J. Munsell,

Mortising Machine,

No. 4,695, Patented Aug. 12, 1846.

Fig. 2.

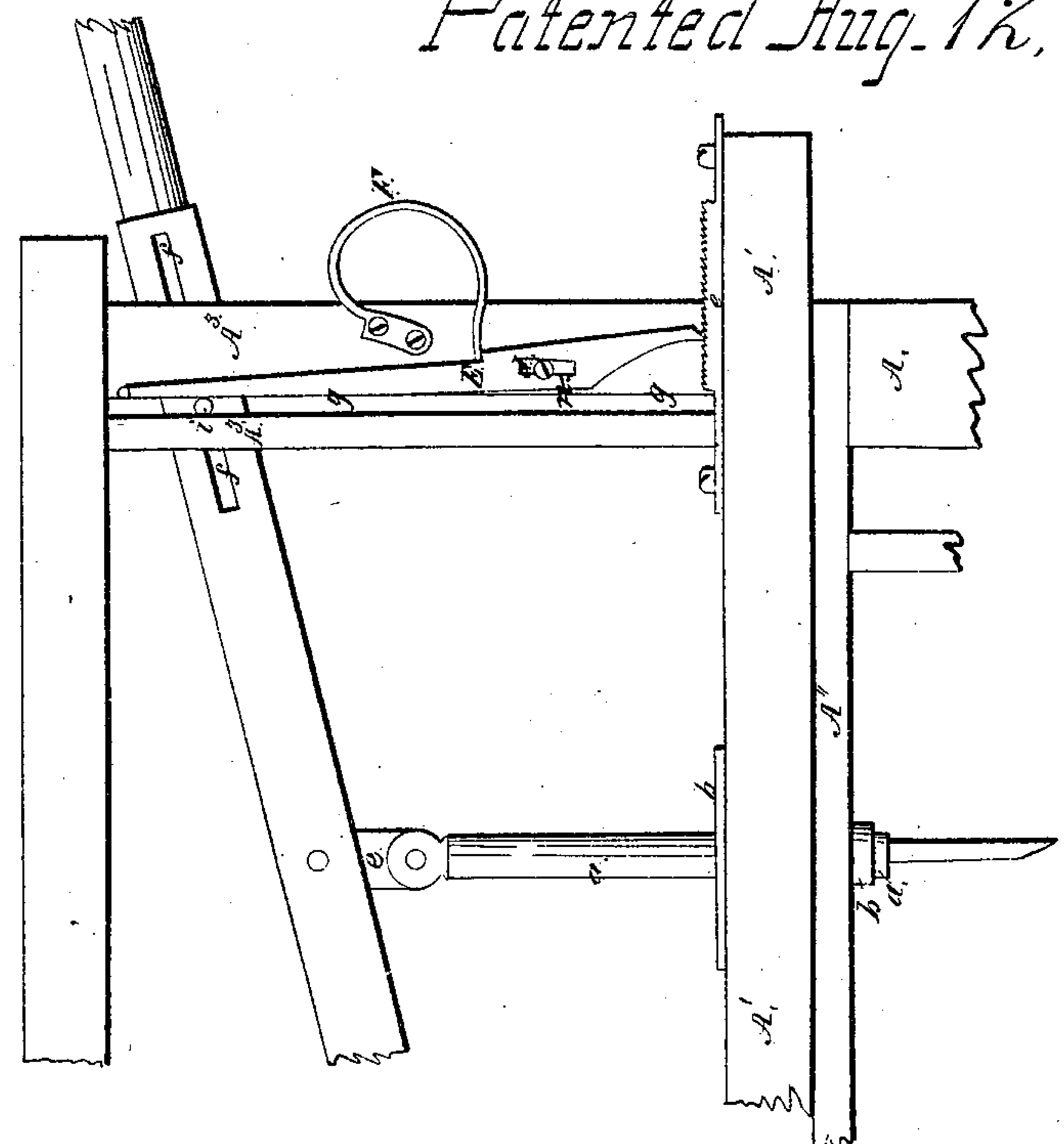
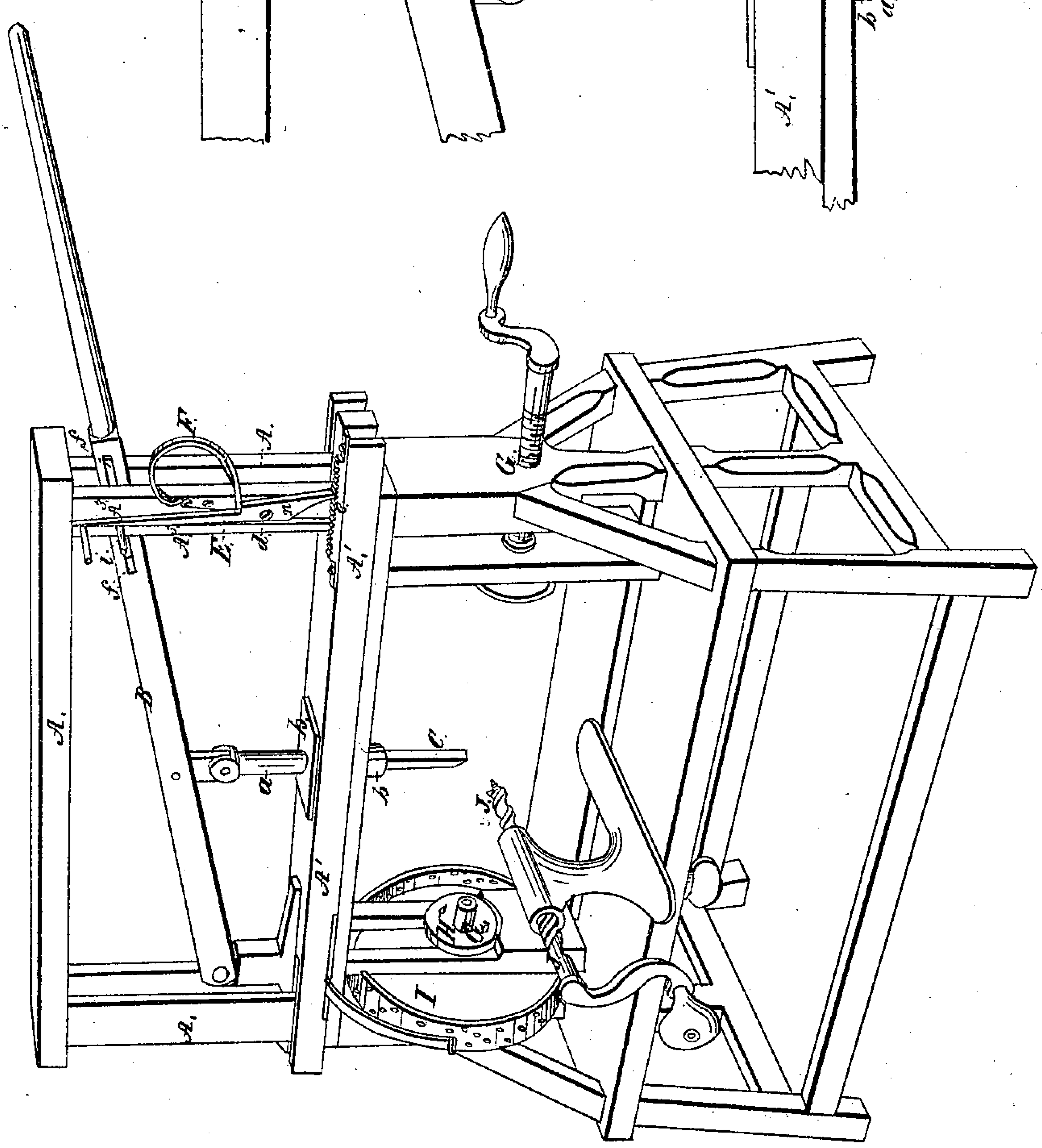


Fig. 1.



UNITED STATES PATENT OFFICE.

JAMES MUNSELL, OF PAINTED POST, NEW YORK.

MORTISING-MACHINE.

Specification of Letters Patent No. 4,695, dated August 12, 1846.

To all whom it may concern:

Be it known that I, JAMES MUNSELL, of Painted Post, in the county of Steuben and State of New York, have made certain new and useful Improvements in the Manner of Constructing Machines for Boring and Mortising the Hubs or Naves of Wheels and other Articles; and I do hereby declare that the following is a full and exact description thereof.

My improvement consists principally in the manner in which I construct the feeding apparatus by which the chisel is made to advance while the article to be operated upon remains at rest, and although I have applied it, and represent it as applied, to the hubs of wheels, this feeding part is applicable to mortising of all descriptions.

In the accompanying drawing Figure 1 is a perspective view of the whole machine, and Fig. 2 a side elevation of a part thereof, showing the feeding apparatus drawn on a larger scale than in Fig. 1.

A A is the frame work of the machine.

B is the lever by which the chisel C is to be worked up and down. The fulcrum D of the lever B is sustained on a sliding piece A′ A′, that rests and moves back and forth on the piece A″ of the frame. By working the lever B up and down the said lever with the sliding piece A′ is moved forward, advancing the chisel as the mortising proceeds. The chisel C is fitted into a socket in the lower end of the slide *a*, which slide passes up and down within the tubular guide or socket *b* causing the chisel to operate in a right line. The slide *a* is connected to the lever B by means of a connecting link *c* that works on joint pins in the lever, and in the slide. The chisel C may be reversed, either by turning it around in the slide *a*, or by turning the slide itself around, to do which the joint pin by which it is connected to the link *c* may be taken out and reinserted after turning the slide half way around.

The following is the manner in which the feeding is effected by means of the apparatus constructed for that purpose. E is the feeding lever which works on a joint pin *d* and has its lower end so formed as to engage with the teeth of a feeding rack *e* that is made fast to the sliding piece A′. The fulcrum pin of the feeding lever E passes through a slot, or longitudinal hole *n* in said lever, admitting of its being lifted clear of the rack teeth. F is a spring that acts upon the lever E and keeps it to its proper bearing on the rack and against the feeding bolt, the arrangement and operation of which I will now describe.

Through the lever B I make a slot or mortise *f f;* and through the guide posts A‴ A‴ of the frame I form or leave a long vertical slot *g, g;* and through the slot *g g* and the mortise *f, f* I pass a bolt *i* which I denominate the feeding bolt; this consists simply of a round rod of iron which may be furnished with heads to prevent its slipping endwise. This bolt is of such diameter as to fill, but to slide freely in the mortise *f f* and the slots *g g*. Under this arrangement, as the lever B is worked up and down, the feeding bolt will be carried along the slot *g*, and also along the mortise *f;* and that edge of the feeding lever that is in contact with the feeding bolt, being inclined toward it will be so acted on by it when the lever B is raised, as to cause the sliding piece A′, and the chisel which it carries to advance; and as said lever is depressed the chisel will make a cut, and the feeding lever take a new hold on the rack. It is my intention, in general, to have another feeding lever and rack on the opposite side of the posts A‴; which apparatus will be constructed and operate precisely in the same manner with that described, but will effect the feeding in a reversed direction.

When naves or hubs are to be mortised they are to be held, as in some other machines for that purpose between two centers and face plates one of which must be furnished with points to prevent the shifting of the hub from its place. G G are centers between which the hub may be held. H is one of the face plates that bears against its end and is represented as furnished with points. I is a dividing wheel on the shaft that carries the face plate H and which is so divided as to allow of the mortising for any desired number of spokes.

J is an auger sustained by an adjustable rest like that of a lathe and which may be set at any required angle.

Having thus fully described the manner in which I construct my machine for the

mortising of the hubs of wheels and other articles, what I claim therein as new and desire to secure by Letters Patent, is—

The manner in which I have constructed the feeding apparatus and combined it with the sliding piece A′ so as to advance the chisel on the work while the latter remains at rest, the feeding apparatus consisting mainly of the lever B with its mortise *f*; the feed lever E and rack *e*, and of the slot *g* and feeding bolt *i* arranged and combined with the other parts substantially as herein described.

JAMES MUNSELL.

Witnesses:
THOS. P. JONES,
EDWIN L. BRUNDAGE.