

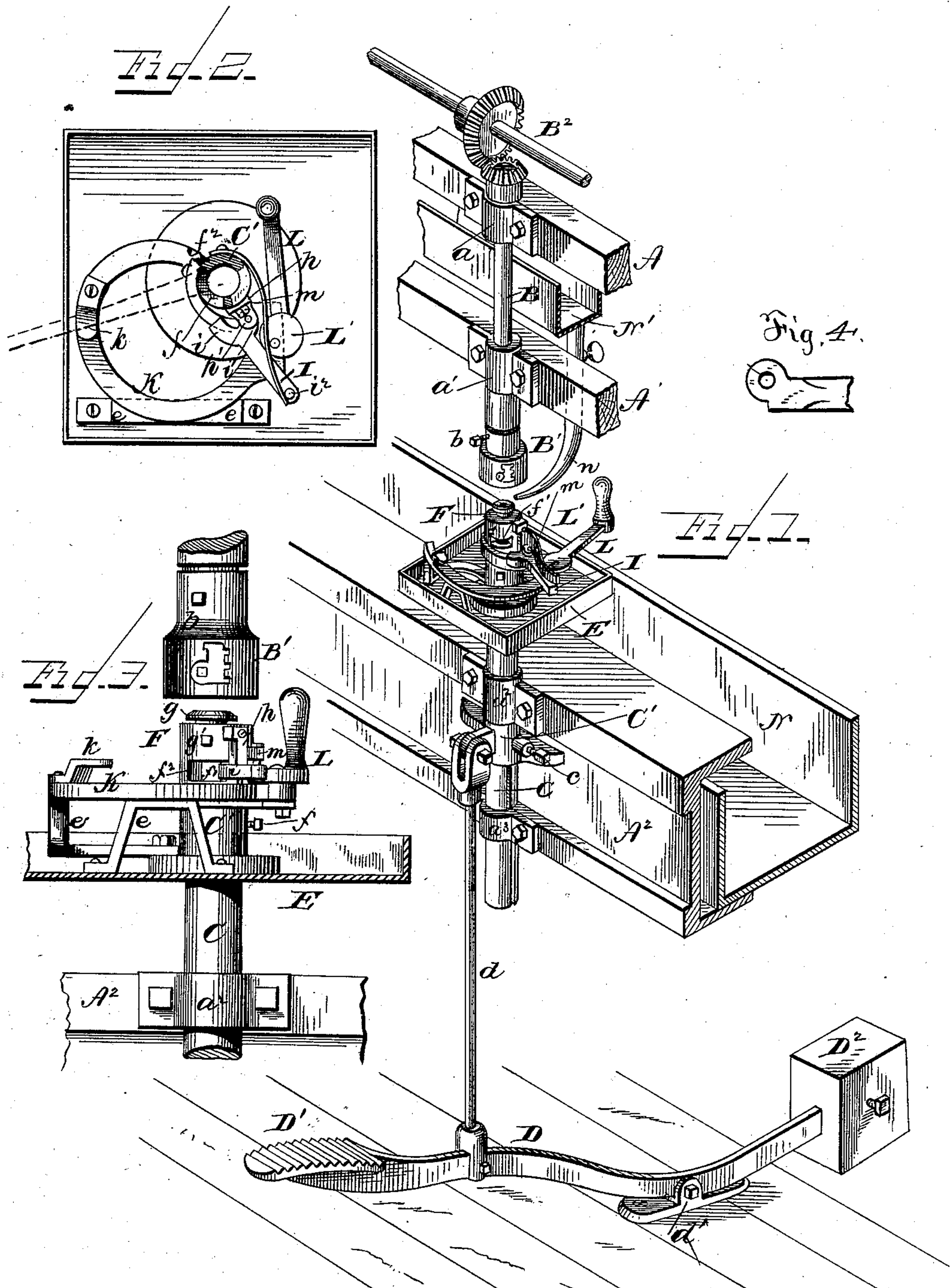
(No Model.)

F. SCHREIDT.

MACHINE FOR DRILLING CARRIAGE TOP IRONS.

No. 373,204.

Patented Nov. 15, 1887.



WITNESSES
H. L. Orland
Rev. Smith.

INVENTOR
Frank Schreidt,
by Will Smith
Attorney

UNITED STATES PATENT OFFICE.

FRANK. SCHREIDT, OF MANSFIELD, OHIO, ASSIGNOR TO THE SCHREIDT & MILLER COMPANY, OF SAME PLACE.

MACHINE FOR DRILLING CARRIAGE-TOP IRONS.

SPECIFICATION forming part of Letters Patent No. 373,204, dated November 15, 1887.

Application filed January 12, 1886. Serial No. 188,358. (No model.)

To all whom it may concern:

Be it known that I, FRANK. SCHREIDT, of Mansfield, county of Richland, and State of Ohio, have invented a new and useful Improvement in Machines for Drilling Carriage-Top Irons, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, making part of this specification.

My invention relates to a novel construction of machine for drilling the rivet-holes in the joints of carriage-tops and similar irons preparatory to uniting the parts of such joints, the construction and arrangement of parts of the machine being such that when the iron to be operated upon is properly clamped in its adjustable or sliding holder the operation of drilling the same for the connecting pin or rivet between the parts of the joint will be automatic, as hereinafter explained.

In the accompanying drawings, Figure 1 is a perspective view of a machine embracing my improvements. Fig. 2 is a plan view of parts of the clamp or holder and carriage for holding and moving the iron to be operated upon up to the action of the drill, the cylindrical holder being shown in section; and Fig. 3 is a side elevation of the drill-holder on the lower end of the drill-shaft and the adjoining end of the adjustable holder or carriage and parts connected therewith. Fig. 4 is a side elevation of one of the blanks after it has been acted upon by the drill.

A, A', and A² represent horizontal bars or portions of a frame-work or support of any suitable construction, the upper bars, A and A', of which are provided with bearings *a* and *a'* for a vertical shaft, B, having on its upper end a bevel or other suitable form of gear, through which a rotary movement is imparted to said shaft from any convenient driving-shaft, such as is indicated at B². On the lower end of the shaft B is secured a tubular bit-holder, B', secured thereon by a set-screw, *b*, and provided in its lower end with a socket for the reception of and in which the drill-bit is to be secured in any usual or preferred manner.

Directly underneath and in line with the shaft B and bit-holder B' is a vertical rod, C, mounted and adapted to slide in bearings *a*²

and *a*³ on the frame-bar A², and provided between said bearings with an adjustable collar, C', secured on said rod by means of a set-screw, *c*, engaging the rod C and permitting the adjustment of the collar up or down thereon. The collar C' has a lug or ear, *c'*, formed on it, to which the upper end of a connecting-rod, *d*, is pivoted, the lower end of said rod being pivoted to a treadle-lever, D, pivoted at or near the center of its length in a floor-bracket, *d'*, and provided on one end with a treadle or foot-piece, D', and at its other with an adjustable weight, D², operating to lift the rod C when the foot of the attendant is removed from the treadle D'.

The upper end of the rod C passes through a tray or table, E, and has a removable cylindrical holder, F, secured to its upper end by a set-screw, *f*, provided with a horizontal slot or opening at *f'* in its side, through which the end of the iron to be operated upon is inserted in the holder, which is made in the form of a sleeve or hollow cylinder, the bore of which is made of a size to conform to the knuckle or rounded end of the iron to be operated upon. The upper end of this sleeve has a removable centering-sleeve, *g*, secured in it by a set-screw, *g'*, and having a central longitudinal bore conforming to the size of the drill employed.

The slot or opening *f'* in the holder F has at one end a square shoulder at *f*², against which the shoulder of the knuckle to be operated upon abuts when the iron is properly placed in said holder. On the opposite side of the holder from said shoulder *f* is secured a bracket, *h*, in a horizontal ear, *h'*, of which is pivoted a lever, I, bifurcated at its inner end, or provided near said end with an ear or arm, *i'*, through which it is pivoted to the ear *h'*, a curved arm, *i*, extending thence around in front of the holder F when the lever is operated to grasp the iron, the end of the arm *i* serving as a jaw to grasp the iron at the junction of the shank or bar with the rounded end or knuckle on the side opposite to that on which the shoulder is formed.

Upon the holder rod or bar C, just below the holder, is secured a pan or tray, E, through a suitable collar and set-screw or other means

5 permitting its adjustment up and down on the
 rod C. Upon this tray or table, upon suit-
 able angle-irons and upright *e e'*, is secured a
 curved bar or plate, K, the upper face of which,
 10 by the proper adjustment of its support or the
 tray J, is brought into the same horizontal
 plane with the lower wall of the slot *f'* in the
 holder F, so that the iron resting on said wall
 and the curved bar K will be held in a hori-
 15 zontal position. The left end of this bar or
 plate K has an angular bracket, *k*, secured to
 it, under which the outer end of the iron is
 swung in bringing it into position to be oper-
 ated upon, said angular bracket serving to
 20 prevent vertical movement or displacement of
 the iron. The opposite end of the curved bar
 or plate K, which is brought into closer prox-
 imity with the holder F, has a lever, L, piv-
 oted upon it, provided on its pivoted end
 25 with a cam or eccentric disk, *L'*, which rests
 against and operates upon the lever I as the
 lever L is vibrated, moving the arm or jaw *i*
 of the lever I around into position to grasp
 and firmly hold the iron in the holder, as ex-
 30 plained.

A spring, *m*, secured at one end to the holder
 F and pressing at its opposite end against a
 pin, *i'*, on the lever I, serves to move the lever
 and jaw *i* outward for releasing the iron when
 35 the lever L is moved in the reverse direction.

N is a tank or trough for receiving and car-
 rying off the borings and drippings from the
 drill, and N' indicates a tank or reservoir, from
 which a pipe or nozzle, *n*, extends downward,
 40 terminating over the centering-sleeve *g*, for
 supplying oil or other liquid to the drill, for
 keeping the latter from becoming overheated in
 operation, any suitable means being employed
 to regulate the flow of the liquid to the drill.

45 In practice I employ a saturated solution of
 sal-soda for keeping the drill cool, having found
 it to be superior in efficiency to and much more
 economical than oil, which is ordinarily used
 for such purposes.

The operation will be readily understood.
 The attendant presses with his foot on the

treadle D', drawing the rod C, the holder F,
 and the supports connected therewith down-
 ward away from the drill. The iron to be op-
 50 erated upon is placed and secured therein, as
 explained, when the attendant removes his foot
 from the treadle, and the weight D² serves to
 move the iron steadily up to the action of the
 drill until the perforation for the pivot is
 55 formed in the iron, when the attendant again
 presses on the treadle, withdrawing the holder,
 when the iron can be removed, a new one put
 in its place, and the operation repeated.

Having now described my invention, I claim
 as new—

1. In a machine for drilling the knuckles or
 joints of carriage-top and other irons, the com-
 bination, with the drill shaft or holder, of the
 slotted cylindrical holder for said irons, se-
 65 cured to and moving with a sliding rod or sup-
 port, arranged and operating substantially as
 described.

2. In a machine for drilling the joints of car-
 riage-top and other irons, the removable cylin-
 70 drical holder secured to a reciprocating sup-
 port and provided with the slot for the irons
 to be operated upon, in combination with the
 clamping-bar for securing the irons in said
 holder, substantially as described.

3. The combination, with the sliding rod or
 75 support, of the slotted cylindrical holder, the
 pivoted arm or jaw for clamping the iron in
 said holder, and a support, K, for said iron, se-
 cured to and moving with the holder, substan-
 tially as described.

4. In a machine for drilling carriage-top-
 iron joints, the slotted cylindrical and sliding
 holder, in combination with the clamping le-
 80 ver and the cam-lever and spring for actuat-
 ing said clamping-lever, substantially as de-
 scribed.

In testimony whereof I have hereunto set my
 hand this 7th day of January, A. D. 1886.

FRANK. SCHREIDT.

Witnesses:

SAMUEL MARRIOTT,
 EFFIE DOTY.