

Dixon & Sampson,

Pitman.

No. 106,339.

Patented Aug. 16. 1870.

Fig. 1

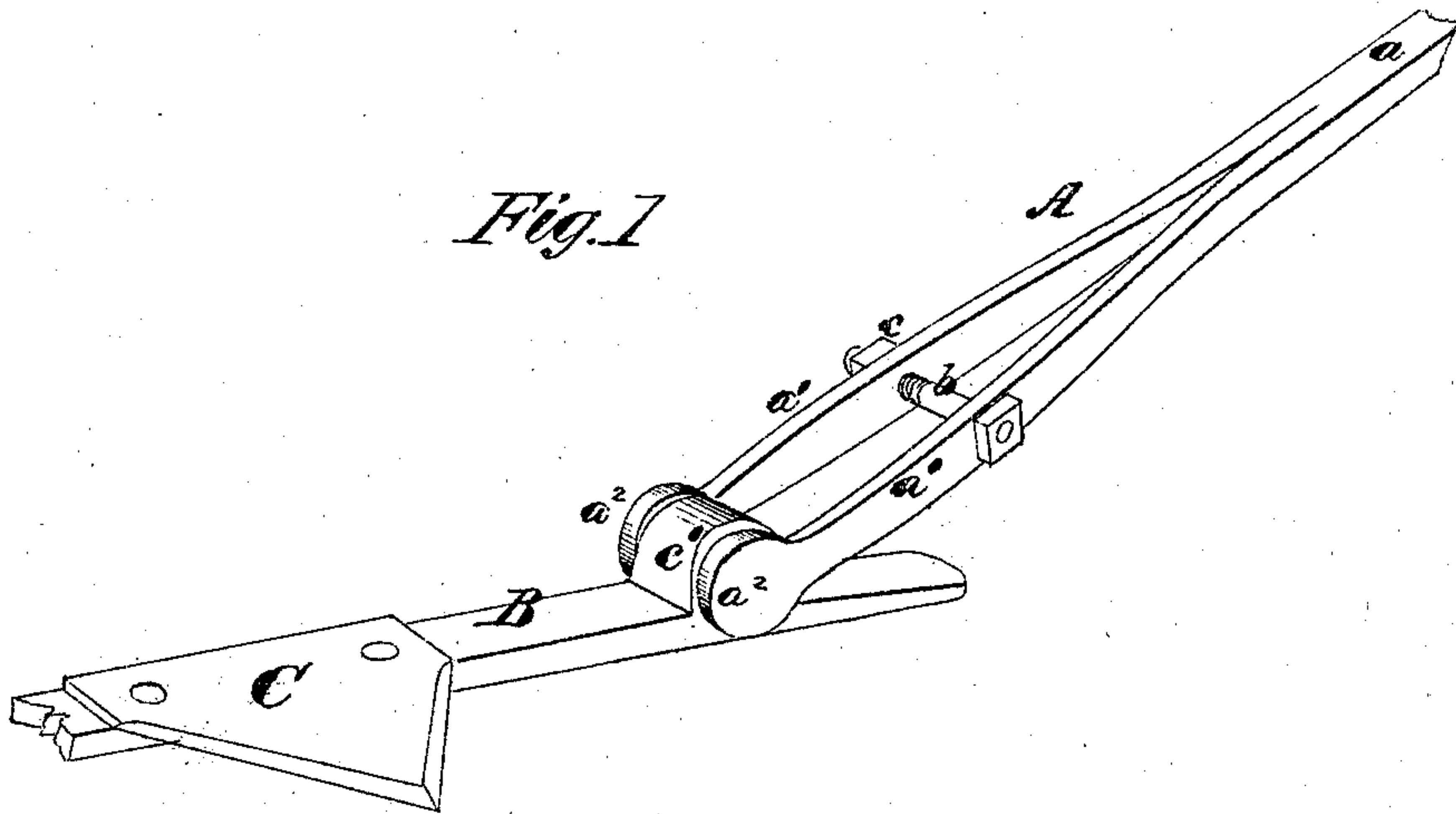


Fig. 2

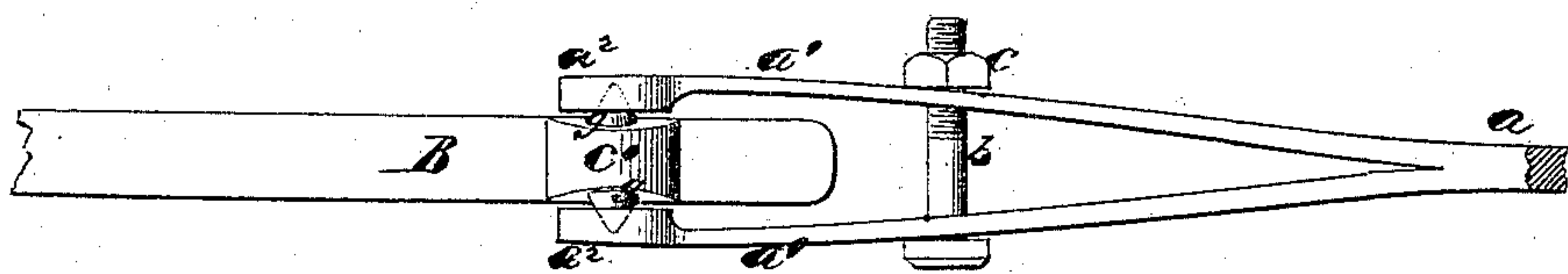


Fig. 3

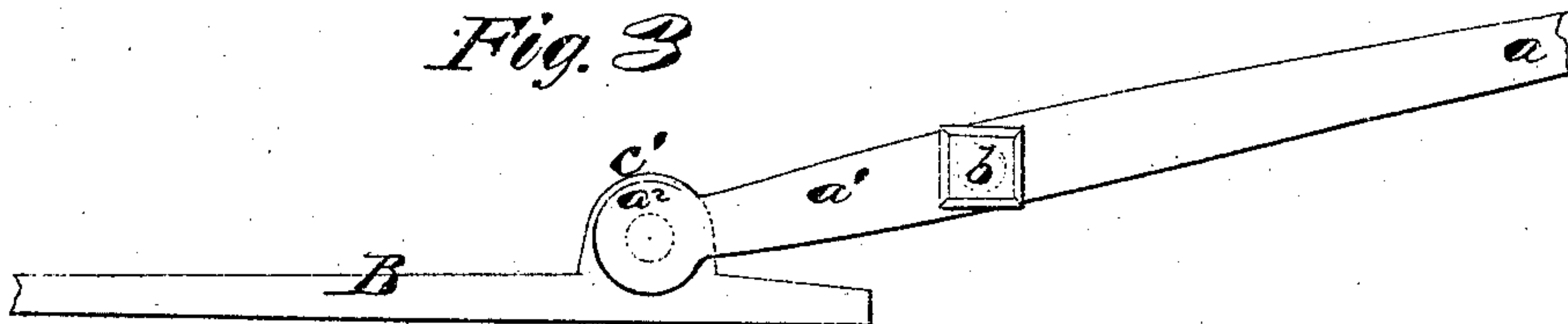
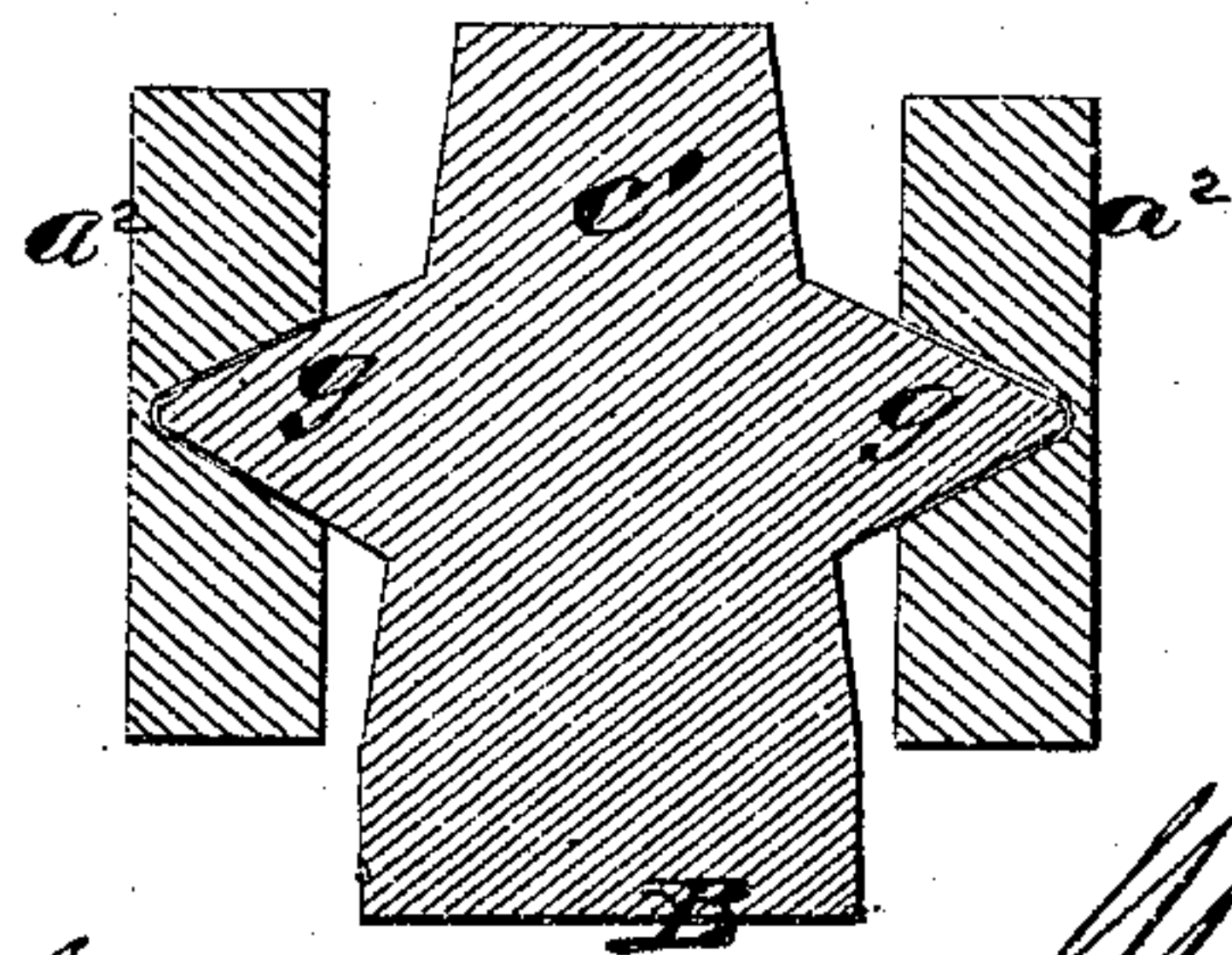


Fig. 4



Witnesses.

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# UNITED STATES PATENT OFFICE.

JOSEPH DIXON AND MATTHEW B. SAMPSON, OF EDDYVILLE, IOWA.

## IMPROVEMENT IN PITMAN-CONNECTIONS FOR HARVESTERS.

Specification forming part of Letters Patent No. 106,339, dated August 16, 1870.

*To all whom it may concern:*

Be it known that we, JOSEPH DIXON and MATTHEW B. SAMPSON, of Eddyville, in the county of Wapello and State of Iowa, have invented a new and Improved Pitman-Connection for the Knife-Rods of Harvesters; and we do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawing, making part of this specification, in which—

Figure 1 is a perspective view of portion of a pitman and knife-rod, showing my invention. Fig. 2 is a top view of the same. Fig. 3 is a front or side view. Fig. 4 is an enlarged transverse vertical section through the pitman and knife-rod at the joint.

Similar letters of reference indicate corresponding parts in the several figures.

The object of this invention is to improve pitman-couplings, which are used for transmitting motion from a driving-shaft on the draft-carriage of a harvester to the knife-rod, and to so connect a pitman to a knife-rod that, while all liability of looseness and lost motion at the joint is avoided, provision is made for preventing undue friction and wear, and also for setting up to compensate for wear, as will be hereinafter explained.

To enable others skilled in the art to understand our invention, we will describe its construction and operation.

The pitman A is made of some suitable springy metal, and one end bifurcated, so as to form two separated arms,  $a^1 a^1$ , which terminate at their free ends in heads or enlargements  $a^2 a^2$ . The opposite ends of the arms converge and unite in a single rod,  $a$ . These arms are thickened at some parts and made thinner at other parts, and they are slightly curved, so that the inner side of the enlargements  $a^2 a^2$  will preserve a parallelism with respect to each other. B is the knife-rod, and in Fig. 1 C represents a knife secured thereto. On this rod B, at or near one end of it, is a rounded boss,  $c'$ , the front and rear ends of which taper upwardly, so that from before backward the boss is narrower at its upper extremity than it is at its base.

On opposite sides of the boss  $c'$  conical piv-

ots  $g g$  are constructed so that their axes coincide. They are adapted to fit into conical recesses made into the two enlargements  $a^2 a^2$  on the free ends of the arms of the pitman, and thereby form a pivot connection between the pitman and the knife-bar and allow free vertical articulation.

At a suitable point between the solid portion  $a$  of the pitman and the ends of the arms  $a^1 a^1$  oblong holes are made through these arms, through which a screw-bolt,  $b$ , is passed, having a nut,  $c$ , applied on its end for setting the free ends of the arms closer together.

It will be seen from the above description that the free ends of the arms  $a^1 a^1$  constantly tend to spring outward, but are resisted by the bolt and nut  $b c$ ; consequently the only friction or pressure which is given to it is by setting up the nut  $c$ , which can be very nicely adjusted. The action of the arms  $a^1 a^1$  being outward against the nut  $c$  and head of the bolt  $b$ , these parts will be prevented from working loose during the operation of the machine. The conical pivots, fitting into recesses of a corresponding shape in the enlargements of the spring-arms  $a^1 a^1$ , form a good joint, and at the same time one which can be prevented from looseness in consequence of wear by setting up the arms  $a^1 a^1$ . The upwardly-tapering boss  $c'$  on the knife-rod will allow free access above its cones for oiling them, and will prevent clogging, as grass or other substances will be compelled to escape by the movements given to the parts.

We are aware that cone joints for various purposes are not new, and therefore we make no claim to them.

We also are aware that a forked pitman with cone bearing-points and with an adjusting screw and nut is shown in H. Hilburn's patent of July 31, 1866; but we are not aware that the two prongs of the forked pitman have been reduced in thickness after the bar of metal has been split, so as to make each of said prongs a spring such as we have described and shown; nor are we aware that the socket-head on which the cone points are formed has been beveled off in the manner we have described and shown, so as to prevent clogging by grass and extraneous substances.

Therefore, while we do not claim the plan of construction shown in said Hilburn's patent above named,

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

A pitman-connection for harvesters consisting of the spring-arms  $a^1 a^1$ , forming part of the pitman-rod, in combination with the con-

cal joint  $g g a^2 a^2$ , boss  $c'$ , tapered upward, and the adjusting devices  $b c$ , substantially as described.

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MATTHEW B. SAMPSON.

Witnesses:

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