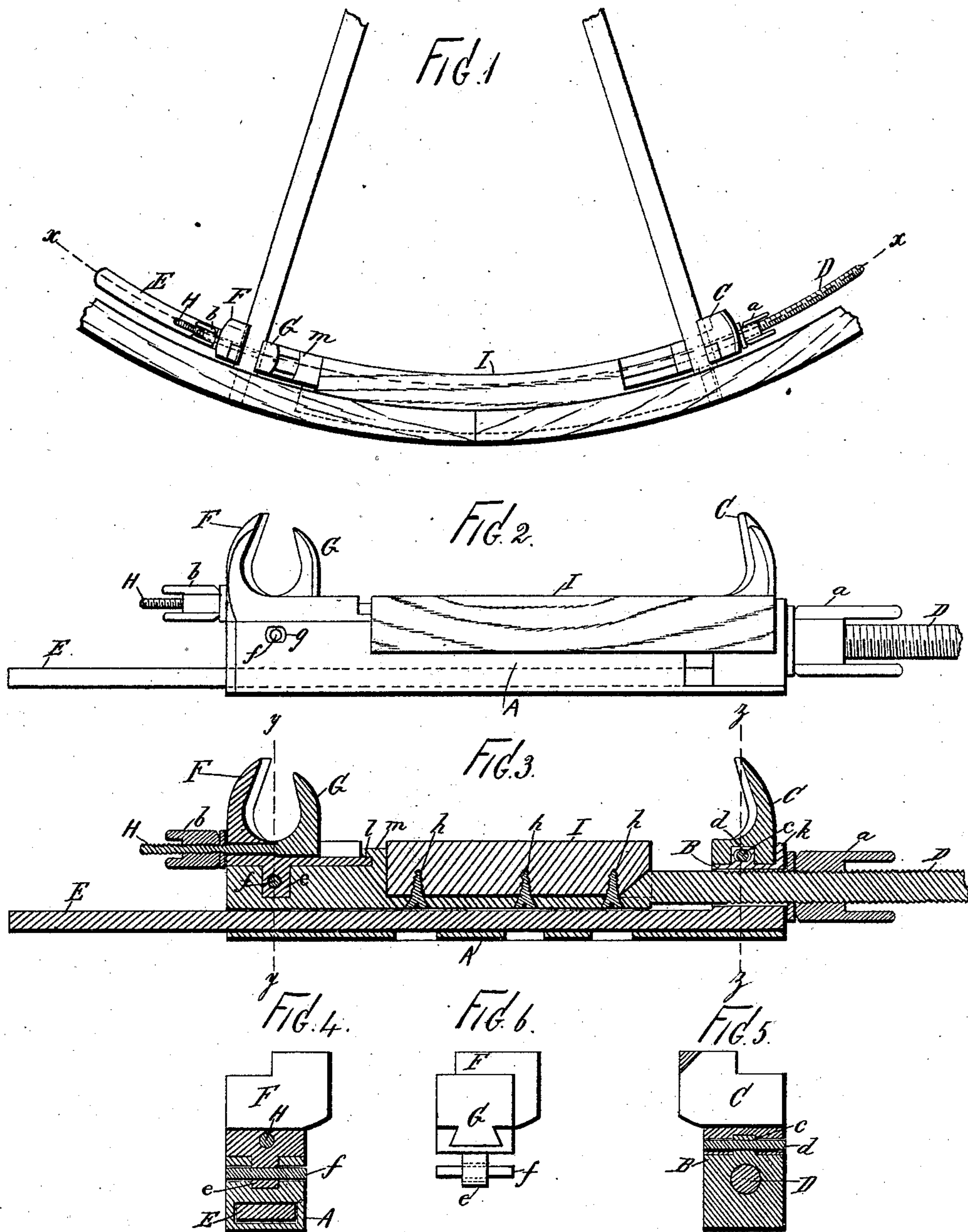


(No Model.)

M. POTTER.
CLAMP.

No. 305,222.

Patented Sept. 16, 1884.



Witnesses:
John Buckler,
Henry Lieb,

Morgan Potter,
Inventor.
By North Osgood,
Attorney

UNITED STATES PATENT OFFICE.

MORGAN POTTER, OF COLD SPRING, NEW YORK.

CLAMP.

SPECIFICATION forming part of Letters Patent No. 305,222, dated September 16, 1884.

Application filed February 12, 1884. (No model.)

To all whom it may concern:

Be it known that I, MORGAN POTTER, of Cold Spring, county of Putnam, and State of New York, have invented certain new and useful
5 Improvements in Carriage-Wheel Clamps, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

10 The object of my invention is to produce a simple, cheap, and effective clamp adapted for application to the spokes of a carriage or other wheel, and arranged to securely hold the parts of the wheel or the joints of the rim
15 thereof preparatory to drafting, facing, and finishing the rim, (without the use of dowels,) the clamp being convenient for application and use, not liable to get out of order, and affording a secure joint with ready means of ad-
20 justment, as may be required. To accomplish all of this my improvements involve certain novel and useful arrangements or combinations of parts, peculiarities of construction, and principles of operation, all of which will be
25 herein first fully described, and then pointed out in the claims.

Heretofore in facing and finishing the rims of wheels at joints of rim the rim has ordinarily been secured at the joints by dowels, which
30 tend to weaken the rim, and which, in fact, do not afford at all times the desired rigidity of parts while the finishing is in progress, and, moreover, require much time for fitting and adjustment. These disadvantages are obvi-
35 ated by my improved device.

In the accompanying drawings, forming part of this specification, Figure 1 is a plan view of a clamp constructed and arranged for operation in accordance with my invention and in-
40 volving the principles thereof, the clamp being shown as applied upon the spokes of a wheel. Fig. 2 is a side elevation; and Fig. 3 a vertical section in the direction of line *x x* of Fig. 1, these figures being on a larger scale than
45 Fig. 1. Fig. 4 is a cross-section on line *y y* of Fig. 3, and Fig. 5, a similar section on line *z z*. Fig. 6 is an elevation of one of the jaws, detached.

In all these figures like letters of reference wherever they occur indicate corresponding
50 parts.

A is the main body or shell of the clamp, upon which the working parts are mounted.

B is a seat for one of the jaws, C, the seat being arranged to travel back and forth upon a curved threaded rod, D, carrying the jaw C 55 with it, and being connected with a curved guide, E, running through the shell A. Upon the opposite end of the shell is another jaw composed of two parts, F and G, the part G being arranged to advance toward and recede 60 from part F, and having a threaded rod connected with it. A thumb-nut, *a*, upon rod D serves to tighten the clamp or to make the two jaws approach each other, and a thumb-nut, *b*, upon the rod H serves to bring the two 65 parts F and G into clamping relations with each other, all of which will be readily understood. In order that the clamp may be readily applied to various sizes of wheels and fit and hold properly, both jaws are swiveled on their 70 seats and may revolve thereon to a limited extent.

The jaw C is mounted upon a stud, *c*, connected with the seat B, and it is held against vertical movement by a cross-pin, *d*, passing 75 through a horizontal slot in the stud, the same being large enough to permit all the required movements in the horizontal direction. The opposite jaw is provided with a depending shank, *e*, which enters a recess in the seat for 80 this jaw, and is held against vertical displacement by a cross-pin, *f*, the projecting ends of which enter horizontal slots, as *g*, in the walls of the seat and permit all the required horizontal adjustments. The bearing-face of jaw 85 C is curved substantially as shown, so that when brought against the curved surface of a spoke it will prevent the spoke from rising, and the bearing-face of F is similarly formed. To prevent the clamp from riding along or 90 creeping on the spokes, the part G is made movable in a groove, in which it is dovetailed, so that while the whole jaw may swivel, as required, one part thereof cannot move with respect to the other, except in one direction, thus 95 rendering the clamping action perfectly secure. The jaw C is braced in rear by an upwardly-projecting flange, *k*, and the opposite jaw is braced by a lip, *l*, riding under an overhanging ledge, *m*, these features being intended to 100 counteract any tendency to a tipping of either jaw when under strain.

I is a block of wood secured to the shell, upon which the rim of the wheel is to rest

when the clamp is in position, affording a level bed for the rim. Carriage-wheel rims are usually divided in two parts. Two of the improved clamps are intended to be applied, one upon the spokes on opposite side of one joint, and the other in a similar manner in the region of the remaining joint. As the rims are driven to shoulders of spokes the joints require sawing out, (called "drafting" by the craft,) of course the two joints open or close, and it is necessary to make them perfect. Facing and finishing may be proceeded with, the wooden block affording a stop for the saw and bed for rim. This block may be removed and replaced, as required, being held to the shell of the clamp by removable screws, as *h*. The rim of the wheel projects slightly beyond the block and the clamp, so that the plane or other implement may be conveniently used. The clamp holds the two parts firmly and accurately in position, and is adjustable, so that as the joint is trued and rim drafted, the parts may be again forced into contact. The bearing-faces of the jaws may be notched to increase their grip upon the spokes. No dowels are required, and the rim is in no way weakened or injured.

The improved clamp may also be advantageously used for holding the rim together while the tire is being put on, particularly if the wheel is old and spokes loose in hub, less heat being required to adjust the tire than is required without the clamp.

Other advantages are secured by use of the improved implement, notably in the regulation of the dish of the wheel, by drafting out the rim and screwing up on thumb-nut, and the accuracy and dispatch with which the rim may be faced and finished.

The improved device has been found in practice to admirably answer the purposes or objects of the invention, as previously set forth.

Having now fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a carriage-wheel clamp, the curved screw-rod and curved guide combined with two jaws arranged to clamp and hold the spokes of the wheel, the rod being provided with a suitable thumb-nut, substantially as shown and described.

2. In a carriage-wheel clamp, the combination, with the curved body and the clamping-jaws, of the removable wooden block, serving as a rest for the rim of the wheel, substantially as shown and described.

3. In a clamp of the character herein set forth, the two jaws arranged to approach and recede from each other, both jaws being swiveled upon their seats and combined with a curved screw-rod and an adjustable nut mounted thereon, substantially as and for the purposes set forth.

4. In a carriage-wheel clamp, the two jaws combined with the curved clamping-screw and guide, said jaws having their bearing-faces curved and notched, substantially as described, so as to prevent the spokes from rising, substantially as shown and described.

5. In a clamp of the character herein set forth, the combination, with the screw-rod, of the two main clamping-jaws, one of said jaws being made movable with respect to the other, being composed of two parts, and provided with a screw and thumb-nut, substantially as set forth.

6. The herein-described clamp, composed of the curved shell, guide, and threaded rod, the two swiveled jaws, the removable wooden block, and the thumb-nuts, all combined and arranged for operation, substantially as shown and described.

In testimony that I claim the foregoing I have hereunto set my hand in the presence of two witnesses.

MORGAN POTTER.

Witnesses:

JAS. M. CAMP,
CHARLES MITLER.