(No Model.)

B. H. GLEDHILL.

GRIFF FOR JACQUARD MECHANISM.

No. 539,753. Patented May 21, 1895.

Fig. 1

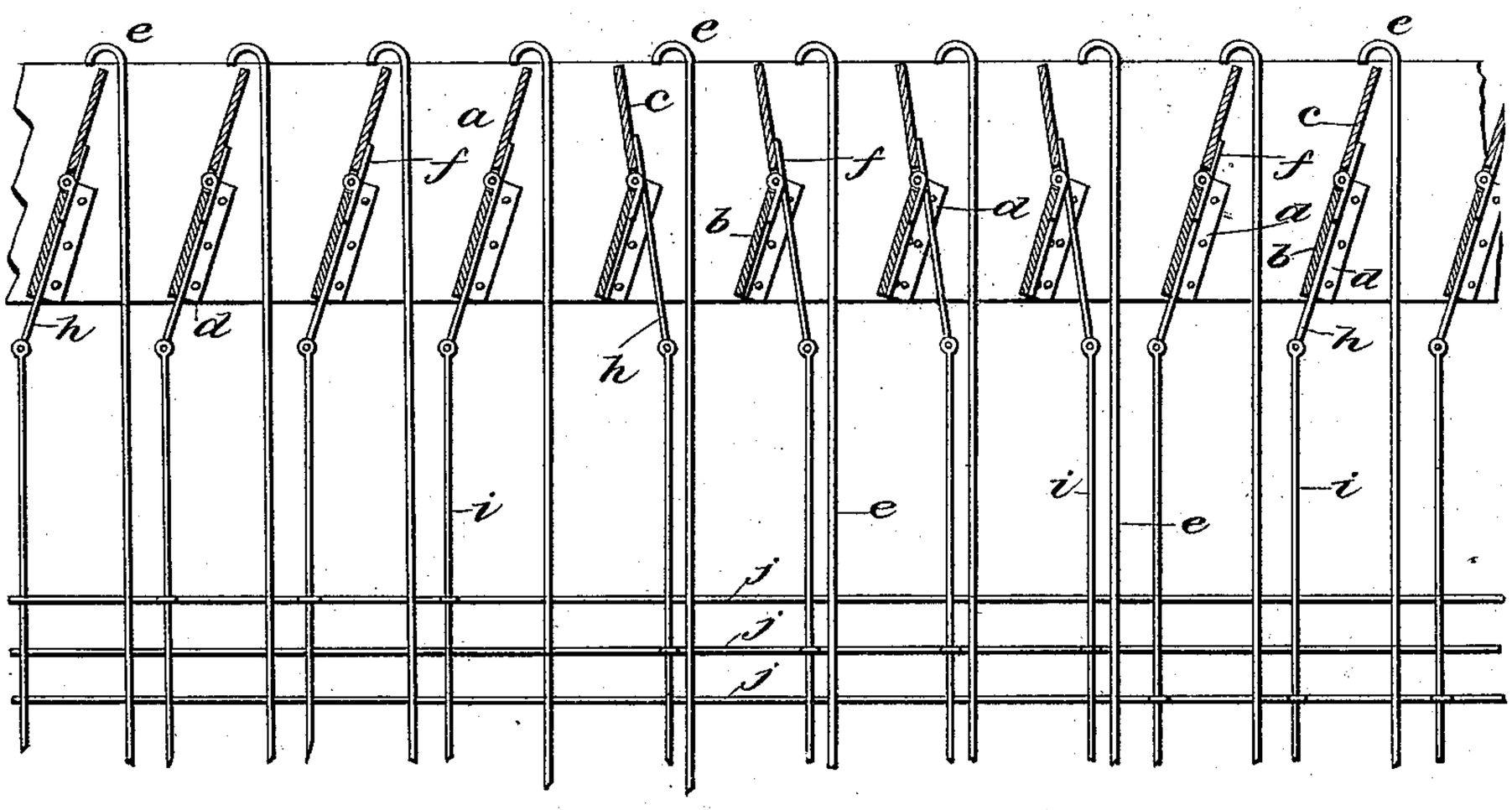


Fig. 2

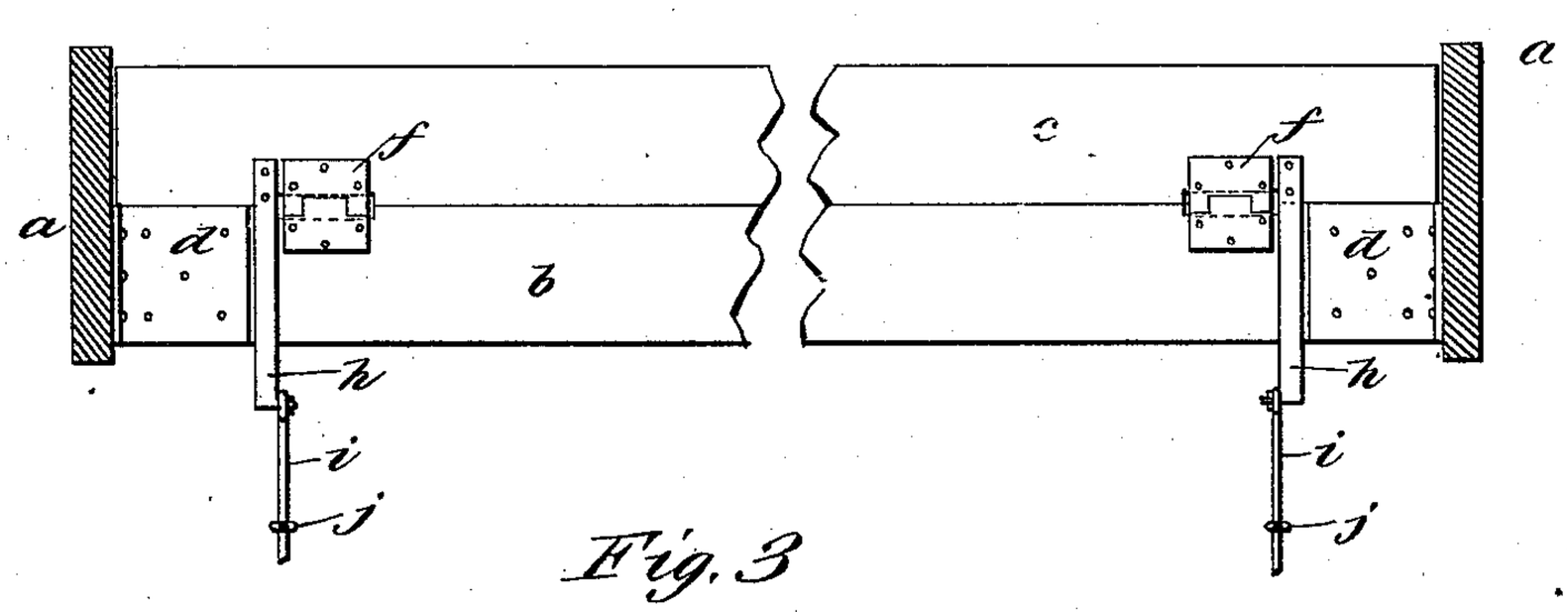
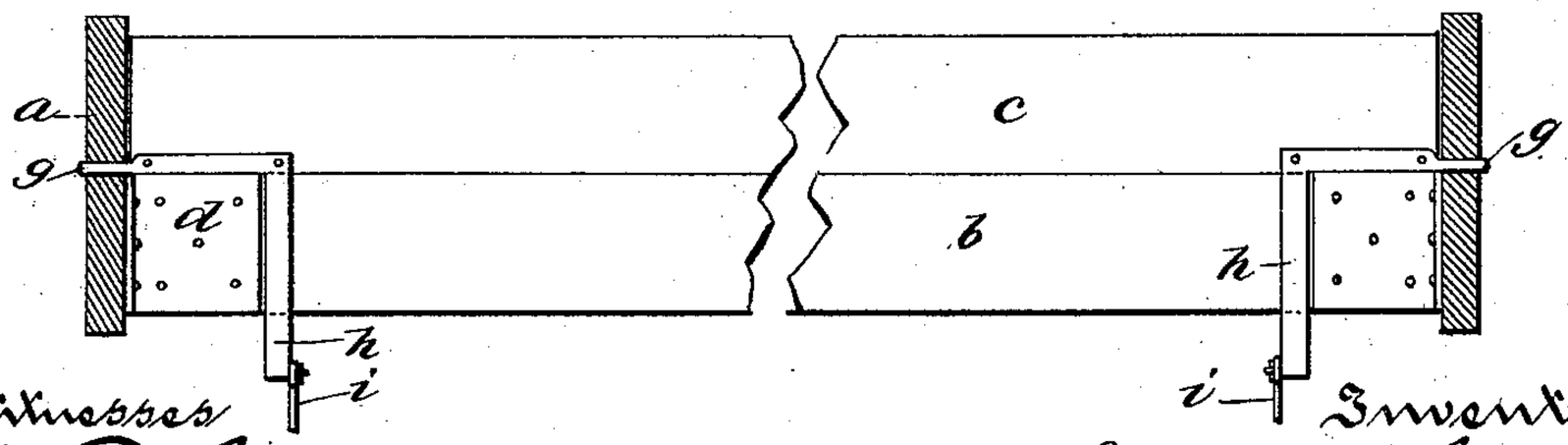


Fig. 3



Witnesses
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UNITED STATES PATENT OFFICE.

BENJAMIN H. GLEDHILL, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR TO C. H. MASLAND & SONS, OF SAME PLACE.

GRIFF FOR JACQUARD MECHANISM.

SPECIFICATION forming part of Letters Patent No. 539,753, dated May 21, 1895.

Application filed November 24, 1894. Serial No. 529,791. (No model.)

To all whom it may concern:

Be it known that I, BENJAMIN H. GLEDHILL, a citizen of the United States, residing at Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented a certain new and useful Improvement in Griffs for Jacquard Mechanism, of which the following is a full, clear, and exact description.

This invention relates to pivoted knives for the griffs of Jacquard mechanisms for looms.

In a prior invention (patented September 18, 1894, No. 526,365) I used a knife pivoted centrally so that when vibrated the planes of both its upper and lower edges were changed, and it has been found that such a knife under some circumstances in the descent of the griff-frame came into interference with the hooks. To avoid such interference, in accordance with the present invention, I divide the knife longitudinally, and fix its lower half in the griff-frame at an incline toward the crooks of the hooks and pivot the upper half so that it may be turned into a plane to be engaged by the crooks to lift the hooks, and be turned away from the crooks so as to miss them. In any case, the fixed half of the knife has its lower edge arranged practically out of the path of the hooks, and said fixed member is disposed at such an inclination with relation to the hooks, that hooks with which there is a possible interference upon the descent of the griff-frame, will be shoved or pushed aside without damage; and since the pivoted half is movable into a plane coincident with the plane of the fixed half when it is desired to engage the hooks, such pivoted half co-operates with the fixed half at such time to guide the hooks safely into engagement with itself.

Having thus stated the principle of my invention, I will proceed to describe the best mode in which I have contemplated applying that principle and then will particularly point out and distinctly claim the part, improvement or combination which I claim as my invention.

In the accompanying drawings, illustrating my invention, in the several figures of which like parts are similarly designated, Figure 1 is a sectional elevation of part of a griff-frame, showing the knives in sets of four, some in position to engage the hooks and others in position to be missed by them. Fig. 2 is a cross-section, and Fig. 3 is a cross-section illustrating a modification in the pivoting of the upper half of the knives.

The griff-frame may be of usual construction, and comprises the bars *a*. To and between these bars the divided knives of this invention are secured, and each knife comprises a lower fixed member *b* and an upper hinged or pivoted member *c*. The fixed member *b* may be secured to the bars of the griff-frame by the brackets *d*, and it is arranged at an upward and forward inclination to the hooks *e* and with its lower edge practically out of the path of the pattern hooks, so that should the griff descend upon any of the hooks out of alignment, the hooks will strike the fixed member of the knife a glancing blow and be by it pushed out of danger and into normal position, without liability to damage. The fixed member may be applied to the griff-frame by any suitable means, the invention not being limited to the brackets shown, but it is esteemed of importance that such fixed member shall be arranged at substantially the inclination shown, for the purpose and operation stated. The hinged, movable or pivoted member *c* of the knife, may be secured to the upper edge of the fixed member by hinges *f* as shown in Figs. 1 and 2, or it may be pivoted at its lower end by end lugs *g* directly to the griff-frame, as in Fig. 3. In any case, the movable member vibrates upon or in the plane of the upper edge of the fixed member. Means for vibrating the pivoted member of the knife may consist of arms *h* fixed to the said member at opposite sides and provided with depending rods *i*, which are engaged by needles *j*, *j*, *j*, under control of the cylinder, as in the patent referred to.

It will be observed that when the movable members of the knives are moved to engage the hooks *e*, as illustrated in the first four and last three reading from the left of Fig. 1, the said movable members are continuous with the fixed member in the same plane of inclination, and hence they assist to guide abnormally placed hooks into position to be engaged by the knives, and finally engage them, while when the movable members are turned out of alignment with their fixed members,

as indicated by the second four in Fig. 1, reading from the left, the hooks are not engaged.

What I claim is—

1. A griff-frame for looms, provided with longitudinally divided knives, the lower member of each knife being fixed and the upper member rotatable upon an axis essentially coincident with the upper edge of the fixed member, substantially as described.

2. A griff-frame for looms, provided with longitudinally divided knives, the lower member of each knife being fixed in the griff-frame at an incline and the upper member being movable upon an axis essentially coincident with the upper edge of the fixed member, substantially as described.

In testimony whereof I have hereunto set my hand this 17th day of November, A. D. 1894.

BENJAMIN H. GLEDHILL.

Witnesses:
JOHN M. HARPER,
S. E. CARVER.