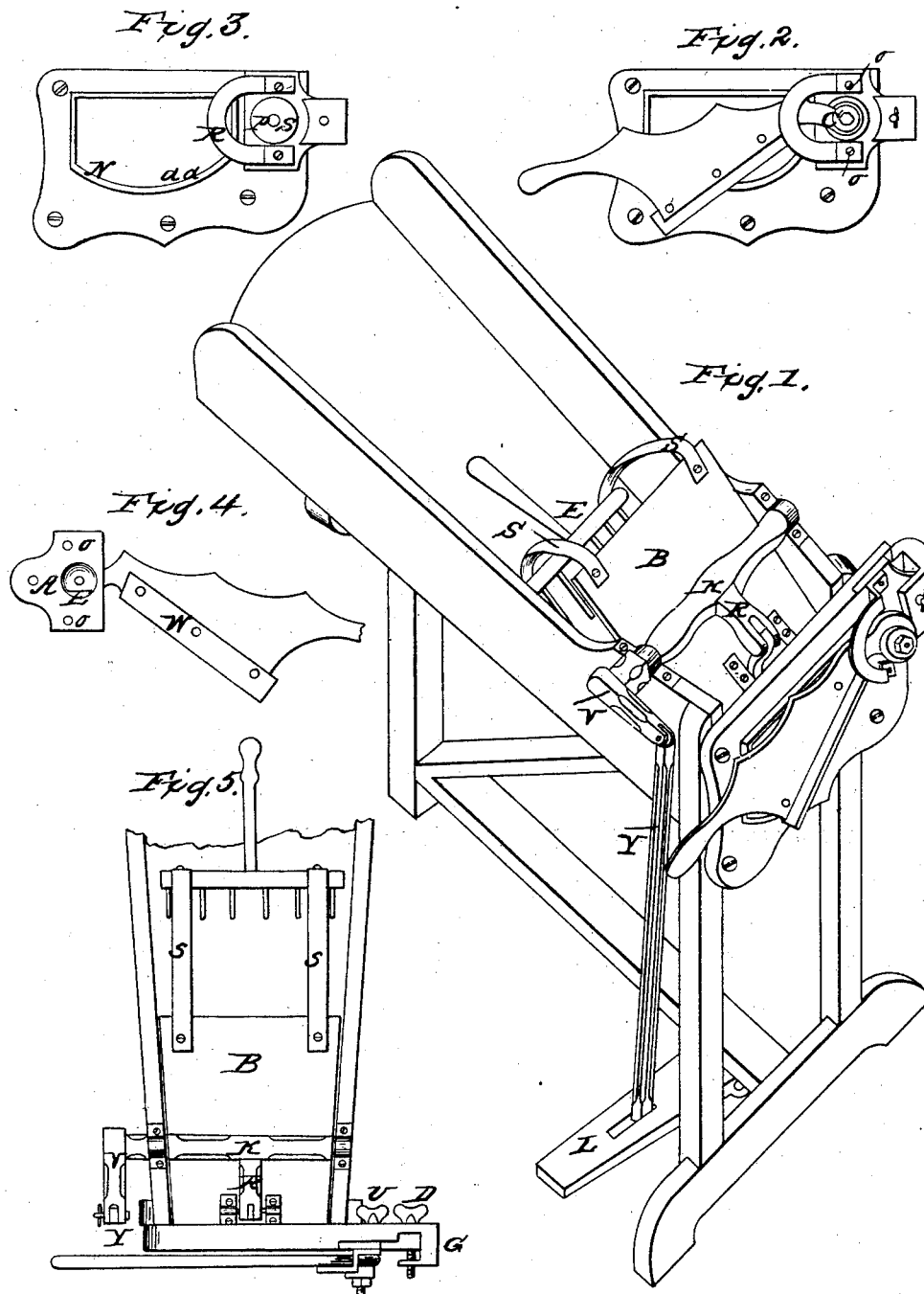


C. D. & W. S. BREWER.

Hay and Straw Cutter.

No. 45,385.

Patented Dec. 13, 1864.



Witnesses:
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UNITED STATES PATENT OFFICE.

C. D. BREWER AND W. S. BREWER, OF LEWISBURG, PENNSYLVANIA.

IMPROVEMENT IN HAY AND STRAW CUTTERS.

Specification forming part of Letters Patent No. 45,385, dated December 13, 1864.

To all whom it may concern:

Be it known that we, C. D. BREWER and W. S. BREWER, residents of Lewisburg, in the county of Union and State of Pennsylvania, have invented a new and useful Improvement in Hay, Straw, and Fodder Hand Cutting Machines; and we do hereby declare that the following is a full, clear, and exact description of the construction and operation of our improvement, reference being had to the annexed drawings, making a part of this specification, in which—

Figure 1 is a perspective view of a hand-cutting box with the improvements attached; Fig. 2, a front view of the cutting arrangement with the knife in position; Fig. 3, a front view of the throat-piece and cutting-bar with the knife detached; Fig. 4, a back view of the adjustable plate A; Fig. 5, a flat view of the press-board B and its arrangement.

The nature of our improvement consists in the construction and arrangement of the adjustable plate A, as shown in Fig. 4, whereby the knife *w* is so controlled as to adjust the edge thereof to the cutting-bar *a a*, thereby forming a perfect shear-cutting principle by means of the shape of the cutting-bar *a a* and the ability of adjusting the knife to the same. The knife and lever, as shown in Fig. 2, are held securely to the adjustable plate A by means of the nut *v*, as shown in Fig. 1, which screws on the end of the fulcrum-pin C, as seen in Fig. 2, said fulcrum being fast to the adjustable plate A, which being left full at the center on the back part, with an impression, E, to receive the end of the set-screw *u*, by which means the plate A is made adjustable, and is easily changed in position by means of the screw-bolts *o o*, as shown in Figs. 2 and 4, whereby when the upper bolt is loosened and the lower one tightened the edge of the knife is thrown closer to the cutting-bar *a a*, and vice versa, thereby regulating the knife transversely at will. The knife being regulated longitudinally by means of the thumb-screw D, which passes through the open hook G, as shown in Fig. 5, and moves the point of the adjustable plate A across the opening in the hook G, thereby regulating the pressure of the knife against the cutting-bar *a a* longitudinally, by the as-

sistance of the semicircle R, which is held to the plate A by means of screws, this part of the machine to be constructed of cast-iron, and in the construction and arrangement of the press-board B, as shown in Fig. 5, which is a board swinging or hinging on the pins *n n*, and connected with the shaft K by means of the short arm R, and the shaft K being connected with the foot-treadle L by means of the pitman Y, by which means, when the foot is placed upon the treadle L and pressed downward, the shaft K is caused to revolve. Thereby through the agency of the short elbow *r* the press-board B is forced down on the straw or other substance which is being cut, thereby packing it solid and holding it securely in its proper place, thereby facilitating the labor of cutting as well as preventing the substance from being drawn from the box without being cut off, as must evidently be the case with cutting-boxes that have no press-board; and the construction and arrangement of the hand-rake F, as shown in Fig. 1, which is connected with the press-board B by means of the straps *s*, which is fastened to the press-board B with pins or screws, the rake being fastened to the press-board serves the double purpose of moving forward the straw or other substance, and in doing that it at the same time draws down the end of the press-board B, thereby raising the other end, which gives the straw or other substance the opportunity of passing through under the press-board B unobstructed, the whole being simple in construction, effective, and practicable, being neither costly nor liable to get out of order.

Having thus fully described our improved cutting-box and pointed out its utility, what we claim as new therein and of our invention is—

1. The press-board B, shaft K, arm R, connecting-rod Y, and treadle L, when arranged and operating as and for the purpose specified.

2. The rake F, when attached to the press-board B, operating as and for the purpose set forth.

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