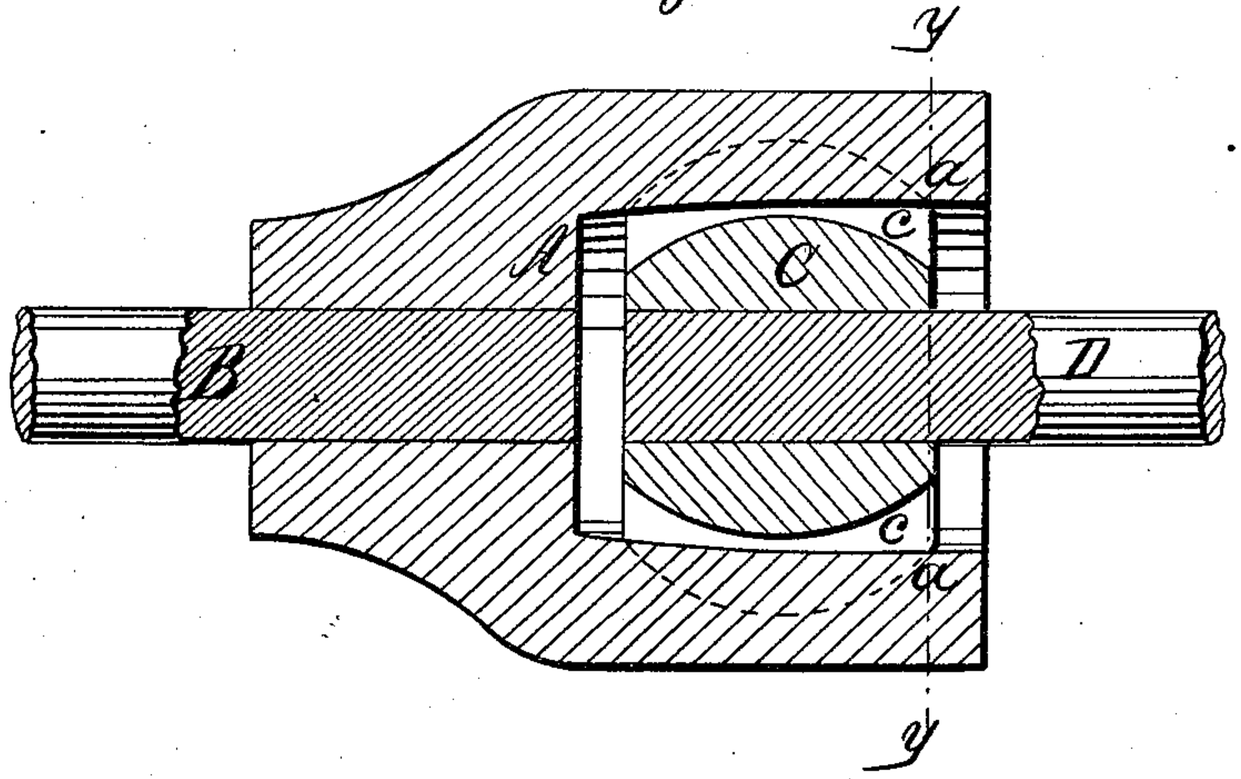
S. N. Taylor,

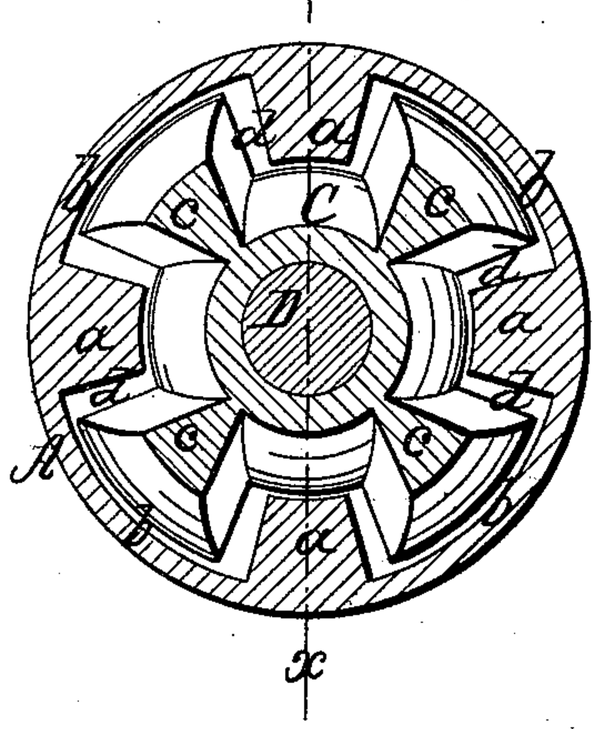
Universal Joint.

No. 52,908. Patented Feb. 27, 1866.

Fig. 1.



x Fig. 2.



Witnesses;

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UNITED STATES PATENT OFFICE.

SIMEON N. TAYLOR, OF HORICON, WISCONSIN.

IMPROVED KNUCKLE-JOINT.

Specification forming part of Letters Patent No. **52,908**, dated February 27, 1866.

To all whom it may concern:

Be it known that I, SIMEON N. TAYLOR, of Horicon, in the county of Dodge and State of Wisconsin, have invented a new and Improved Knuckle-Joint for Connecting the Tumbling-Rods of Thrashing-Machines and Shafting of other Machinery; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to fully understand and use the same, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 represents a longitudinal vertical section of my invention, taken in the line *x x*, Fig. 2; Fig. 2, a transverse vertical section of the same, taken in the line *y y*, Fig. 1.

Similar letters of reference indicate like parts.

This invention relates to a new and improved coupling for connecting together the tumbling-rods of thrashing-machines and the shafting of other machinery which require to be placed in an oblique position relatively with each other.

The invention is an improvement on a knuckle-joint for which Letters Patent were granted to me bearing date February 16, 1864; and it consists in constructing the parts in such a manner that the tumbling-rods may be turned in either direction, the original device being capable of turning in one direction only.

A represents a socket which externally may be of cylindrical form, and is attached to one end of one of the tumbling-rods or shaft B. This socket is provided internally with a series of longitudinal ribs or shoulders *a*, which are formed by making a series of curved recesses or grooves, *b*, in the socket, the shoulders *a* extending the whole length of the interior of the socket A. The inner edges of the ribs or shoulders may be slightly curved, very much less however than the recesses or grooves *b*.

C represents a head, which is attached to one end of the other tumbling-rod or shaft D. This head has a series of ribs or projections, *c*, on its periphery, said projections being formed by making curved recesses *d* in the periphery of the head, said projections being curved in a longitudinal direction and corresponding to the curvature of the recesses or grooves *b*, while the spaces between the projections *c'* are also curved, the head C being of spherical form or approaching said form.

The ribs or shoulders *a* have a radial position within the socket A, and both sides of the projections *c* of the head C have a radial position with the shaft D.

The head C is of such diameter at its largest central part that it may fit into the socket A, and as the other parts of the head are curved inward at both sides of the center, or toward each end, it will be seen that the two shafts B D may be placed in line or in an oblique position relatively with each other and rotated in either direction, the socket and head forming the connection between the two shafts, the sides of the shoulders *a* and projections *c* being in contact. This coupling possesses all the advantages of the patented one hitherto alluded to, besides the advantage of the tumbling-rods being turned in either direction, a result due to the construction or formation of the ribs or shoulders *a* and the projections *c*, the latter having both sides radial with the head C.

I claim as new and desire to secure by Letters Patent—

The constructing or forming of the head C of the shaft D with ribs or projections *c*, both sides of which have a radial position with head, in combination with the longitudinal ribs or shoulders *a* of the socket A, which are formed by making a series of curved recesses or grooves in the socket, the shoulders *a* extending the whole length of the interior of the socket A, to admit of the tumbling-rods B D being turned in either direction—that is to say, to the right or left, as may be desired.

SIMEON N. TAYLOR.

Witnesses:

W. H. BUTTERFIELD,

F. W. BUTTERFIELD.