D. STUART & C. C. LLOYD.

METHOD OF CASTING HINGES.

No. 2,917. Patented Jan. 20, 1843.

Fig. 1

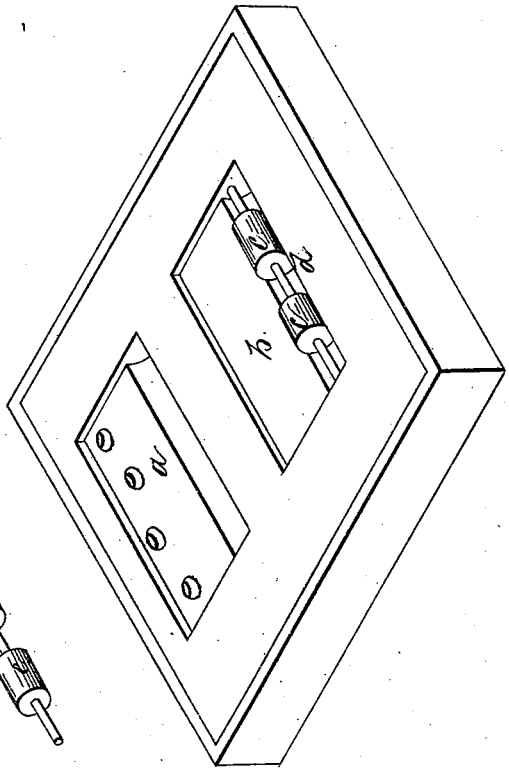


Fig. 2.

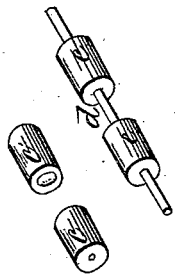


Fig. 3.

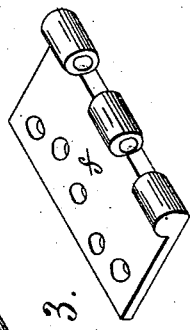
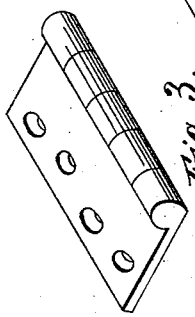
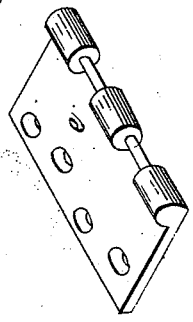


Fig. 4.





UNITED STATES PATENT OFFICE.

D. STUART AND C. C. LLOYD, OF DANVILLE, PENNSYLVANIA.

IMPROVEMENT IN THE METHOD OF CASTING HINGES.

Specification forming part of Letters Patent No. **2,917**, dated January 20, 1843.

To all whom it may concern:

Be it known that we, DAVID STUART and CHARLES C. LLOYD, of Danville, in the county of Columbia and State of Pennsylvania, have invented a new and Improved Method of Casting Hinges; and we do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 is the frame of sand for forming the mold in; Fig. 2, the loam or sand cores; Fig. 3, the half-hinges; Fig. 4, the pattern.

The nature of our invention consists in forming the knuckle of the mold entire for casting the first half-hinge and suspending the wire pivot in its place by means of a loam or sand core made in a separate mold, which also serves to form the necessary spaces in the knuckle of the half of the hinge.

By means of the pattern, Fig. 4, which is the exact counterpart of the half of a hinge, except that the knuckle is entire, the molds *a b*, Fig. 1, are made. The spaces in the knuckle of the half-hinge are formed by means of loam or sand cores, which are formed as follows: A mold of a circular form, of the same diameter as the knuckle of the hinge and as long as the spaces required to be left in the half-hinge at the joint, is filled with sand or loam mixed with any suitable substance for the purpose of making it adhere together, in the usual manner of making dry sand or loam cores. A hole is made through the center of these cores by thrusting a wire through a hole in the end pieces of the mold made for that purpose. The cores *c* are strung on a wire, *d*, which is to form the pivot of the hinge, as many being placed on it as there are spaces to be left in the joint of the half-hinge. The cores sustain the wire in the proper place, and rest in the groove formed by the knuckle of the pattern in the mold. (See *b*, Fig. 1.) When the half-hinge is cast, the core is knocked off. It is then in the state shown at Fig. 3, *e*, and is then ready for casting the other half to it, which is done in the usual way.

When conical pivots are to be used, instead of a wire running through the joint, as shown in the casting, Fig. 3, *f*, there is no hole made through the core; but instead thereof a concavity is formed in the ends of the cores, as at *c'*, Fig. 3, forming the conical projections *i* from the knuckles of the half-hinge, on which the other half, when cast, turns. A projection, instead of a concavity, may be formed on the ends of the cores, which will produce a similar effect.

We do not claim as our invention the use of separate cores in connection with flanges in casting the first half of a hinge on the joint-pin, as this has been done before; nor do we claim the use of separate cores generally in casting, as this has before been practiced; but

What we do claim as our invention, and desire to secure by Letters Patent, is—

The method of forming the spaces between the knuckles on the first half by means of cores formed in separate molds and slipped onto a cylindrical pin, in the manner and for the purpose specified.

DAVID STUART.
CHAS. C. LLOYD.

Witnesses:
RUDOLPH SECHLER,
JOHN BEST.