

(No Model.)

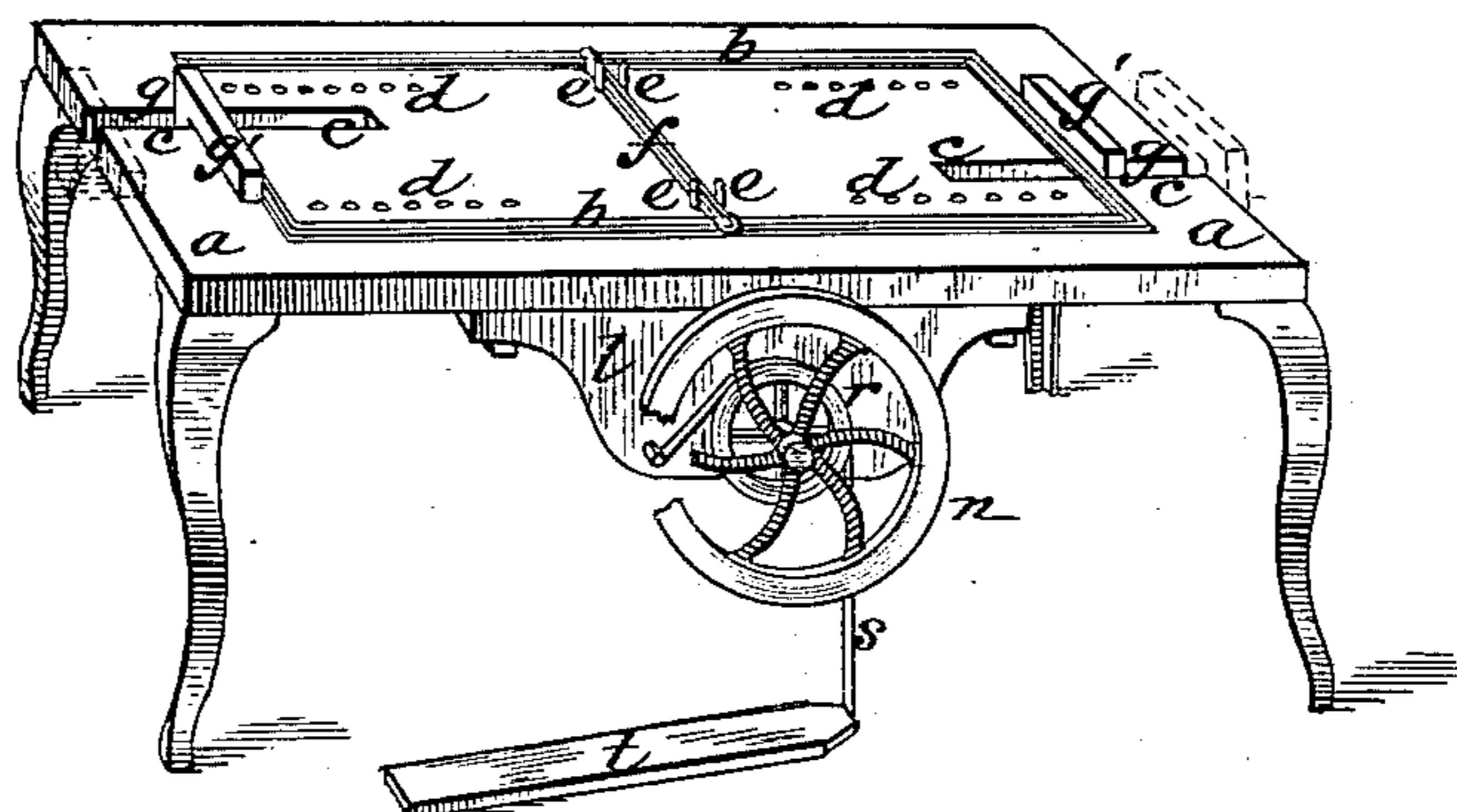
F. C. AYER.

CLAMP FOR HOLDING VEHICLE DASH FRAMES.

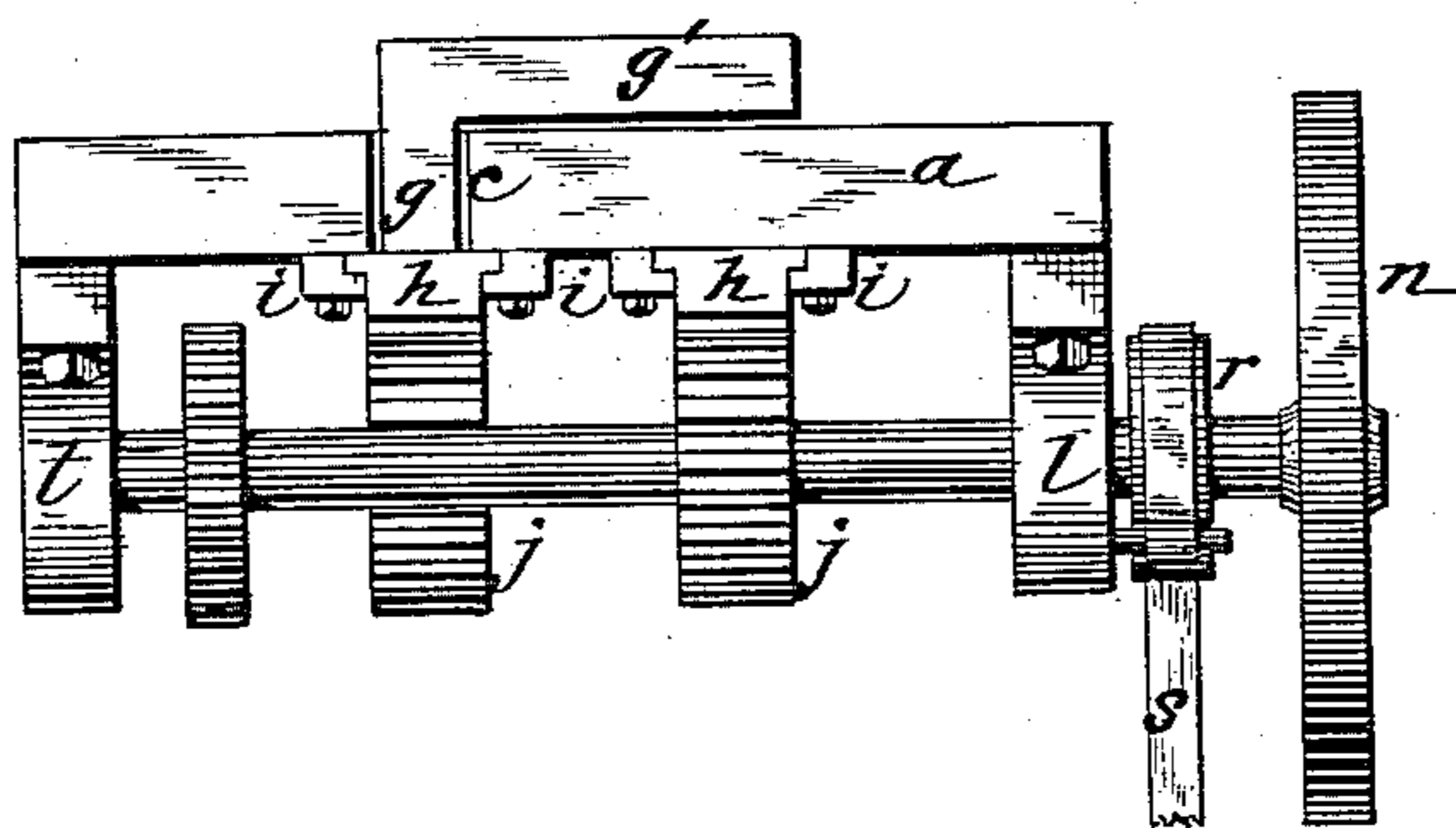
No. 259,351.

Patented June 13, 1882.

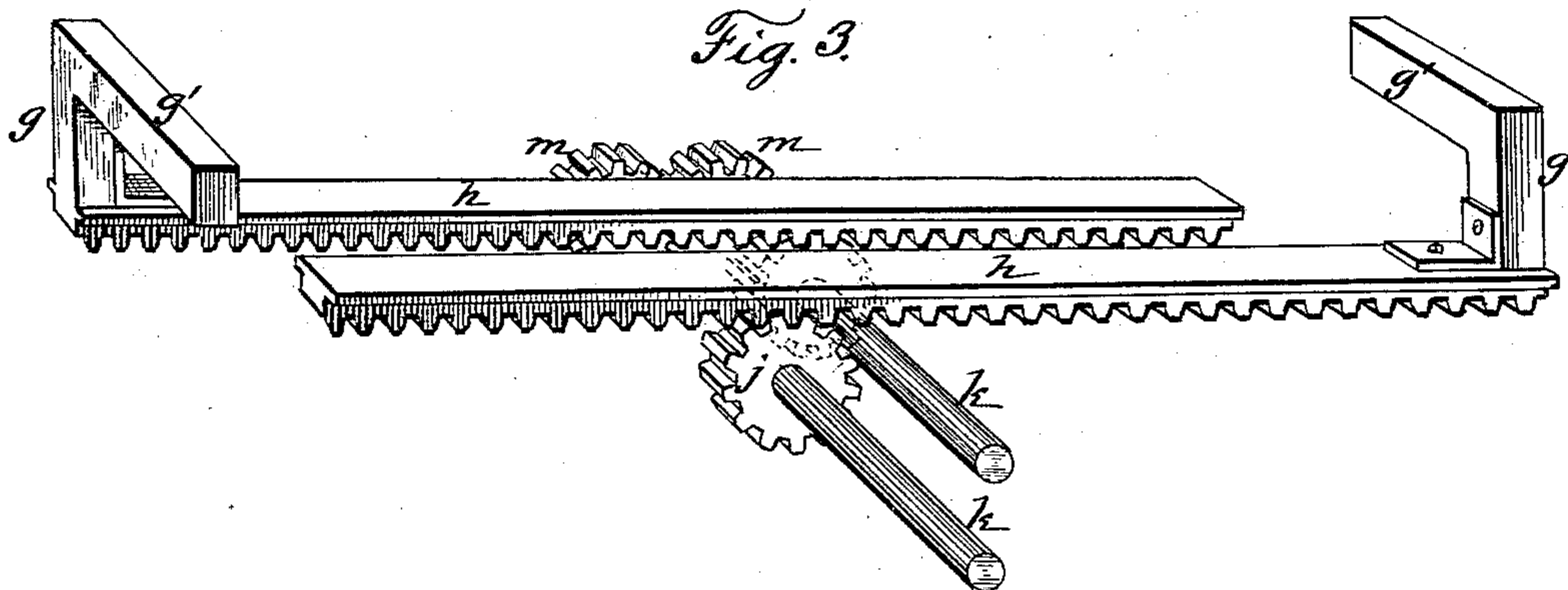
*Fig. 1.*



*Fig. 2.*



*Fig. 3.*



Witnesses:  
Emond Brodhaag  
Philip F. Larnet-

Inventor:  
pro Frank C. Ayer  
Johnson and Johnson  
Atty

# UNITED STATES PATENT OFFICE.

FRANK C. AYER, OF COLUMBUS, OHIO.

## CLAMP FOR HOLDING VEHICLE DASH-FRAMES.

SPECIFICATION forming part of Letters Patent No. 259,351, dated June 13, 1882.

Application filed November 15, 1881. (No model.)

*To all whom it may concern:*

Be it known that I, FRANK C. AYER, a citizen of the United States, residing at Columbus, in the county of Franklin and State of Ohio, have invented new and useful Improvements in Clamps for Holding Vehicle Dash-Frames and their Cross-Bars in Fastening the Same together, of which the following is a specification.

In the manufacture of iron frames for vehicle-dashes the cross-bars are set by hand, by gage or rule, in position to be secured, and this necessarily increases the cost of producing the frame. I have produced a machine for holding the cross-bars and setting and holding the frame in proper relation thereto in the operation of securing the cross-bars.

The accompanying drawings represent such a machine, in which Figure 1 is a view in perspective, showing the dash-frame in position to be set in relation to the center cross-bar, which has a fixed relation to the table. Fig. 2 is an end elevation of the machine; and Fig. 3, a view in perspective, on an enlarged scale, showing the gearing for operating the frame-setting device.

A suitable table or work-bench, *a*, supports the dash-frame *b* and its setting and holding appliances. It is preferably of metal to give the required strength and durability, and has formed at each end a longitudinal slot, *c c*, preferably on each side of a middle longitudinal line, and of a length sufficient to be crossed by the end bars of the shortest dash-frame, as shown in Fig. 1. In parallel relation to the said slots, and in position to be inside of dash-frames having the least width, holes *d* are drilled in the table, into which pins *e e* are placed to form holes for the cross-bar *f* or bars of the dash-frame. The cross-bar is shown as being placed in the center; but there may be one near each end of the frame; but the holes *d* are so disposed that the pins *e* can be adjusted to suit the desired positions of the cross-bars, and it will be understood that the function of said pins is to hold the cross-bars in fixed relation to the table.

The device for setting the dash-frame in proper relation to the cross-bars consists primarily of arms *g g*, one carried at each end of the frame and adapted to be moved equally in the said slots *c c* against the end bars of the dash-frame in such manner as to move it upon the table,

set it centrally with the cross-bar *f*, and clamp and hold said frame while the cross-bars are being fastened thereto. For this purpose the setting-arms extend above the table and are formed each with a right angle or horizontal extension, *g'*, standing in opposite directions crosswise of the table and just clearing its surface, so that while moving the dash-frame to set it these extensions serve to keep it in parallel relation to the table and to give a firm clamping action upon the dash-frame to hold it true while fastening the cross bar or bars, as shown in Fig. 1. This setting and holding of the dash-frame will of course properly place the end cross-bars for being fastened. As shown, the setting and clamping bars are carried by racks *h h*, arranged parallel to each other and fitted to have a sliding movement in ways *i i*, secured to the underside of the table, as shown in Figs. 2 and 3. These racks are operated by gears *j j*, carried by shafts *k k*, suitably mounted in bearings or hangers *l l*, placed crosswise of the frame, parallel to each other, and geared by gear *m m* to give the racks equal movement, and their setting-arm equal movement toward and from the middle of the table, so that in placing the frame thereon it will be set exactly symmetrical with the table by being moved by one of said arms. When so set both the arms will at once act with a clamping and holding function in proper relation to the cross-bars held between the pins, so that the dash-frame is both set and held, and the cross-bars are both set and held for being fastened, and when so fastened the holding-arms are released and the dash-frame lifted from the pins.

A hand-wheel, *n*, on one of the cross-shafts at the side of the table serves to operate the setting and holding arms, while a smaller wheel, *r*, on the shaft of said hand-wheel serves to receive a brake-band, *s*, attached by one end to the hanger *l* or to the table and by the other end to a foot bar or treadle, *t*, resting on the floor, whereby the workman holds the clamping-arms while fastening the cross-bars. Any suitable brake device may be used for this purpose, and it is obvious that the setting and holding arms may be connected and operated by chains or by cams.

By this machine the work of fastening the cross-bars to the dash-frame is conducted in an expeditious manner, and the cost of this

branch of the work in the manufacture of vehicle-dashes is lessened.

I claim—

1. The work-table having longitudinal slots  
5 and holes disposed in relation to each other, substantially as hereinbefore set forth, in combination with clamping device operating in said slots at each end of the table for setting and holding the dash-frame thereon, holders inserted in said holes for setting and holding the  
10 cross-bars of said dash-frame in fixed relation to the table, and carrying-slides for operating the setting and holding device upon the dash-frame to center it in relation to the cross-bars,  
15 substantially as described, for the purpose specified.

2. The combination of the work-table having longitudinal slots and holes disposed in relation to each other, substantially as herein-  
20 before set forth, with arms operating in said slots for setting and holding the dash-frame upon said table, pins fixed in said holes for setting and holding the cross-bars of said dash-frame in fixed relation to the table, carriers for  
25 operating the setting and holding arms against the ends of the dash-frame to center it in rela-

tion to the cross-bars, and means, substantially as described, for holding said arms in clamping action upon the dash-frame when so centered, substantially as described, for the purpose specified. 30

3. In combination, the table *a*, having the longitudinal slots *c c* and holes *d*, the setting and holding right-angled arms *g g'*, their carrying-racks *h*, the cross-shafts *k k*, having gear  
35 *j j*, engaging with said racks, and gears *m m* to give equal rotation to said shafts, the hand-wheel *n*, a brake device for the shaft of said hand-wheel, and the setting and holding pins  
40 *e e*, these several parts being constructed and arranged for use in setting and holding vehicle dash-frames and their cross-bars in the operation of fastening the same together, substantially as described.

In testimony whereof I have hereunto set my  
45 hand in the presence of two subscribing witnesses.

FRANK C. AYER.

Witnesses:

T. M. LIVESAY,  
GEO. L. ARTZ.