

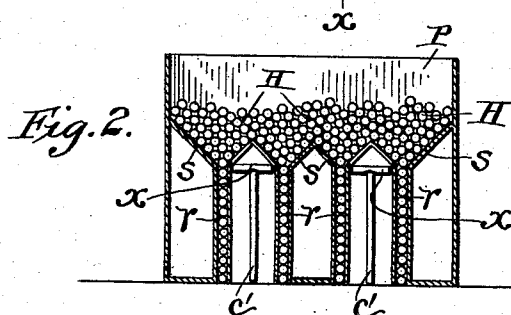
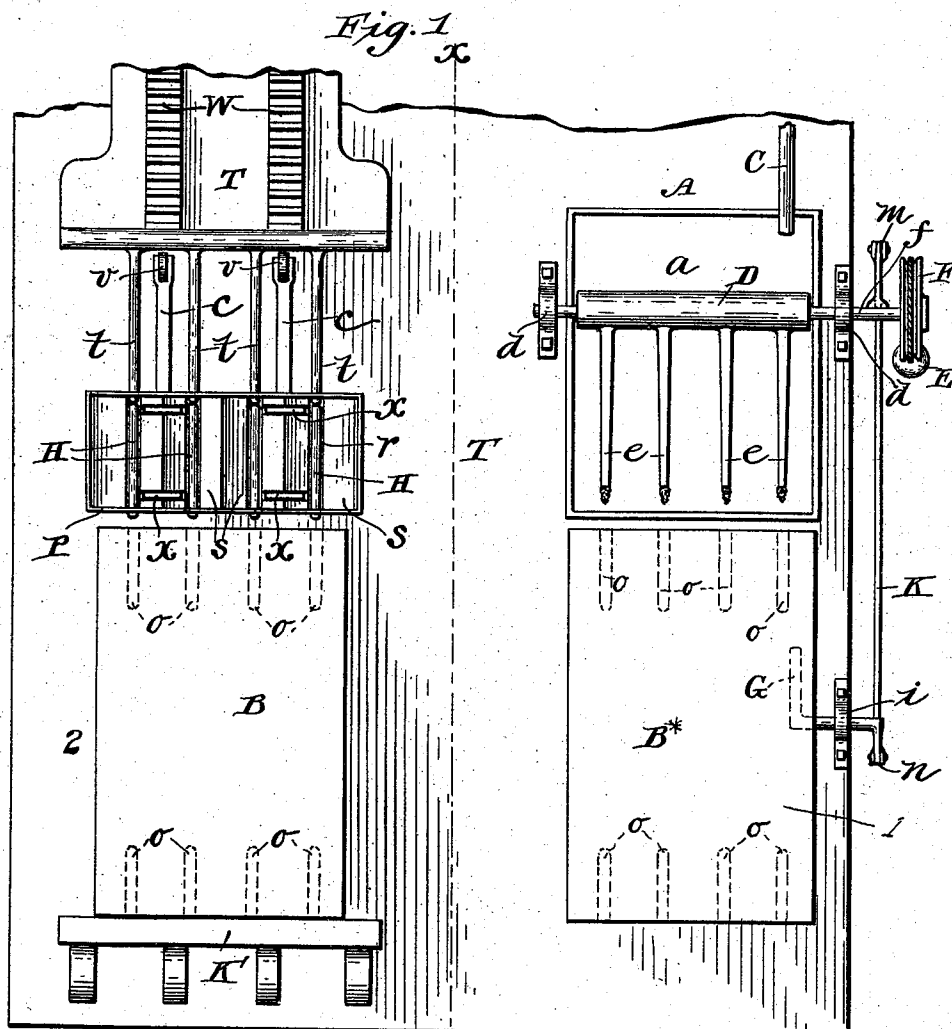
(No Model.)

2 Sheets—Sheet 1.

C. FOSTER & H. A. SIPPEL.
MACHINE FOR SETTING DOWELS.

No. 534,555.

Patented Feb. 19, 1895.



WITNESSES

Governance.
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INVENTORS

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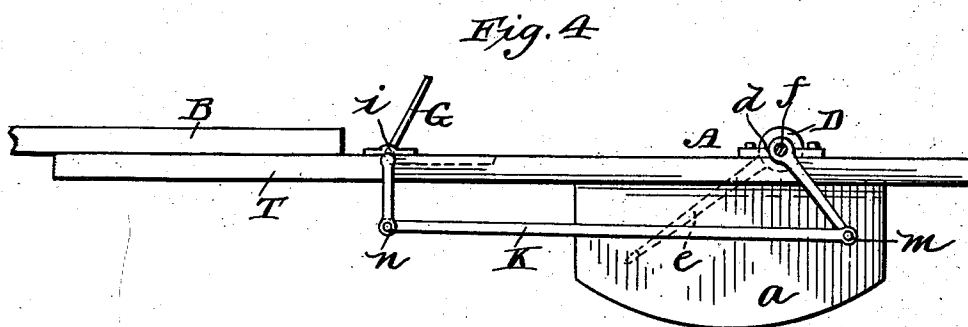
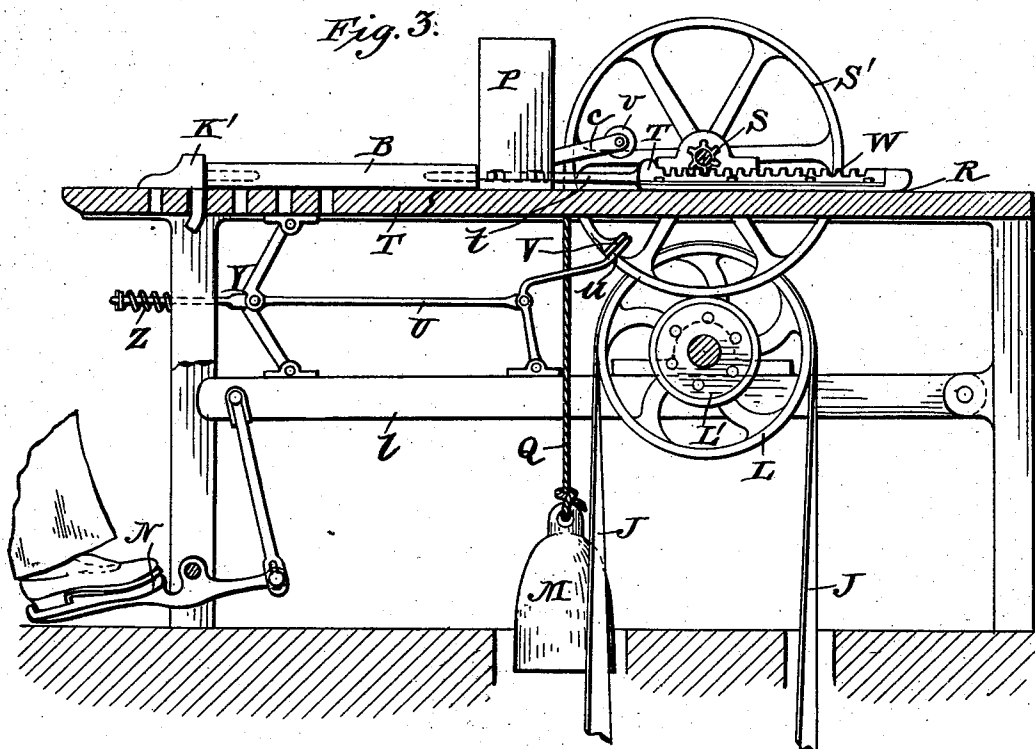
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INVENTORS:

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UNITED STATES PATENT OFFICE.

CARLTON FOSTER AND HUGO A. SIPPEL, OF OSHKOSH, WISCONSIN.

MACHINE FOR SETTING DOWELS.

SPECIFICATION forming part of Letters Patent No. 534,555, dated February 19, 1895.

Application filed November 14, 1894. Serial No. 528,771. (No model.)

To all whom it may concern:

Be it known that we, CARLTON FOSTER and HUGO A. SIPPEL, citizens of the United States, residing at Oshkosh, in the county of Winnebago and State of Wisconsin, have invented certain new and useful Improvements in Machines for Setting Dowels; and we do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

Our invention relates to a machine for setting dowels in doors, and the like, and consists in novel means for glueing and driving the dowels into the rail.

In the accompanying drawings Figure 1 is a plan view of the machine. Fig. 2 is a side view of the feeding box with the side of the box removed. Fig. 3 is a vertical section of the table on the line *xx* showing a side view of the driver only, and Fig. 4 is a side view of the glueing device with the wheel F removed.

Similar letters refer to similar parts in each view.

T is a table supporting the machine.

A represents the glueing device, *a* being the trough or vat containing liquid glue which is kept at the proper temperature by steam through the pipe C.

D is a shaft supporting the glue applying fingers *eeee* and revolving in the bearings *dd*. Any device or counter-balance may be used to turn the brushes down into the glue. We have shown a weight E operating by a connecting cord extending around the wheel F which is on the same shaft *f* as the cylinder D and revolves therewith.

G is a lever arm which turns in the bearing *i* and is connected with the shaft *f* by means of the bar K. When the glue applying fingers are turned down into the glue vat, the lever arm G extends above the plane of the table as shown in Fig. 4. The operator slides the rail B upon the table to the position 1 shown in Fig. 1 and in so doing it strikes against and presses down the lever arm G, and by means of the pivotal joint *n* pulls upon the bar K connecting pivotally at *m* with an arm extending from the shaft *f*, and

thereby turns the shaft and raises the brushes out of the glue to a horizontal position. Then the operator continues to push the rail toward the cylinder D, the brushes entering the dowel holes *o' o' o' o'* coating the inside with glue. Then the rail is placed in the position 2 Fig. 1, against the support K'.

The dowels H H, &c., are arranged in the dowel box P as shown in Fig. 2 and drop into the slots *rrrr* and are driven by the rods *ttt* attached to the head block T which slides horizontally upon the track R. The dowels are driven into the holes *oooo*. After each set of dowels is driven others drop into place as shown in Fig. 2,—incline *ssss*, &c., being provided for this purpose, but to prevent clogging we provide jumpers *xxxx* upon each alternate incline. These jumpers are connected by the rods *c' c'* with the rods *cc* at the bottom of the box, and are operated thereby. The head block T slides very rapidly to drive the dowels and striking suddenly against the wheels *vv* jumps them up, thereby operating the so-called "jumpers" *xx*. The wheels then pass over the head block.

We regard the "jumpers" as an important feature of our invention, as we have found from experience that they are necessary to prevent clogging.

Our invention may be operated by any power applied in any of the usual ways. We do not wish to confine our invention to any particular kind of power, or to any particular manner of applying the same.

We have shown in Fig. 3 a simple manner of applying power to the driver, the head block T being provided with a series of cogs W which are engaged by the cog wheel S, as it revolves the large wheel S' being connected therewith.

The power is applied by means of the band J over the wheel L, the friction wheel L' rising to engage the wheel S' when the foot lever N is pressed down. The weight M is attached to the cord Q extending around the circumference of the wheel S' and pulls the head block T back to the original position, when the friction is released.

U is a brake which operates to throw off the friction. When the head block T has traveled far enough to drive the dowels the projection V on the wheel S' strikes against the

end of the brake *u* and stops the revolution, also throwing off the friction to stop the machine.

The knuckle joint Y and spring Z operate to provide flexibility, and the spring also furnishes a tension, and when the knuckle joint is extended it presses the beam 1 down sufficiently to throw off the friction.

What we claim as our invention is—

10 1. In a dowel setting machine, the combination with a suitable supporting table, of a glue vat, a suitably supported, oscillating glue applying finger arranged above said vat and means for oscillating said finger substantially as described.

2. In a dowel setting machine the combination with a suitable supporting table, of a glue vat, a suitably supported, oscillating glue applying finger arranged above said vat, a tripping device for raising the finger out of the vat, and means for automatically returning the finger to the vat, substantially as described.

3. In a dowel setting machine, the combination with suitable supporting table, of a glue vat, a suitably supported shaft carrying glue applying fingers, a tripping device, means connecting the tripping device and the said shaft for raising the fingers out of the vat and bringing them to a horizontal position, and means connected with the shaft for automatically returning the fingers to the vat, substantially as described.

4. In a dowel setting machine, the combination with a suitable supporting table of an automatic dowel feeding box, a jumper or agitator located in the dowel box for preventing the dowels clogging, a reciprocating head block carrying a driving rod which operates through the dowel box and adapted to drive a dowel into a dowel socket in an article being operated upon, the head block also operating the jumper and means for operating the head block, substantially as described.

5. In a dowel setting machine, the combination with a suitable supporting table of an au-

tomatic dowel feeding box a reciprocating head block carrying driving rods and provided with rack teeth, a cog wheel gearing with said rack, a wheel carrying said cog wheel, a power wheel carrying a friction wheel, means for bringing the friction wheel into contact with the wheel carrying the cog wheel and thereby operating the head block, and means for disengaging the friction wheel substantially as described.

6. In a dowel setting machine, the combination of a suitable supporting table, an automatic dowel feeding box a reciprocating head block carrying a driving rod and provided with rack teeth, a cog wheel gearing with said rack, a wheel carrying said cog wheel, a power wheel carrying a friction wheel, means for bringing the friction wheel in contact with the wheel carrying the cog wheel and thereby operating the head block, a brake for disengaging the friction wheel, a projection on the wheel carrying the cog wheel for operating the brake and stopping the revolution of said wheel, and means for returning the head block to its normal position substantially as described.

7. In a dowel setting machine, the combination of a suitable supporting table, a glue vat arranged in one part of said table, a suitably supported, oscillating glue applying finger arranged above said vat and means for oscillating said finger and a dowel driving device comprising a dowel feeding box, a reciprocating head block carrying a driving rod which operates through the dowel box and is adapted to drive a dowel into a glued dowel socket in an article being operated upon, substantially as described.

In testimony whereof we affix our signatures in presence of two witnesses.

CARLTON FOSTER.
HUGO A. SIPPEL.

Witnesses:

H. E. BAHR,
CHARLES J. SCHMITT.