GEORGE H. PRATT.

Improvement in Clipping Shears.

No. 116,216. Patented June 20, 1871.

Fig. 1.

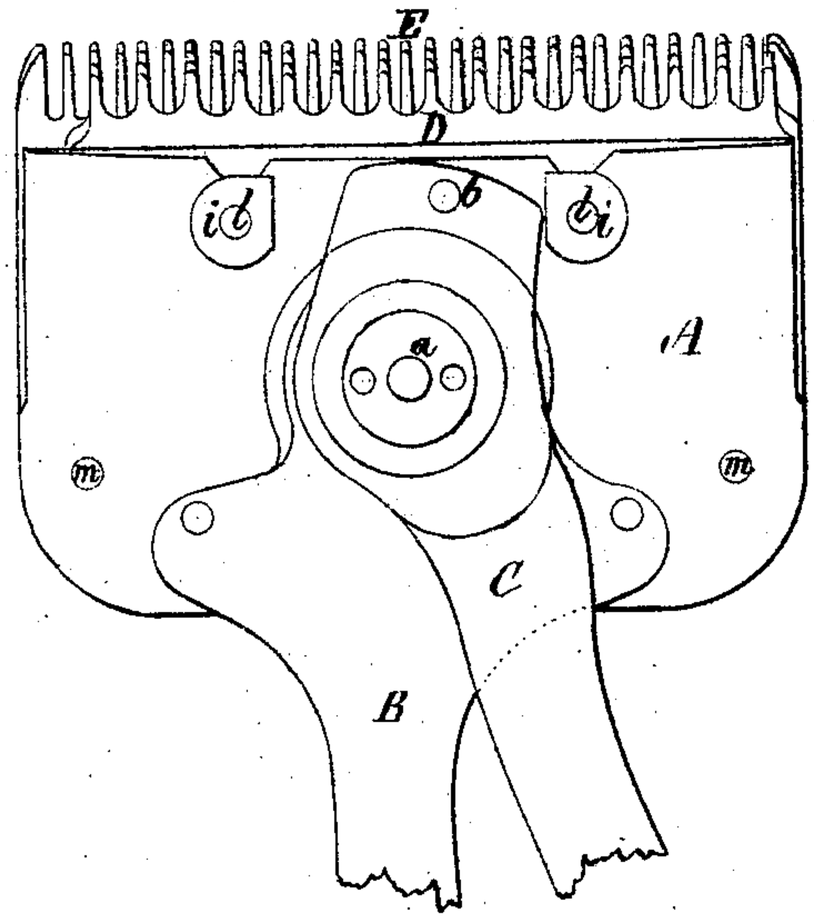


Fig. 2.

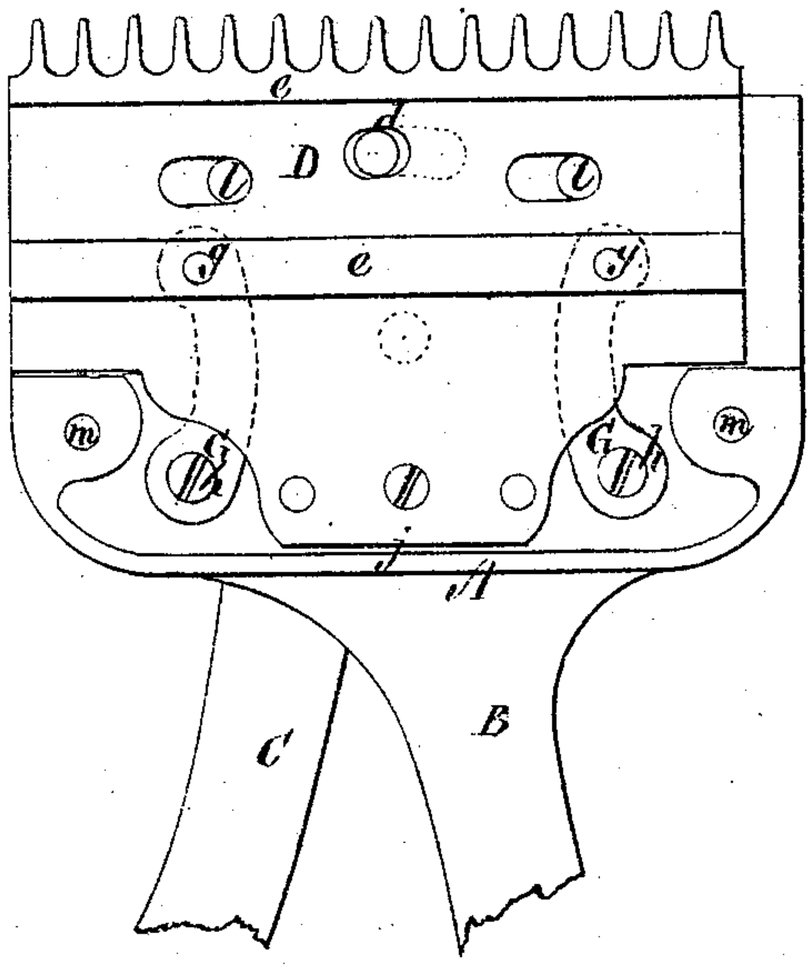


Fig. 3.

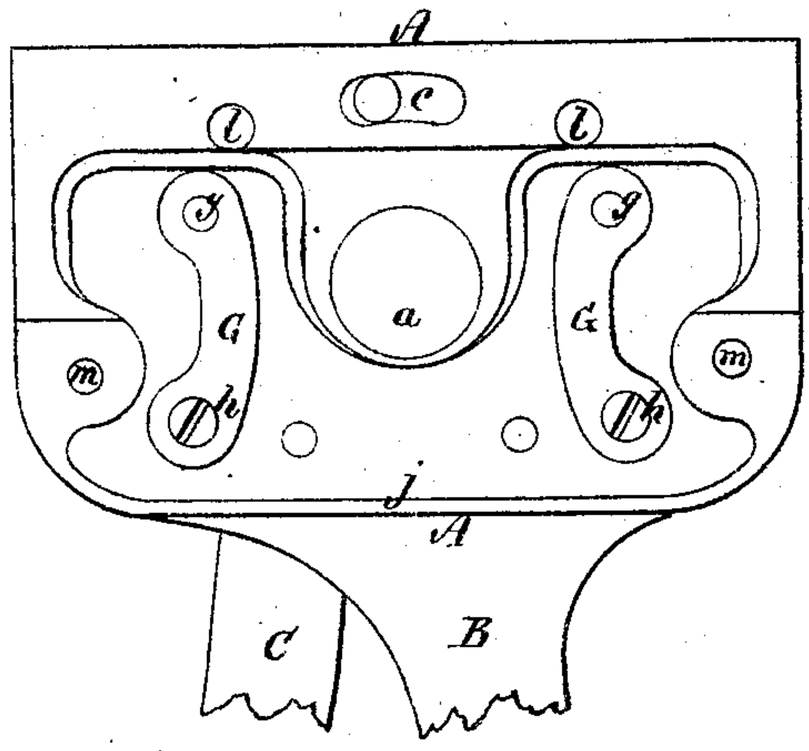
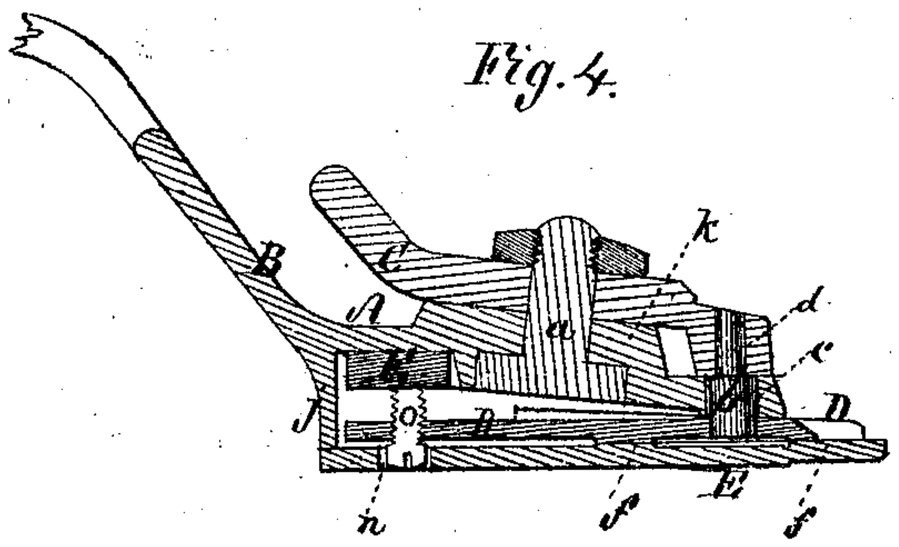


Fig. 4.



Witnesses.
Frank Fuller
Edw. Griffith

George H. Pratt.
by his Attorney.
Frederick Curtis.

UNITED STATES PATENT OFFICE.

GEORGE H. PRATT, OF BOSTON, MASSACHUSETTS.

IMPROVEMENT IN CLIPPING-SHEARS.

Specification forming part of Letters Patent No. 116,216, dated June 20, 1871.

To all whom it may concern:

Be it known that I, GEORGE H. PRATT, of Boston, in the county of Suffolk and State of Massachusetts, have invented certain new and useful Improvements in Horse-Clipping Machines, of which the following is a specification:

My invention relates to the construction of the toothed knives or plates of a horse-clipping instrument, as well as to the construction of the stock and of the actuating mechanism thereof.

In the drawing accompanying and making part of this specification, Figure 1 is a plan view; Fig. 2, an under-side view with the comb-plate removed; Fig. 3, an under-side view of stock or base-plate. Fig. 4 is a vertical and transverse section of the implement.

A is the stock or base-plate; B, the fixed handle; C, the swiveled handle; D, the toothed plate; E, the comb-plate. F is the adjustable gauge or comb. G G are the swinging arms, pivoted to the toothed plate. *a* is a pivot. *b* is a stud; *d*, orifice in toothed plate; *c*, sectoral slot in base-plate. *e e* are shallow ribs on bottom of toothed plate. *f f* are shallow ribs on top of comb-plate. *g g* are pivots of swinging ends of swinging arms. *h h* are pivots of stationary ends of said arms. *i i* are stops. J is the projecting ledge. *k* is the elevated seat of swiveled handle. *l l* are front screws, holding comb-plate to stock. *m m* are back screws for like purpose. *n* is a slot in the comb-plate through which head of set-screw *o* is reached.

The upper toothed plate is made with a less number of teeth than the comb-plate, by which several advantages are gained both in the construction of the teeth and the operation of the cutter. These advantages need not, however, be here recited.

Along the inner surfaces of the cutting-plates, and just in rear of the teeth, I form a shallow groove or depression, leaving shallow ribs, as shown at *e e*, on the bottom of the toothed plate D, and also as shown at *f f*, on the top of the comb-plate E. I also remove the metal from the posterior portion of the plates, leaving the posterior shallow ribs to form bearings on a level with the cutting-edges of the teeth. I do this to enable me to readily restore a cutting-edge to my knives when they have become dull by use.

A perfectly flat back to the teeth is of the first importance, and this I am enabled to secure, together with a perfect and uniform cutting-edge, by simply rubbing the plates on a piece of cast-iron which has been planed smooth and sprinkled with emery-dust, the friction serving simply to polish the projecting bearer or shallow posterior rib, while the knife is rapidly put in cutting order. In a toothed cutter in general use a groove has been cut back of the teeth to enable the operator to grind flat, upon a wheel, the inner portion of the teeth, the rounded edge of the wheel projecting over into the groove. The knife thus constructed cannot, however, be sharpened in the manner employed by me, but must be ground upon a wheel, the entire plate, with the exception of the groove, forming a bearing when placed upon any flat surface. With my arrangement of the shallow depression and narrow bearing strip or rib on a level with the cutting-edges and backs of the teeth no machinery or skill is needed to restore the knife to a cutting-edge, but the object can be attained by any person of fair judgment.

The guides or swinging arms G G, which I place in depressions of the stock or base-plate, are arranged to hold the toothed plate in its appropriate position, and particularly to save from wear, strain, loosening, or injury from contact with the walls of the slot in the toothed plate, the front screws *l l* holding the comb-plate in position. The adjustable gauge F drops into a depression in the stock or base-plate A, and serves to elevate or depress the toothed plate D, as may be desired, by means of the screw *o*, showing through slot *n* in the comb-plate. Surrounding the back of the toothed plate, as a part of the stock or base-plate, is the projecting ledge upon which the back of the comb-plate rests, and which serves as a shield for the interior mechanism of the instrument, protecting it from accumulations of sand, hair, or other substances calculated to destroy its efficiency. The swiveled handle actuates the upper or toothed plate by means of the stud *b* working in the sectoral slot *c*, and the length of the sweep is determined by the stops *i i*, which are elevations upon the base-

plate A, through which the front screws *l l* are made to pass. I project the lip of the swiveled handle, to which stud *b* is secured, so as to cover sectoral slot *c* in the base-plate, and exclude the dirt at this point. The elevation upon the stock A, through which the stud *a* passes, and which serves as a bearing for swiveled handle C, is inclined upward from front to back, in order to give an upward pitch to the swiveled handle C, which enables me to employ a straighter handle or handle-shank, avoiding the tipping or wrenching tendency common to ordinary clipping-machines.

By the arrangement of the several parts which I have described I am enabled to produce a strong, durable, and very efficient clipping instrument, not liable to get out of order, and easily restored to a working condition by hand when dulled by use. The cutting-plates, which I have denominated the toothed plate D and the comb-plate E, should be made of finely-tempered steel. The stock and shank of its fixed handle, as well as the shank of the swiveled handle, may be cast from brass or malleable iron, and both should be supplied with wooden handles when the device is used by hand. Other power may, however, be applied, if desired.

Claims.

I claim—

1. The shallow ribs *e e* and *f f* of plates E and D, substantially as and for the purpose set forth.

2. The arrangement of the adjustable gauge F, the swinging arms G G, the ledge J, the inclined bearing *k*, and the stops *i i*, substantially in the manner and for the purposes specified.

GEORGE H. PRATT.

Witnesses:

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FRED. CURTIS.