D. F. HARTFORD.

Shears for Cutting Sheet-Material.

No. 203,449. Patented May 7, 1878.

Fig. 1.

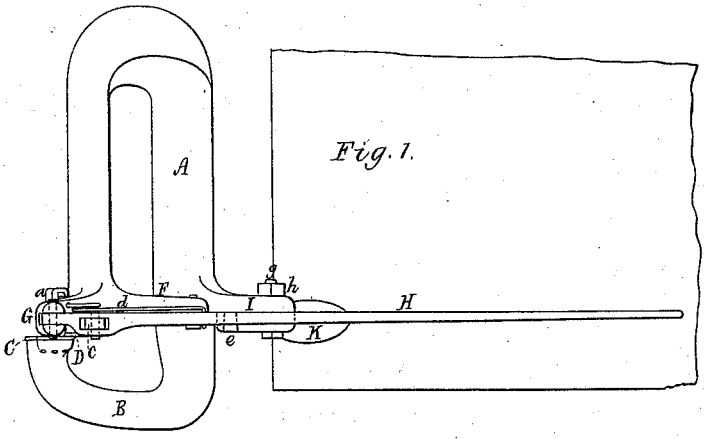


Fig. 2.

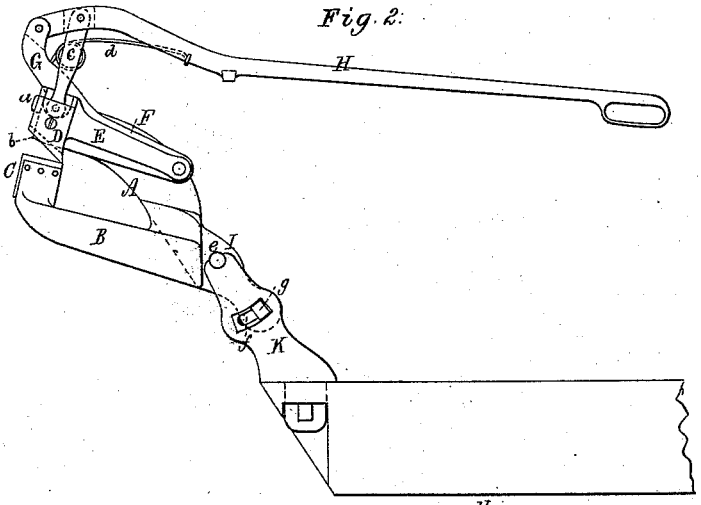
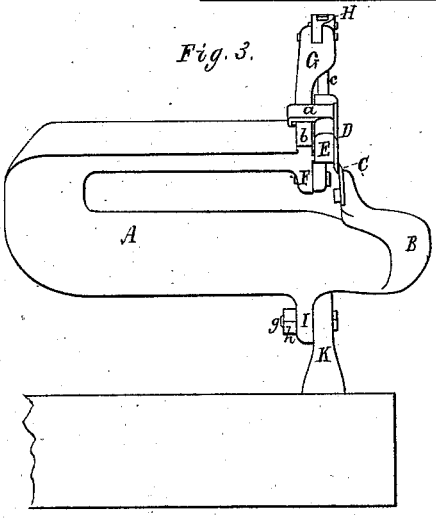


Fig. 3.



Witnesses.

S. W. Piper.

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Inventor

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UNITED STATES PATENT OFFICE.

DAVID F. HARTFORD, OF BOSTON, MASSACHUSETTS, ASSIGNOR TO HIMSELF AND THOMAS T. HARTFORD, OF SAME PLACE.

IMPROVEMENT IN SHEARS FOR CUTTING SHEET MATERIAL.

Specification forming part of Letters Patent No. **203,449**, dated May 7, 1878; application filed April 24, 1877.

To all whom it may concern:

Be it known that I, DAVID F. HARTFORD, of Boston, of the county of Suffolk and State of Massachusetts, have invented a new and useful Improvement in Shears for Cutting Sheet Material; and do hereby declare the same to be described in the following specification and represented in the accompanying drawings, of which—

Figure 1 is a top view, Fig. 2 an end elevation, and Fig. 3 a front view, of my improved shears or machine.

My invention consists in the goose-neck pivoted to a standard, and provided with adjusting devices, as described, and with one stationary and one movable knife, and mechanism for operating the latter, all as explained.

In the drawings, A denotes the goose-neck or U-shaped arm, provided with an extension or auxiliary curved arm, B, and arranged therewith as shown. To the end of the latter arm a knife, C, is fastened, to operate with a movable knife, D, formed as shown, and fixed to an arm, E, which is pivoted to another arm, F, projecting from the upper part of the goose-neck A.

The arm E, at its free end, is furnished with a hook, *a*, projecting from it, and going around an extension, *b*, from the goose-neck. Furthermore, another arm, G, extends up from the upper part of the goose-neck, and has pivoted to it a hand-lever, H, which is connected with the knife-carrying arm E by a pitman or connecting-rod, *c*, duly hinged to the two. A spring, *d*, fixed to the arm G, bears at its free end against the under side of the hand-lever, and serves to force it and the movable knife upward.

From the lower part of the goose-neck an ear, I, is extended, it being arranged alongside of a stationary standard, K. From the ear a pivot or journal, *e*, projects, and rests in a bearing in the top of the standard. There is in the said standard a curved slot, *f*, through which and the ear a set-screw, *g*, provided with a clamp-nut, *h*, is extended, all being arranged as represented. By such means the goose-neck becomes adjustable, or capable of being varied in its inclination to the horizon, in order to enable an attendant to arrange it in a convenient position for use.

In using the machine, an operative, with his left hand hold of the sheet to be cut, places such sheet on the cutting-edge of the stationary knife, and between such and the movable knife. With his right hand he grasps the operative lever of the movable knife, and presses it down as occasion may require. Previous to each descent of the movable knife the operative should move the sheet, as may be necessary, to cause such knife, when descending, to pass through the sheet in the proper direction.

I claim as my invention as follows:

The goose-neck A, pivoted to the standard K, and provided with adjusting devices, as shown, and with one stationary and one movable knife, and mechanism for operating the latter, all being essentially as described and represented.

DAVID F. HARTFORD.

Witnesses:
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