar to the one shown in Fig. 1 of a modified hinge; Fig. 7 is a section taken on line 7—7 of Fig. 6; Fig. 8 is a section taken on line 8—8 of Fig. 6; Figs. 9 and 10 represent the flat

metal blanks of the two leaves of the hinge shown in Figs. 6 to 8, inclusive; and Figs. 11 and 12 represent flat metal blanks of another modification of the hinge.

Referring now first to Figs. 1 to 5, inclusive, of the drawings, the numeral 10 (Fig. 4) indicates the flat metal blank of which one of the hinge leaves is formed, and the numeral 11 (Fig. 5) the flat metal blank of which the other one of the hinge leaves is shaped. The blank 10 comprises an oblong body portion 12 which constitutes a hinge leaf. From the inner longitudinal edge 13 of this leaf projects centrally side-wards a tongue 14, on the free end of which are formed two lugs 15, one above the tongue 14 and the other one below the same. In forming a hinge leaf of the blank 10, the tongue 14 and lugs 15 are bent into cylindrical shape, thereby providing a knuckle 16. This knuckle is centrally located on the leaf 12, as clearly appears from Figs. 1 and 2 of the drawings. The inner edges 17 of the lugs 15 constitute stop shoulders, when the blank 10 is shaped as above described. The blank 11 consists of an oblong body or leaf portion 18, from the inner longitudinal edge 19 of which projects side-wards two tongues, denoted by the numerals 20 and 21. One of these tongues is formed adjacent the upper end of the edge 19 and the other edge adjacent the lower edge thereof. From the free end of the tongue 20 projects downwards a lug 22, and from the free end of the tongue 21 upwards a lug 23. These two lugs extend in parallel relation to the longitudinal axis of the body portion 18. In forming a hinge leaf of the blank 11, the tongues and lugs are bent into cylindrical shape, the inner edges 24 and 25 of the lugs 22 and 23, respectively, forming stop shoulders, as clearly shown in Figs. 1 and 3 of the drawings. The last-mentioned shoulders are in alignment with but spaced from the shoulders 17 of the lugs 15, when the hinge leaves are arranged in the same plane, that is to say in their closed positions. From this it appears that the hinge leaf formed of the blank 11 is provided with two knuckles, between which is disposed the single knuckle of the hinge leaf which is formed of the blank 10. Through the knuckles extends a pintle 26.

The operation of this device is as follows: The leaves 12 and 18 are attached to the

outer face of a box-body and cover, respectively, for instance by rivets, not shown, which extend through apertures 27 and 28 in the leaves 12 and 18, respectively. When the cover is closed the shoulders on the knuckles are spaced apart. On opening the cover, the stop shoulders 24 and 25 are brought to abut against the stop shoulders 17, thus limiting the opening movement of the hinge.

Inasmuch as the hinge is provided with two pairs of coating stop shoulders, a double stop is provided, insuring greater strength than in the devices heretofore in use. It is to be noted that each of the hinge leaves is struck up by a single operation from one piece of metal, thereby entailing little expense and labor.

The modification illustrated in Figs. 7 to 10, inclusive, of the drawings, differs from that above described in that the blank 11' is somewhat wider, and is provided approximately at its middle portion with a longitudinal slot 29, whereby a longitudinal bar 30 is formed, which connects the tongues 20' and 21' thereon. In forming a leaf of the blank 11', the bar 30 and the adjacent portions of the tongues 20' and 21' are longitudinally bent back upon themselves, into cylindrical shape, as clearly shown in Fig. 8 of the drawings, whereby the bar 30 constitutes the pintle of the hinge, the lugs 15 and tongue 14 of the blank 10 being first extended through the slot 29 and then bent into cylindrical shape. Otherwise the construction and operation of the elements are the same as of those of the hinge illustrated in Figs. 1 to 5, inclusive, of the drawings. The hinge illustrated in Figs. 7 to 10, inclusive, differs thus from the hinge described in Figs. 1 to 5, inclusive, in that in the

former the pintle is made integral with the leaf 18', which is formed of the blank 11'.

The modification illustrated in Figs. 11 and 12 of the drawings differs from the one described in connection with Figs. 7 to 10, inclusive, in that its bar 30' is considerably narrower than the bar 30, and in that from this bar extends toward the lugs on the tongues 20'' and 21'' a lug 31. These lugs together with the bar 30' are, in shaping the leaf from the blank 11'', bent to form a cylindrical member, around which the tongue and lugs on the blank 10 are bent. Otherwise the construction and operation are the same as of the hinge described in connection with Figs. 7 to 10, inclusive, of the drawings.

What I claim is:—

A hinge comprising two leaves, a single knuckle centrally located on one of said leaves, a pair of knuckles on the other one of said leaves between which said single knuckle is disposed, said second-mentioned leaf being provided with a transverse slot in rear of its knuckles, thereby providing a pintle between the knuckles thereof, the knuckle of said first-mentioned leaf being extended through said slot and around said pintle, two shoulders on said central knuckle, and a shoulder on each of said pair of knuckles for co-operation with a shoulder on said central knuckle, said shoulders being spaced when said hinge is closed and adapted to abut against each other in the opening movement of said hinge so as to limit the opening of the hinge.

Signed at New York, in the county of New York, and State of New York, this 21st day of April, A. D. 1924.

JACOB CRANZLER.