E. A. Cooper,

Hame-Fastener.

No. 75,864. Patented Mar. 24. 1868.

Fig. 1.

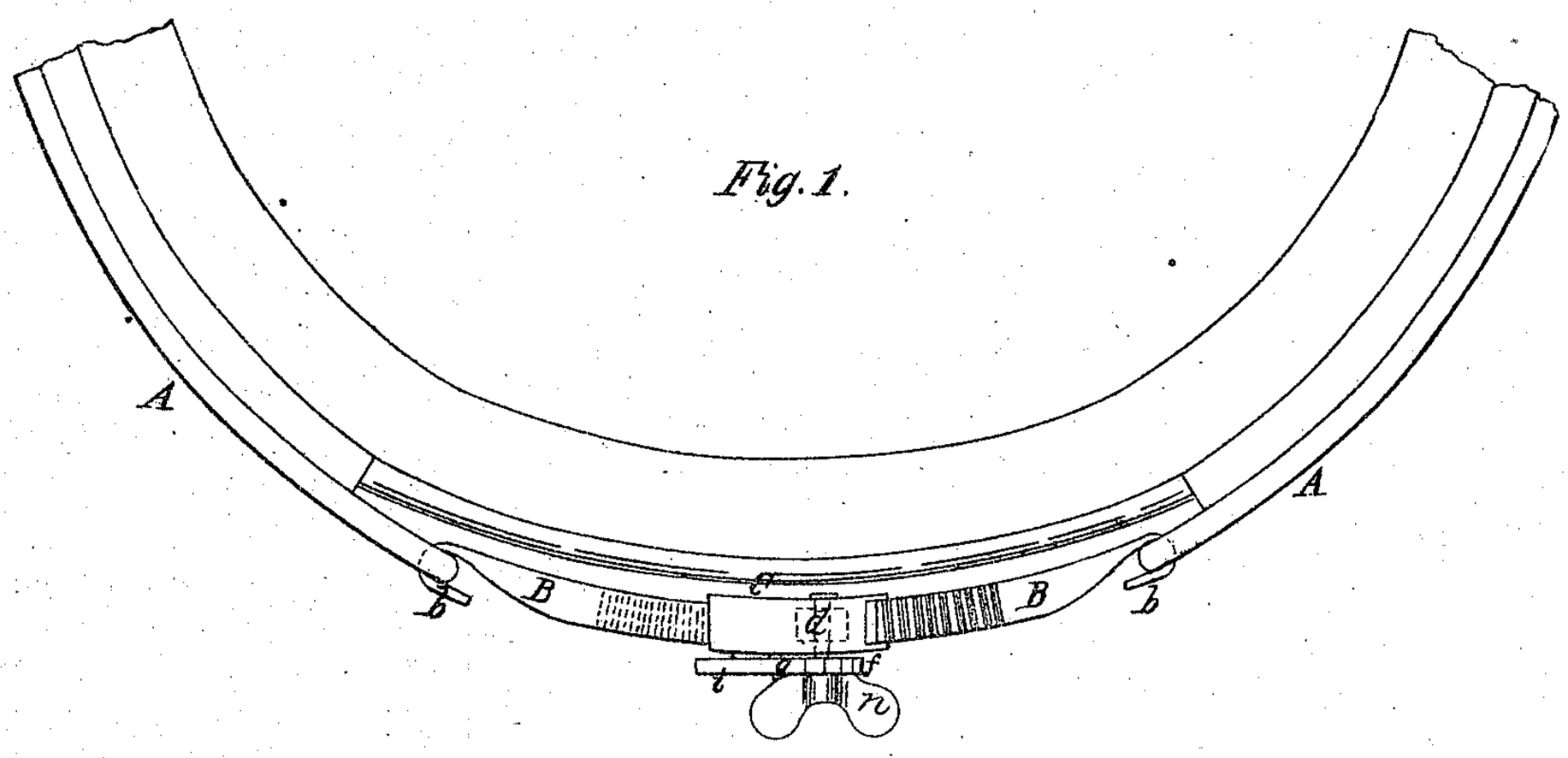


Fig. 3.

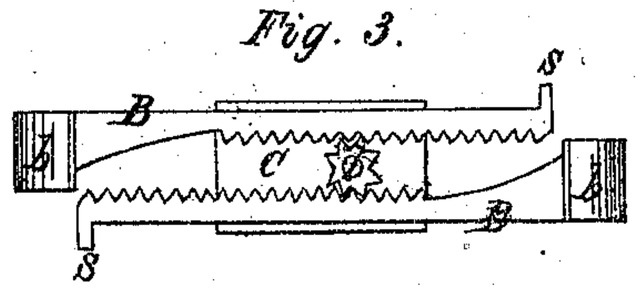
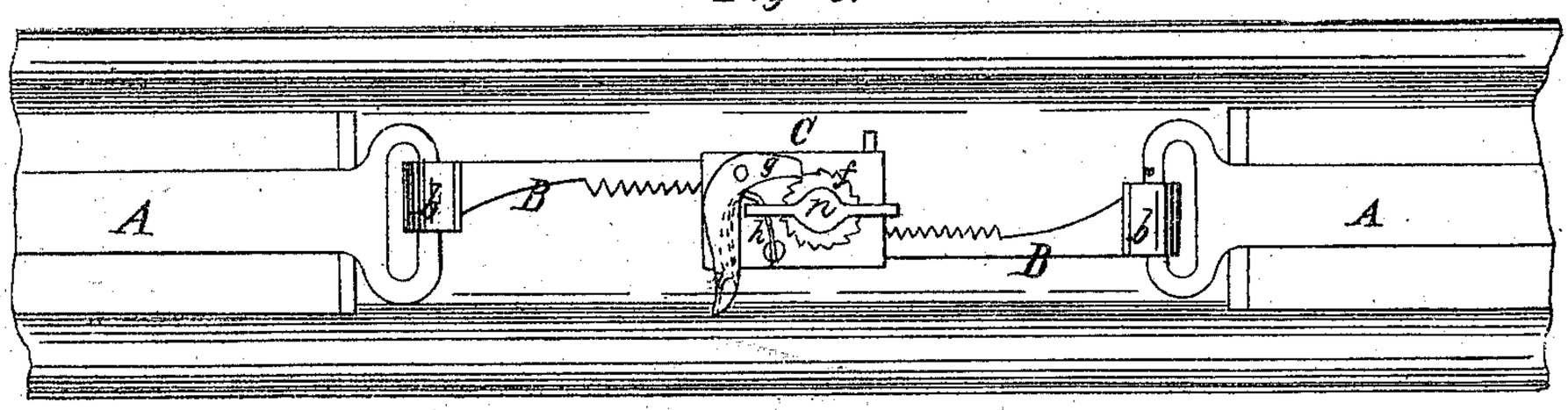


Fig. 2.



WITNESSES.

Edward Wilhelm

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United States Patent Office.

EDWARD A. COOPER, OF LANCASTER, NEW YORK.

Letters Patent No. 75,864, *dated March* 24, 1868.

IMPROVED HAMES-FASTENER.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that I, EDWARD A. COOPER, of Lancaster, in the county of Erie, and State of New York, have invented a new and improved Hames-Fastener; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, in which—

Figure I is a front elevation of my improved fastener as applied to the hames.

Figure II is a bottom plan.

Figure III is a section on line *x x*, Fig. I.

Like letters of reference designate similar parts in all the figures.

My invention consists, first, of two bars, each provided with a hook at one end for attachment to the hames-loops, and one or both provided with rack-teeth, and made movable with reference to a guide-sleeve, supporting a pinion meshing with said teeth, and which, by its revolution, will cause the bars to move in opposite directions to bind the hames to the collar; second, a ratchet and pawl in combination therewith, to prevent the backward revolution of the pinion after the hames have been clamped.

In the drawings, A A represents the lower end of a pair of hames; B B, two rack-bars connected at their outer ends to the hames by hooks *b b*, which engage with the loops in the ends of the former. C is a box-sleeve, forming a way for the said rack-bars, so as to keep them properly engaged with a pinion, *d*, mounted therein, by which they are drawn together in clamping the hames. On the extended axis of the pinion, on the front side of the sleeve, is secured a ratchet-wheel, *f*, with which engages a pawl, *g*, hinged to the sleeve, to prevent the backward revolution of the pinion, and the unloosening of the fastening. The pawl is kept engaged with the ratchet-wheel by a spring, *h*, and is disengaged by pressing on the thumb-lever *i* at its opposite end in releasing the hames. The pinion is revolved by a thumb-piece, *n*, at the extremity of its shaft.

The operation of my fastener is as follows: The hames being arranged in place on the collar, the bars B B are extended sufficiently to permit the easy engagement of their hooks *b* with the loops at the ends of the hames, when, by turning the pinion by means of the thumb-piece *n*, the ends of the hames are readily drawn together to the required degree, and securely retained by the engagement of the pawl with the ratchet-wheel. The fastening is released by simply disengaging the pawl by passing its thumb-lever *i*, which permits the pinion to reverse; again extending the bars of the fastener, so as to allow of their easy detachment from the hames.

The bars are prevented from being entirely withdrawn from the sleeve by a small lug, *s*, at their ends, which stops against the edges of the sleeve. If preferred, the fastener may be permanently secured to one of the hames, so as to remain attached to the harness when removed from the animal.

Although I prefer to form a rack on the inner ends of both the bars B, yet a slight rack of twice the length will effect the same purpose, the other bar, in such case, being rigidly fastened in the sleeve.

My improved fastener, constructed as before described, forms a most reliable device for the purpose intended. It is easily applied, operated, and detached. When the animal is drawing, the pressure of the ratchet against the pawl, in connection with the spring, prevents the possibility of its accidental disengagement, with the the spring alone, at other times, suffices to keep it securely engaged.

What I claim as my invention is—

1. The two hook-bars B B, one or both provided with rack-teeth, in combination with a guiding-sleeve, C, and operating-pinion, *d*, substantially as set forth.

2. The pawl, and ratchet-wheel in combination therewith, operating substantially in the manner and for the purpose set forth.

EDWARD A. COOPER.

Witnesses:

JAY HYATT,

V. H. BECKER.