

(No Model.)

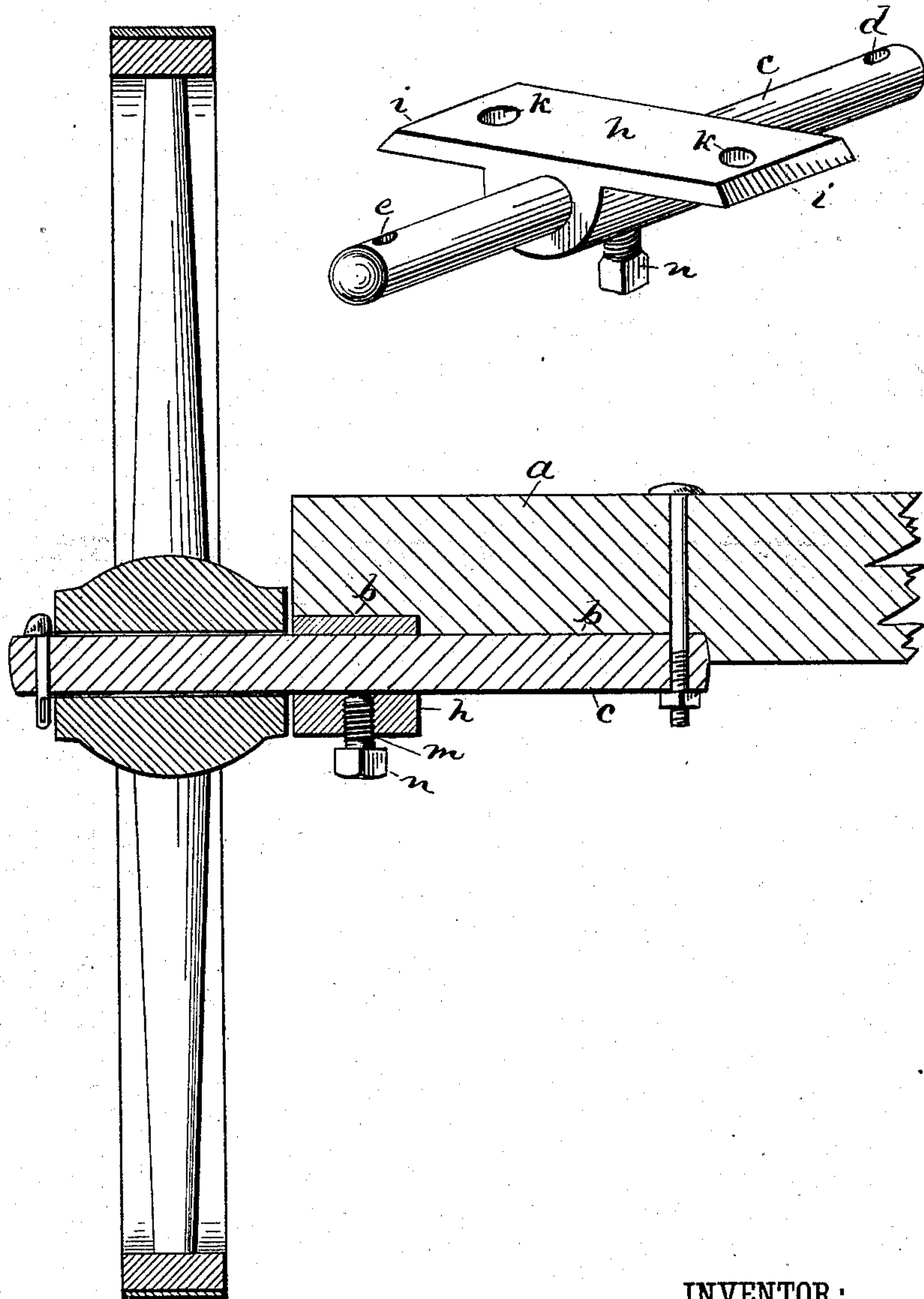
D. F. HULL.
VEHICLE AXLE.

No. 274,776.

Patented Mar. 27, 1883.

Fig. 2.

Fig. 1.



WITNESSES:

Thos Houghton.
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UNITED STATES PATENT OFFICE.

DAVIT F. HULL, OF HAGERSTOWN, MARYLAND.

VEHICLE-AXLE.

SPECIFICATION forming part of Letters Patent No. 274,776, dated March 27, 1883.

Application filed February 9, 1883. (No model.)

To all whom it may concern:

Be it known that I, DAVIT F. HULL, of Hagerstown, in the county of Washington and State of Maryland, have invented a new and useful Improvement in Axles; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a perspective view of a spindle and its bearing, and Fig. 2 is a longitudinal central section of a wheel, axle, and spindle, showing my invention.

My invention relates to improvements in that class of axles in which the spindles are reversible, and it is designed to be applied particularly to grain-drills, horse hay-rakes, and machines in which the axle is straight; and the invention consists of a straight axle, preferably provided at its ends with recesses for the reception of straight spindles revolving in bearings secured to the frame of the machine to which it is applied, each spindle having a hole at each end for the passage of a bolt and linchpin, whereby the spindles can readily be turned around when worn, or turned end for end, as hereinafter more fully set forth.

In the accompanying drawings, *a* represents a straight axle, the lower face of which is preferably provided at its ends with recesses *b b* for the reception of the spindles *c*, which are made of round iron or steel, with holes *d e* made through the ends thereof.

h represents a box, provided with wings *i i*, having holes *k*, through which screws are inserted, and thence into the frame of the machine to which my improved axle is applied. The spindles *c* pass through the boxes *h*, and have their bearings therein, and each box is provided with a threaded hole, *m*, for the re-

ception of a set-screw, *n*, the inner end of which bears against the spindle to keep it in place. The outer end hole, *e*, in the spindle is for the linchpin, and a bolt, *o*, is driven through the inner end hole, *d*, and thence into the axle, thereby securing the spindle readily to the axle. By this construction it will be seen that the spindles can readily be secured to the axle of a machine, and in case a spindle becomes worn its bolt can be withdrawn and the spindle turned around one hundred and eighty degrees and the bolt again inserted; or in case the wheel end of the spindle becomes worn it can be withdrawn and the spindle turned end for end, the linchpin-hole becoming in its reversed position the bolt-hole, and vice versa. The spindles *c*, being formed of round straight iron, can readily be replaced, when broken or bent, by an unskilled workman.

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

1. The combination, with the axle *a*, of the reversible spindles *c*, provided with end holes, *d e*, and box *h*, substantially as described, and for the purpose set forth.

2. The combination, with the straight axle *a*, provided with the end recesses, *b b*, of the straight round reversible spindles *c*, provided with end holes, *d e*, box *h*, provided with wings *i i*, and set-screws *n*, substantially as described, and for the purpose set forth.

The above specification of my invention signed by me in the presence of two subscribing witnesses.

DAVIT F. HULL.

Witnesses:

CHAS. A. PETTIT,

JOHN T. LAWRENCE.