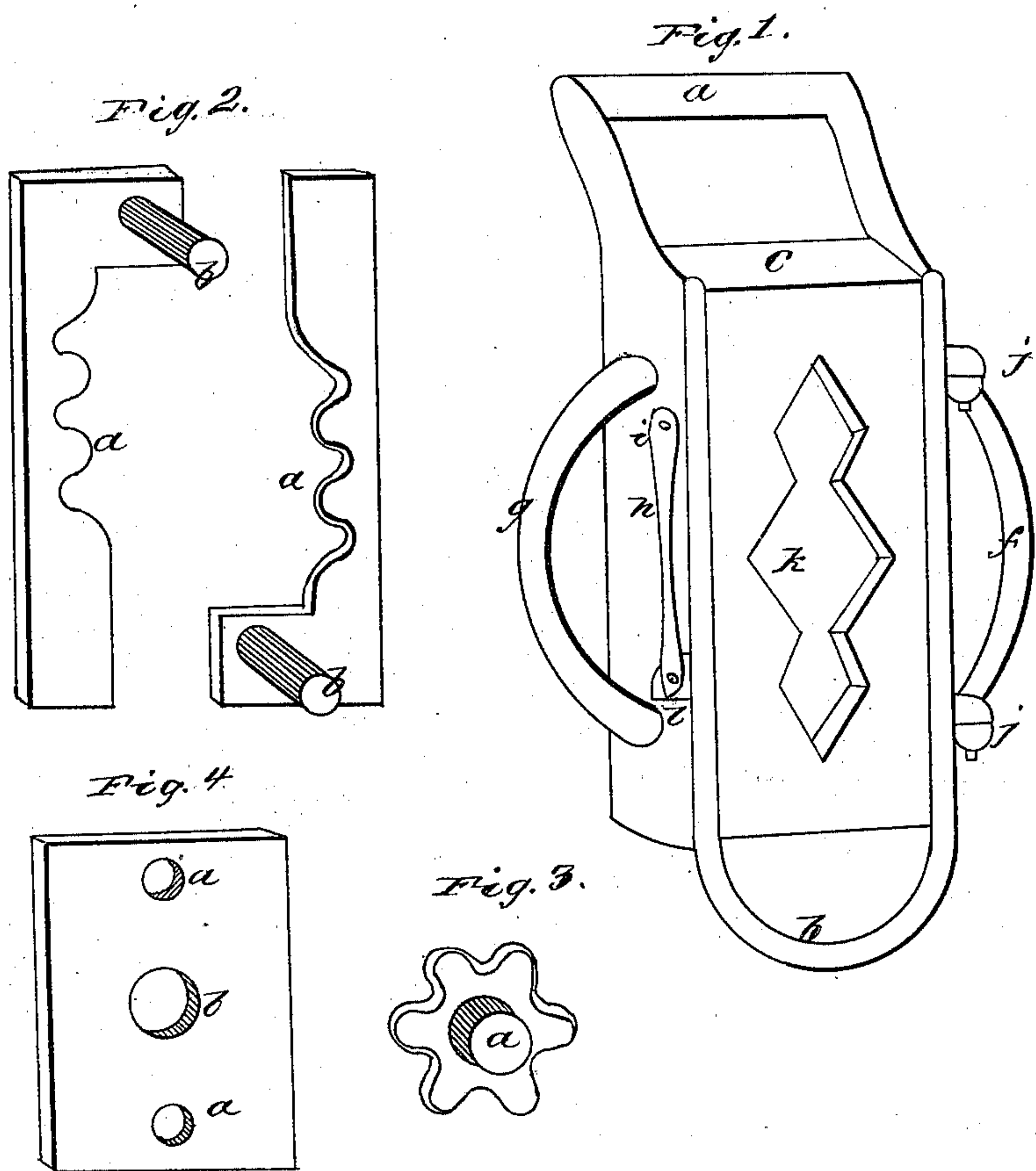


*J. H. Feraw,*

*Tug Buckle,*

*Nº 20,997.*

*Patented July 27, 1858.*



*Witnesses*  
*Amos Cooke.*  
*Alfred Stone.*

*Inventor*  
*John H. Feraw*

# UNITED STATES PATENT OFFICE.

JNO. H. FERAW, OF HINSDALE, NEW YORK.

## HARNESS-TUG BUCKLE.

Specification of Letters Patent No. 20,997, dated July 27, 1858.

*To all whom it may concern:*

Be it known that I, JOHN H. FERAW, of the town of Hinsdale, county of Cattaraugus, and State of New York, have invented a new and useful Improvement in Tug-Buckles; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, in which—

Figure 1, is a perspective view, in which No. 1, represents the body of the buckle, and No. 2, the cover, which is attached to the body of the buckle by means of the hinges as represented by letters J, J, and may be closed at pleasure, and made fast to body by means of a hasp, upon the cover, which is made to shut into a notch made in the body to correspond, with corresponding holes through both hasp and body, as represented by letter *i*, and is secured in that position by means of a spring, as represented by letter (*h*) fastened at one end, as represented by letter (*i*) upon the other end of which spring is a spur made to correspond with and is let into the holes in the hasp and body, as represented by letter *l*. Letter *f*, represents the loop to which the belly-band is attached. Letter *g*, represents the loop to which the pad tug is attached. Letter *a*, represents the loop to which the hame tug is attached. Letter *b* represents the loop in the cover to which the breeching strap is attached. Letter (*c*) represents an aperture formed longitudinally through the buckle by the body and cover, through which the trace passes. Letter (*h*) represents an opening in the cover for ornament merely.

Fig. 2 represents a separate view of the traversing bars, with the buckle tongue at

the end as represented by letter (*b*) which bars are placed in the body of the buckle with tongues in opposite directions and with the notches (*a, a*,) inwardly, or facing each other.

Fig. 3 represents a view of a cog wheel, with a short gudgeon on each side thereof, as represented by letter (*a*), and is placed in the body of the buckle and in the center thereof between the traversing bars, the cogs matching the notches in the traversing bars. One of the gudgeons is inserted in a hole in the center of the body of the buckle and the other end of the gudgeon is made permanent by applying in a thin plate of iron, as represented by Fig. 4, the center hole thereof made to match and receive the gudgeon, as represented by letter (*b*).

Fig. 4 represents a follower made of iron, which is inserted in the body of the buckle over the machinery. Holes (*a, a*) receive permanent posts which are cast with and permanent in the inner side of the body of the buckle by which means cogwheel, as represented at No. 3, is made permanent. The buckle thus framed is opened, and the trace inserted with the holes in the trace over the tongues and the tongues are compelled by means of the cogwheels and traversing bars to bear equal proportions of the draft.

What I claim as my invention is—

The double tongue, cogwheel, and traversing bars, arranged and operating in the body or box, in a manner so as to adjust itself in lengthening out and taking up the traces as above described.

JOHN H. FERAW.

Witnesses:

ALEXANDER STORRS,  
LEONARD MORGAN.