(No Model.)

D. B. & F. S. MORRILL.

FLOOR CLAMP.

No. 396,104. Patented Jan. 15, 1889.

Fig. 1.

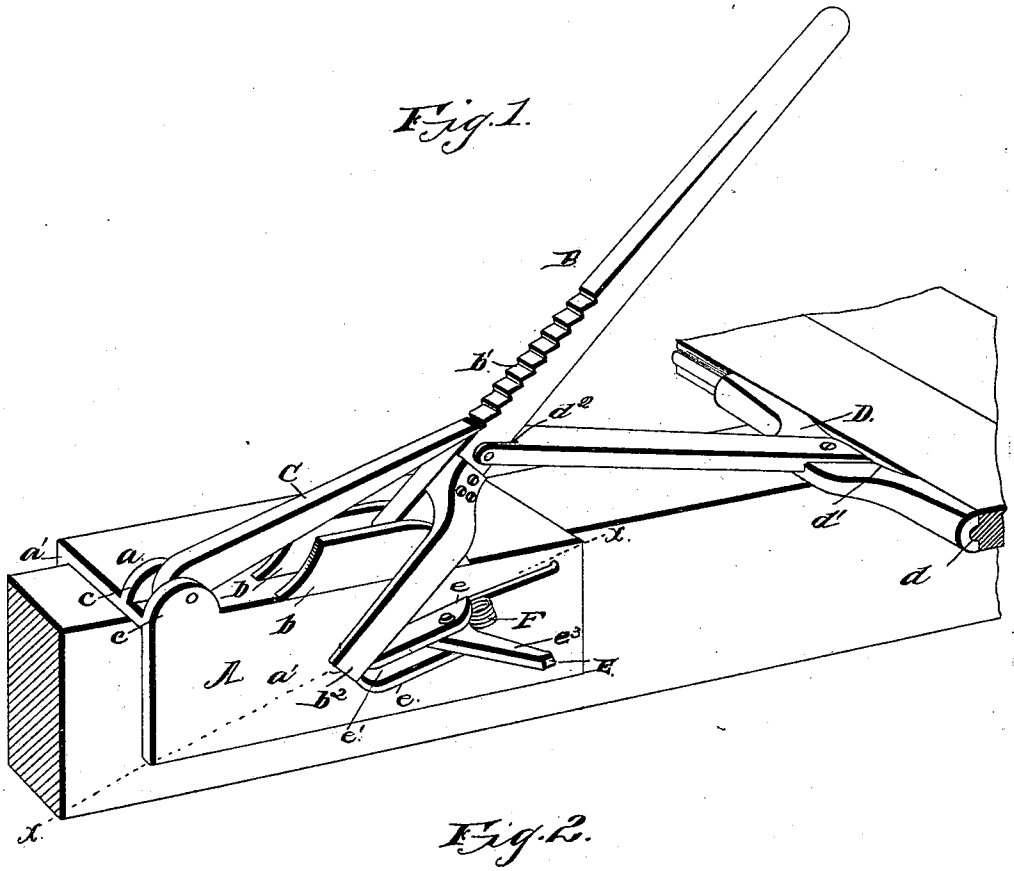

Fig. 2.

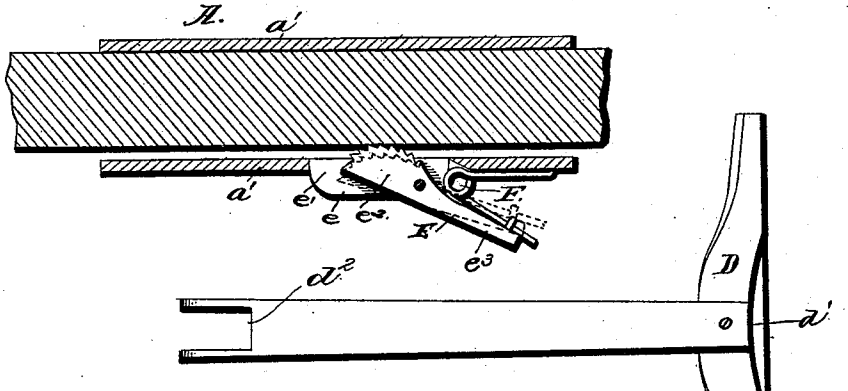

Fig. 3.

Witnesses.
Geo. P. Hoyt
Theodore L. Wells

Inventors,
D. B. Morrill
F. S. Morrill
by C. A. Howes & Co
Attorneys.

UNITED STATES PATENT OFFICE.

DELL BLANCHARD MORRILL AND FRANK STEPHEN MORRILL, OF BLACKBERRY, ILLINOIS.

FLOOR-CLAMP.

SPECIFICATION forming part of Letters Patent No. 396,104, dated January 15, 1889.

Application filed March 13, 1888. Serial No. 267,105. (No model.)

To all whom it may concern:

Be it known that we, DELL BLANCHARD MORRILL and FRANK STEPHEN MORRILL, citizens of the United States, residing at Blackberry, in the county of Kane and State of Illinois, have invented a new and useful Improvement in Floor-Clamps, of which the following is a specification.

The invention relates to improvements in floor-clamps, the object being to provide means whereby the open joints or seams of flooring caused by the planks shrinking or warping can be closed; and it consists in the construction and novel combination of parts hereinafter described, and pointed out in the claims hereto appended.

In the drawings, Figure 1 is a perspective view of a clamp embodying the invention shown in place on a joist and its action when in use. Fig. 2 is a section on the line $x\ x$ of Fig. 1, to more fully show the construction of the detent-dog. Fig. 3 is a plan view of the clutch-bar.

Referring to the drawings by letter, A designates the body or case of the clamp, made preferably of iron and of general rectangular shape; and it consists of the flat top plate, a, and the two side plates, $a'\ a'$, depending from the edges thereof.

B is a lever-handle, pivoted at its lower end between the ears or lugs $b\ b$, standing from the middle part of the plate A, near one side thereof, and having on its rear edge the rack b', provided with downwardly-inclining teeth, as shown.

b^2 is an arm or extension standing outward and then downward parallel to the adjacent side plate, a', from the side of the lever-handle, and serving a purpose hereinafter explained.

C is a pawl, pivoted at its lower end between the ears $c\ c$, which rise from the plate a at its rear end and are aligned with the lugs $b\ b$. The free end of the said pawl engages the rack b'.

D is the clutch-bar standing transversely, and having in its front edge the longitudinal groove d, to fit against the edge of the plank to be moved laterally. The upper side of said groove is cut away centrally to make the curved open space d', through which a nail can be driven through the plank into the joist beneath, to secure the former in place when moved by the device.

d^2 is the clutch-arm, having its outer end secured centrally to the clutch-bar D and its inner bifurcated end pivoted at a proper point on the lever-handle.

E is a detent-dog, pivoted in an inclined position between the ears $e\ e$, which are secured, respectively, above and below the slot e' in the side plate, a', below the lever-handle. The said dog has a semicircular body, e^2, the convex edge of which projects through the slot e', and is provided with rearwardly-inclining teeth, as shown in Fig. 2. From said body projects frontward the arm e^3, the pivotal point of the dog being near said arm, so that when the arm is turned outward the body will turn into the case A.

F is a spring, preferably spiral, which has one end attached to the side plate, a', and the other end loosely connected to the arm e^3 by passing through a staple secured to the arm. This spring tends to force the arm e^3 outward.

In operation the case is set upon the joist and the clutch-bar rested against the edge of the plank to be moved. The lever-handle is then moved frontward, so as to move the clutch-arm outward from the case. As the teeth of the detent-dog which is forced inward by the spring F against the joist are inclined and have their shoulders rearward, the rearward thrust of the case on the joint as the lever-handle is moved outward or frontward to force the plank into place will force the dog farther into the joist and will hold the case thereto. When the plank has been secured and the lever-handle is drawn inward or rearward, the extension b^2 passes over the arm e^3, moving the latter inward and the semicircular dog outward, so that the dog and consequently the case are released from the joist. The pawl C prevents the lever-handle from turning back when holding the plank in position.

The device is simple, strong, compact, and durable of construction, and will do its work rapidly and efficiently. By having the dog

inclined the teeth will not have their points aligned when stuck in the joist; consequently it will require more force to tear them away.

Having described our invention, we claim—

1. The combination of the case, the lever pivoted on the upper side of the same and having rack-teeth on its rear side, the clutch-bar pivotally connected to the front side of the lever, and the pawl pivoted at its lower end upon the upper side of the case, and having its upper end engaging the rack-teeth on the rear side of the lever, as set forth.

2. In a clamp, the combination, with the case composed of the plate a and two depending plates, a' a', of the lever-handle pivoted to lugs on the plate a, and having the downward extension b^2, the semicircular dog having rearwardly-inclining teeth on its curved edge, and a forwardly-extending arm, e^3, and pivoted near said arm in a downwardly-inclined slot in the side of the case, and the coiled spring forcing the arm e^3 outward, substantially as specified.

In testimony that we claim the foregoing as our own we have hereto affixed our signatures in presence of two witnesses.

DELL BLANCHARD MORRILL.
FRANK STEPHEN MORRILL.

Witnesses:
EDWARD J. PARKER,
WM. A. WOLCOTT.