

No. 875,411.

PATENTED DEC. 31, 1907.

J. CHESBRO.
LAWN MOWER SHARPENER.
APPLICATION FILED APR. 18, 1907.

Fig. 1.

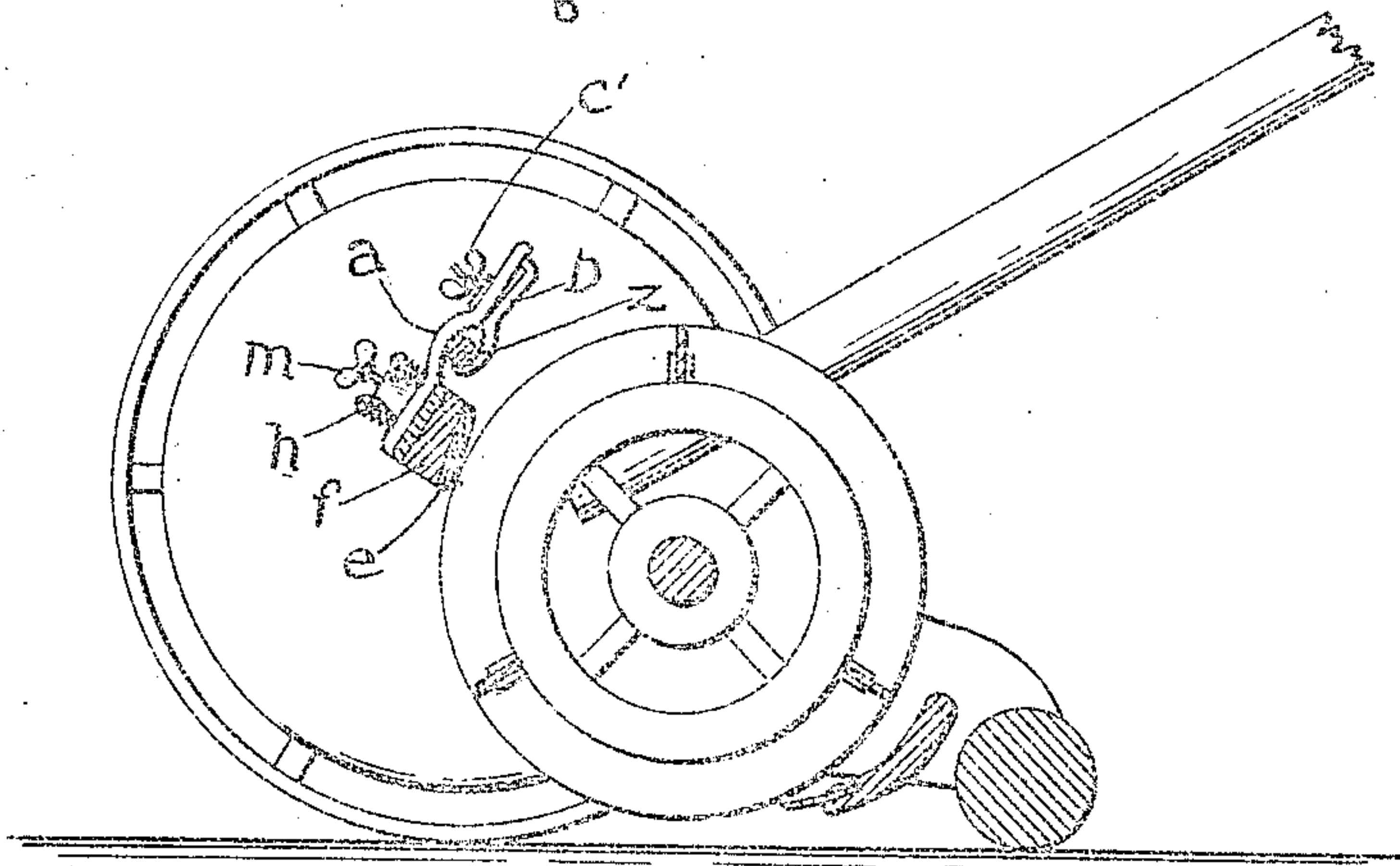


Fig. 2.

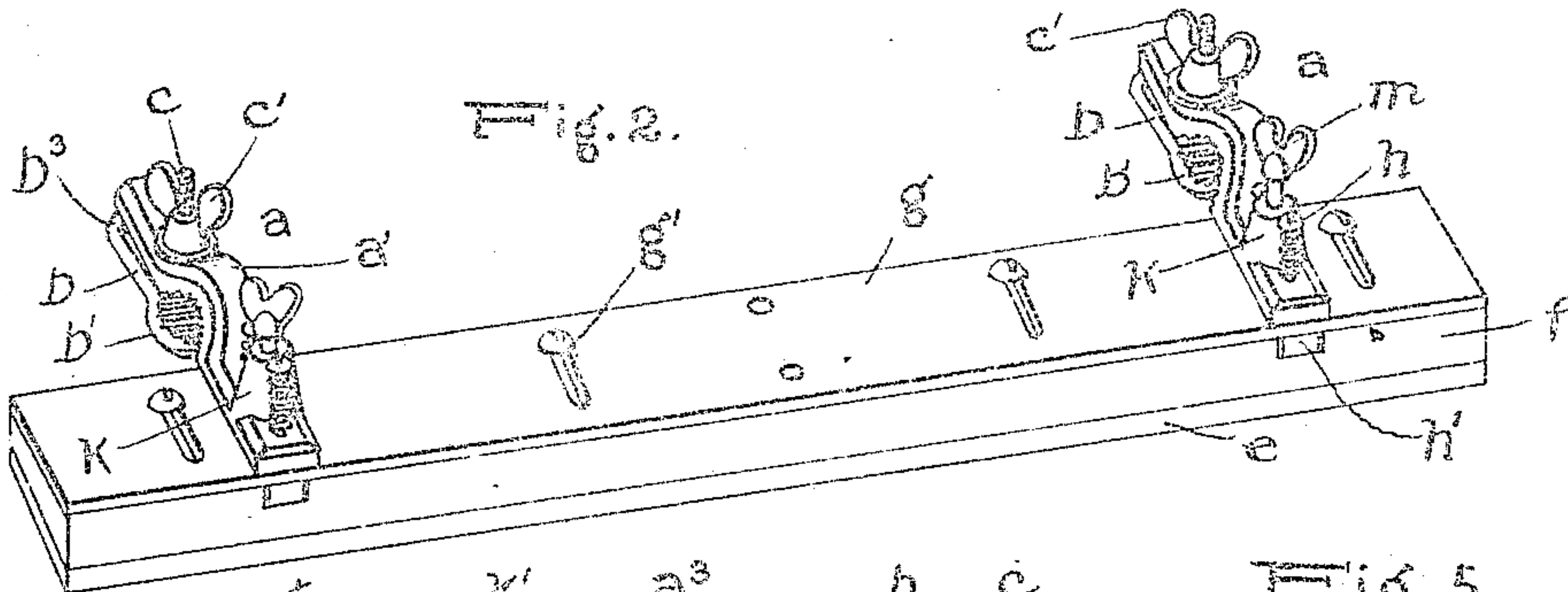


Fig. 4.

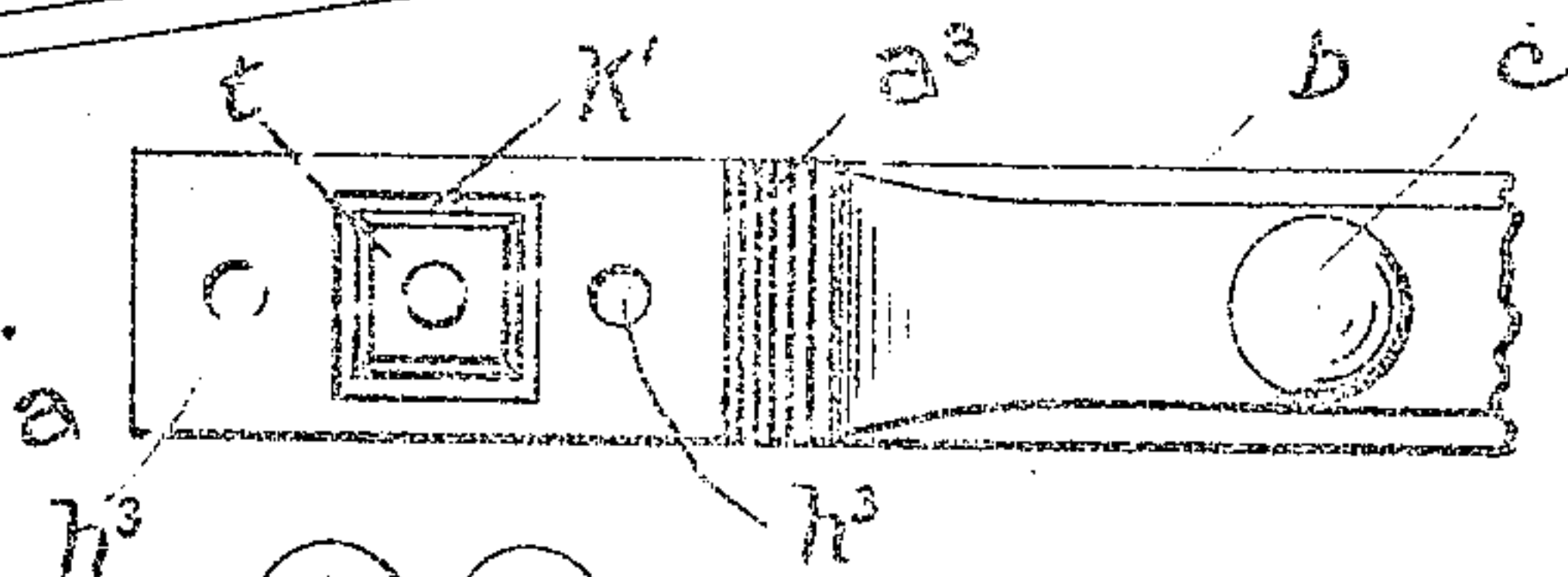


Fig. 3.

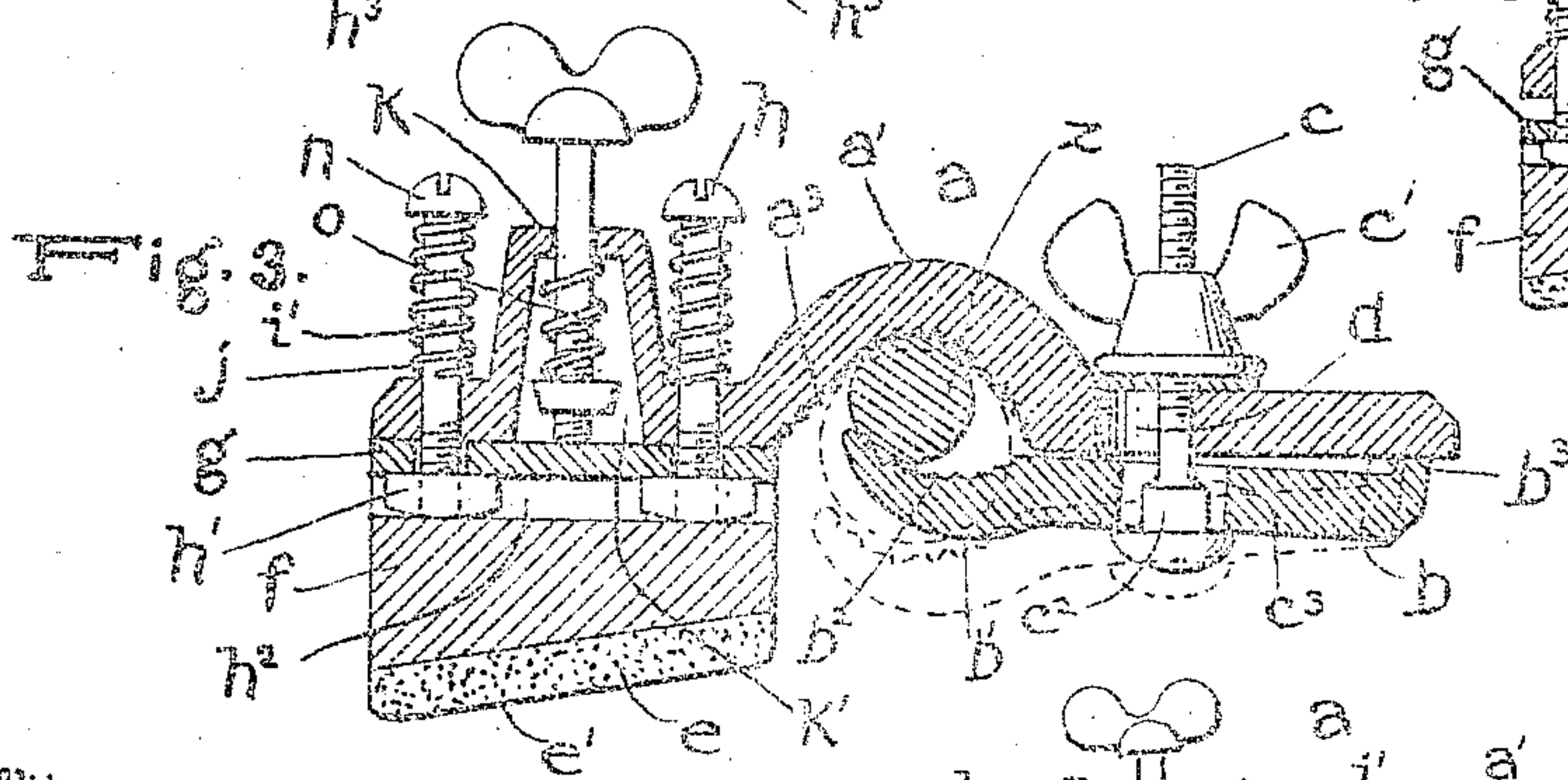


Fig. 5.

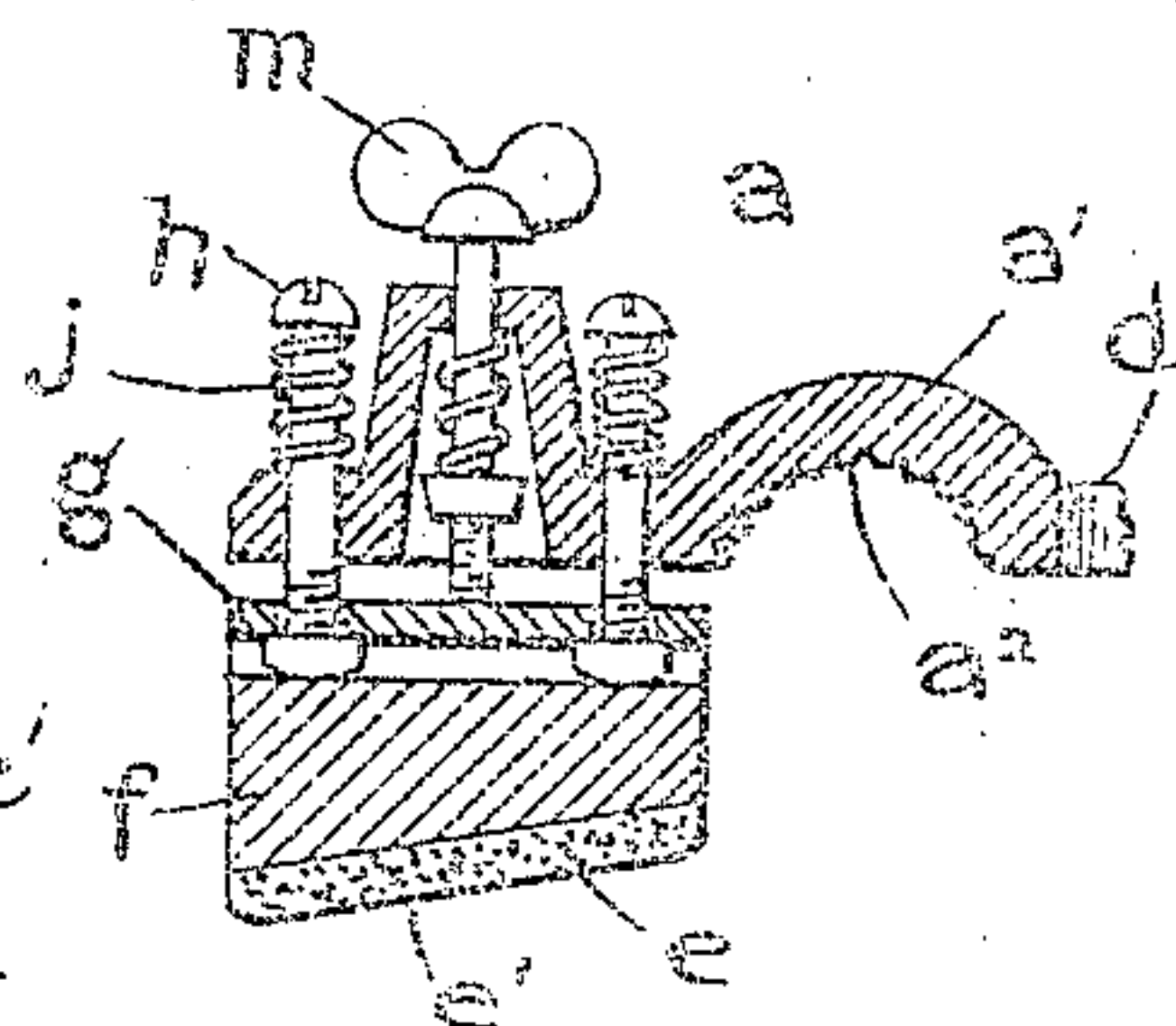
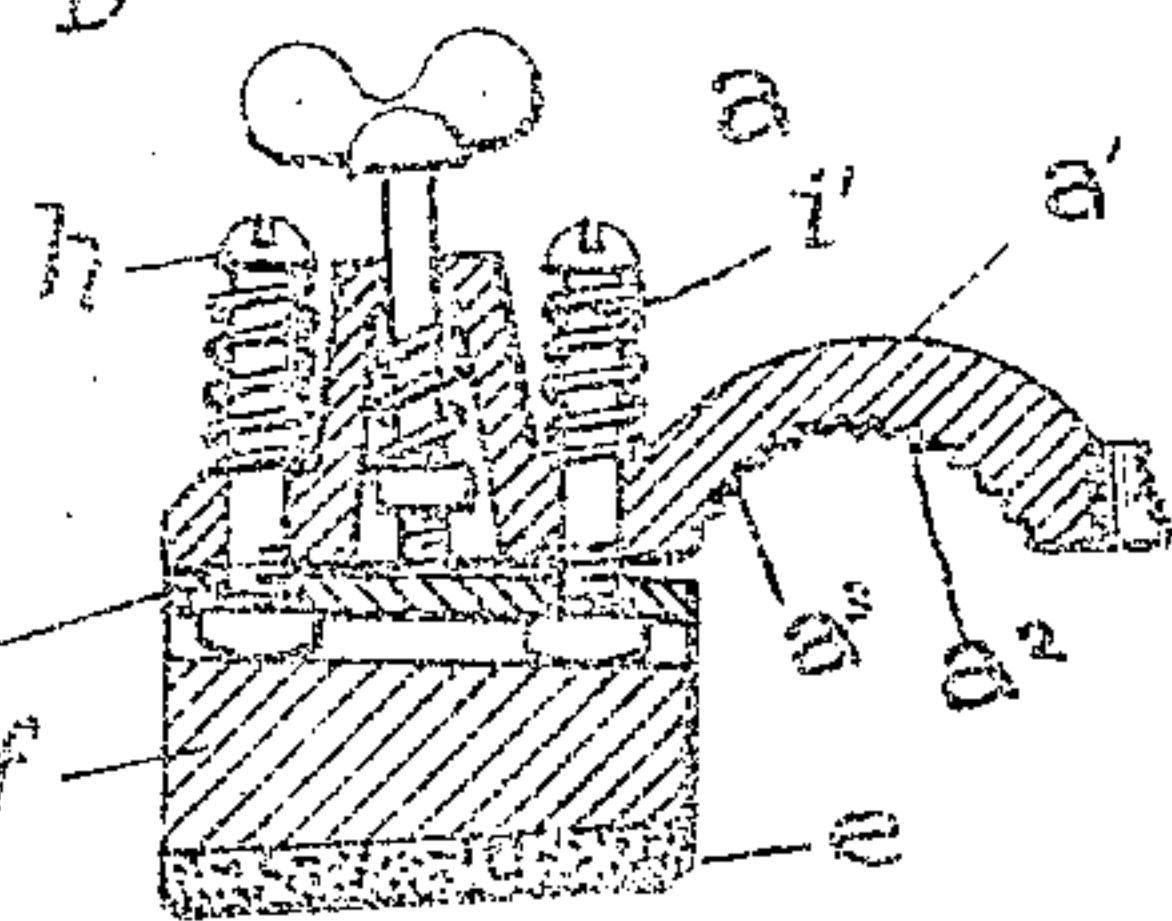


Fig. 6.



Witnesses

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UNITED STATES PATENT OFFICE.

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LAWN-MOWER SHARPENER.

No. 875,411.

Specification of Letters Patent.

Patented Dec. 31, 1907.

Application filed April 18, 1907. Serial No. 368,930.

To all whom it may concern:

Be it known that I, JOHN CHESBRO, a citizen of the United States, resident of Oneonta, in the county of Otsego and State of New York, have made a certain new and useful Invention in Lawn-Mower Sharpeners; and I declare the following to be a full, clear, and exact description of the same, such as will enable others skilled in the art to which it appertains to make and use the invention, reference being had to the accompanying drawings, and to letters or figures of reference marked thereon, which form a part of this specification.

Figure 1 is a vertical transverse section of the invention as applied. Fig. 2 is a perspective view of the invention. Fig. 3 is a sectional view of the invention, the section being taken through the connecting bolts. Fig. 4 is a bottom plan view partly broken away of one of the frame bars and its clamping plate. Fig. 5 is a view similar to Fig. 3, showing adjustment of the thumb screw for the purpose of altering the tension of the coiled springs. Fig. 6 is a similar view illustrating yielding of the file stick at one side under the action of the mower knives.

The invention relates to lawn mower sharpeners, and it consists in the novel construction and combinations of parts as hereinafter set forth.

In the accompanying drawings illustrating the invention, the letter *a* designates supporting frame bars, of which two are provided, one at each end portion of the device, such bars having, each an intermediate outward arched portion *a*¹, having an inner arched surface *a*², provided with teeth *a*³. A clamping plate *b* has connection with each frame bar by means of a bolt *c*, provided with a thumb nut *c*¹, the bolt engaging a slot *d*, of the frame bar adjacent to said arched portion thereof, and having a squared portion *c*², engaging a slot *c*³, of the clamp plate. This clamp plate has an arched portion *b*¹, at its inner end, having a toothed arched inner surface *b*², cooperating with the toothed inner surface of the frame bar to secure the device in position upon the brace bar *z* of the mower. The clamp plate is capable of adjustment upon the inward extending end portion *b*³ thereof, which has abutment against the frame bar as a center to increase or decrease the distance between the arched toothed surfaces of clamp plate and frame bar to accom-

modate mower brace bars of varying diameters, the squared portion *c*², of the bolt having the necessary play in the slot of the clamp plate in which it fits, and the bolt having adjustment in the slot of the frame bar. At the opposite or lower ends of the frame bars is carried the sharpening blade or emery stick *e*, this blade being secured upon a wooden base *f*, and having a beveled sharpening surface *e*¹, for proper action upon the circular knives of the mower.

g is the metal back plate of the emery stick having a slot and bolt connection *g*¹, therewith to allow for adjustment of the emery stick with relation to such back plate to fit varying sizes of mowers. This metal back plate is connected to the frame bars *a*, by means of bolts *h*, two of which are provided for each frame bar, these bolts having threaded inner ends engaging nuts *h*¹, located in squared seats *h*², of the wooden base of the emery stick just in rear of the metal back plate through perforations *h*³, of which these screw bolts pass. The bolts *h* have headed outstanding or projecting portions *i*¹, coiled springs *j*, surrounding each of the projecting portions, and having abutment against the bolt heads at one end and against the frame bars at the opposite end thereof. Thus the emery stick will have a yielding pressure or action upon the knives of the mower and presses evenly upon such knives at all times.

In order to provide tension adjusting means for the springs *j*, a hollow cone extension *k*, is provided for each frame bar between the screw bolts *h*, this cone extension having a square cavity *k*¹, in which fits a floating nut *t*, engaged by tension adjusting thumb screw *m*, passing through a perforation in the top of the cone extension, and bearing at its lower end against the metal back plate of the emery stick. A coil spring *o* is located in each cone extension between the nut *t* and the top or head of the cone. Thus, upon adjustment of the thumb screw the metal back plate may be adjusted towards or away from the frame bars to vary the tension of the coil springs *j*. The coil springs *o*, in the cone extensions act in a similar manner to the coil springs *j*, in giving a yielding pressure of the emery stick against the mower knives, and at the same time act to keep the floating nuts *t*, and the adjusting thumb screws *m*, in proper operative position.

Having thus described the invention, what

I claim and desire to secure by Letters Patent is—

1. A lawn mower sharpener, having a sharpening stick, and frame bars having each a supporting connection with the mower frame and a direct, yieldable connection with the sharpening stick at each end portion thereof including outward projecting headed bolts, and coiled springs surrounding said bolts carried by the sharpening stick and having loose engagement with perforations of said frame bars and abutting at their ends against the heads thereof and said frame bars.

2. A lawn mower sharpener having a sharpening stick, frame bars having each a supporting connection with the mower frame and a direct yieldable connection with the sharpening stick at each end portion thereof, including outward projecting headed bolts and coiled springs surrounding said bolts carried by the sharpening stick and having loose engagement with perforations of said frame bars and abutting at their ends against the heads thereof and said frame bars, and tension adjusting means for said springs.

3. A lawn mower sharpener having a sharpening stick, a laterally adjustable back plate having a slot and bolt connection with said sharpening stick, and frame bars having each a supporting connection with the mower frame, and a direct yieldable spring-pressed connection with the sharpening stick at each end portion thereof.

4. A lawn mower sharpener having a sharpening stick provided with a back plate, and frame bars having each a supporting connection with the mower frame, and a direct, yieldable connection with the sharpening stick at each end portion thereof, including nuts between the sharpening stick and its back plate, outward projecting headed bolts engaging such nuts, and coiled springs surrounding such bolts and abutting at their ends against the heads thereof and said frame bars.

5. A lawn mower sharpener having a sharpening stick, a laterally adjustable back plate having a slot and bolt connection with the sharpening stick, and frame bars having each a supporting connection with the mower frame, and a direct yieldable connection with the sharpening stick at each end portion thereof, including nuts between such stick and its back plate, outward projecting head-

ed bolts engaging such nuts, and coiled springs surrounding said bolts and abutting at their ends against the heads thereof and said frame bars.

6. In a lawn mower sharpener, the combination of a sharpening stick, supporting frame bars carrying said stick and having each an arched portion and an extension provided with a slot, clamping plates having each an arched portion and an extension provided with a slot, and bolt connections for frame bars and clamping plates engaging the slots of the frame bars and having squared portions engaging the slots of the clamping plates said bolt connections having securing nuts.

7. In a lawn mower sharpener, the combination of a sharpening stick, frame bars having each a supporting connection with the mower frame, and a direct, yieldable connection with the sharpening stick at each end portion thereof, including outward projecting headed bolts and coiled springs surrounding said bolts and abutting at their ends against the heads thereof and said frame bars, said frame bars having each an arched portion and an extension provided with a slot, clamping plates having each an arched portion and an extension provided with a slot, and bolt connections for frame bars and clamping plates engaging the slots of the frame bars and having squared portions engaging the slots of the clamping plates.

8. A lawn mower sharpener including a sharpening stick, and supporting frame bars having a yieldable connection with said sharpening stick including outward projecting headed bolts and coil springs surrounding said bolts and located between the heads thereof and the sharpening stick, and tension adjusting means for said coiled springs including bolts located in hollow cone extensions of the supporting frame bars, and bearing at their inner ends against the sharpening stick, nuts upon such bolts in the hollow cone extensions, and coiled springs surrounding the bolts and located between the nuts thereof and the ends of the cone extensions.

In testimony whereof I affix my signature, in presence of two witnesses.

JOHN CHESBRO.

Witnesses:

CHARLES GARDINER,
DOUGLAS W. MILLER.