

N. P. SHANKWILER.
 BACK REST FOR LATHES.
 APPLICATION FILED JUNE 23, 1910

978,663.

Patented Dec. 13, 1910.

2 SHEETS-SHEET 1.

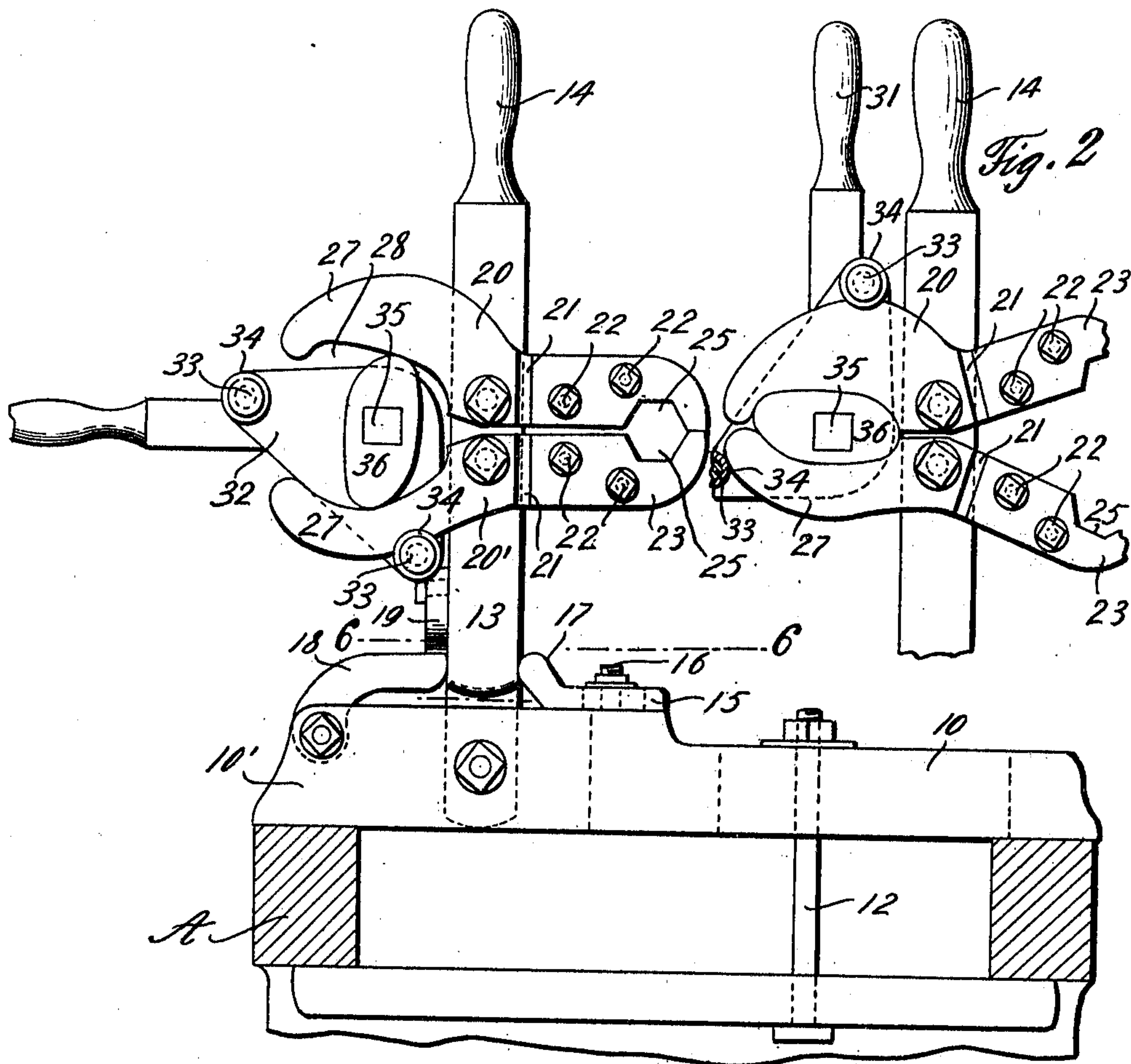


Fig. 1

Inventor

N. P. Shankwiler

Witnesses

E. Larson
 Charles M. Wilson

By

Delevant & Poff

Attorneys

N. P. SHANKWILER.
 BACK REST FOR LATHES.
 APPLICATION FILED JUNE 23, 1910.

978,663.

Patented Dec. 13, 1910.

2 SHEETS—SHEET 2.

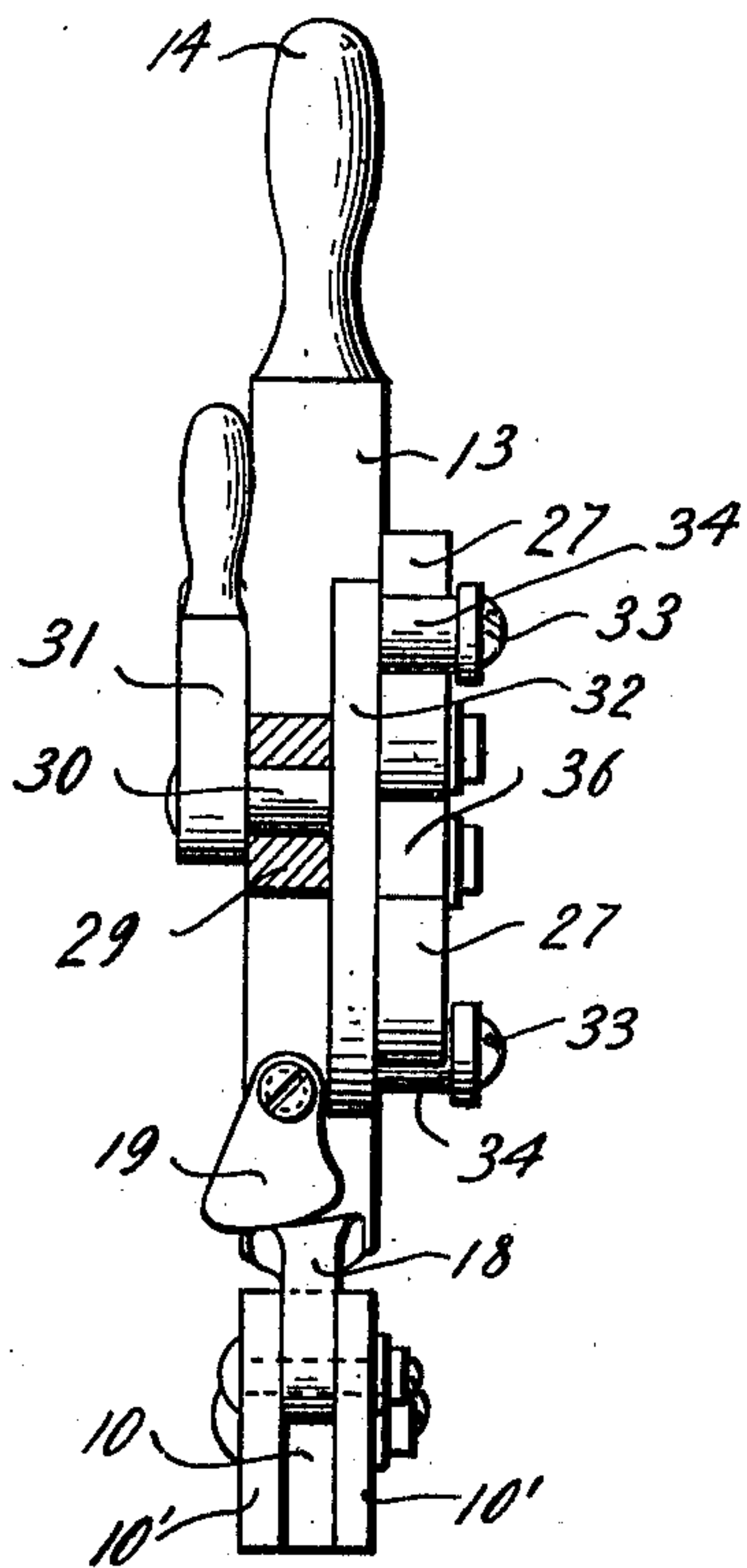


Fig. 3

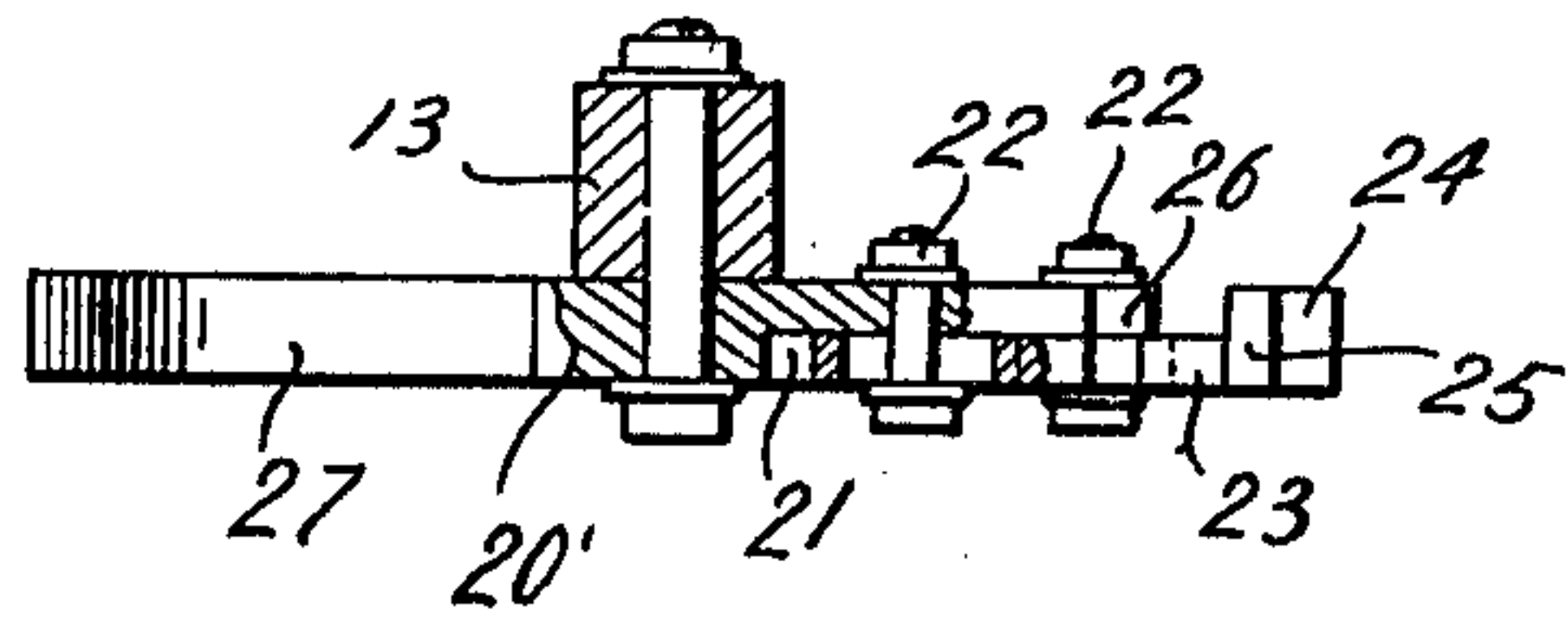


Fig. 4

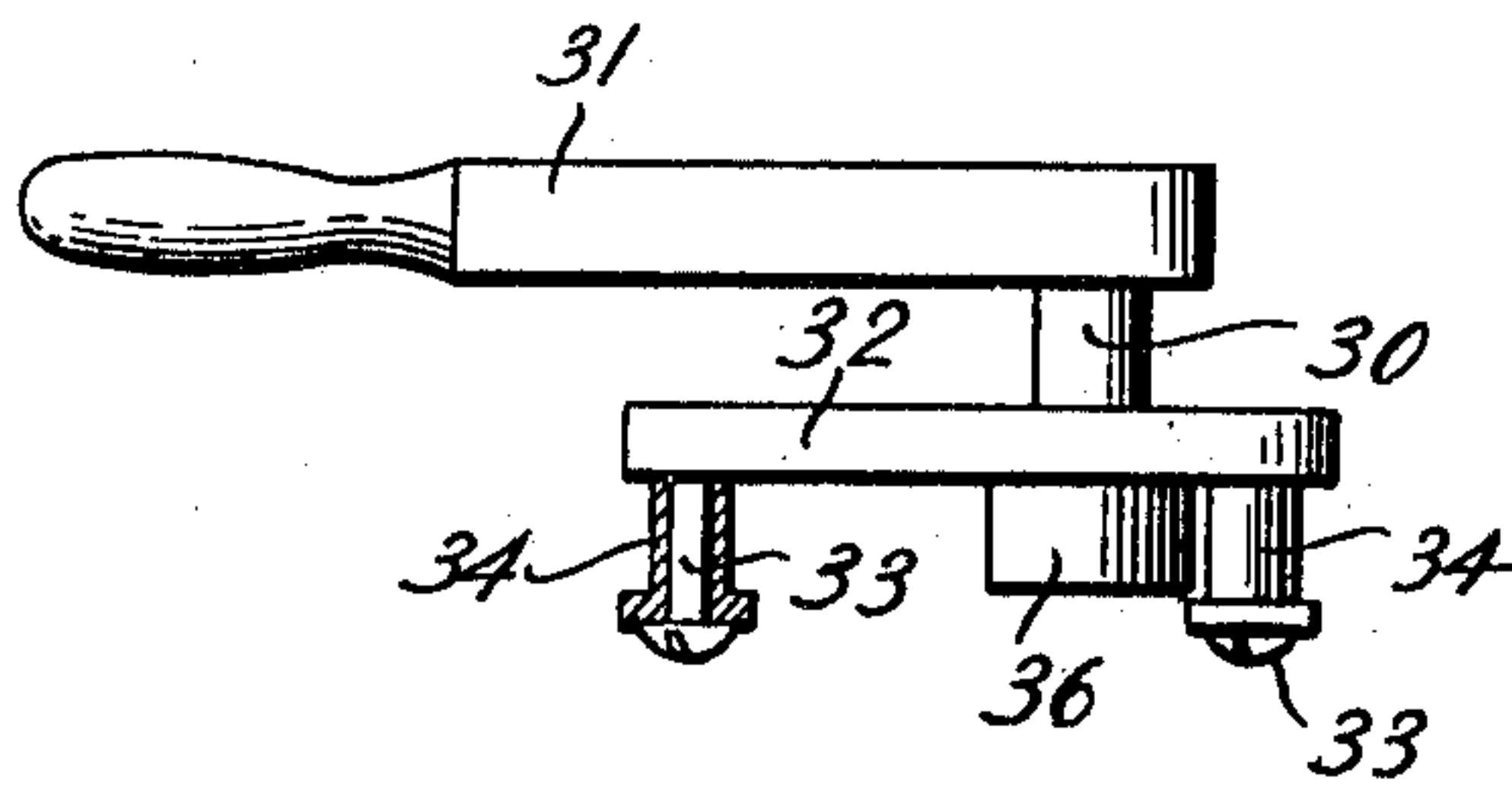


Fig. 5

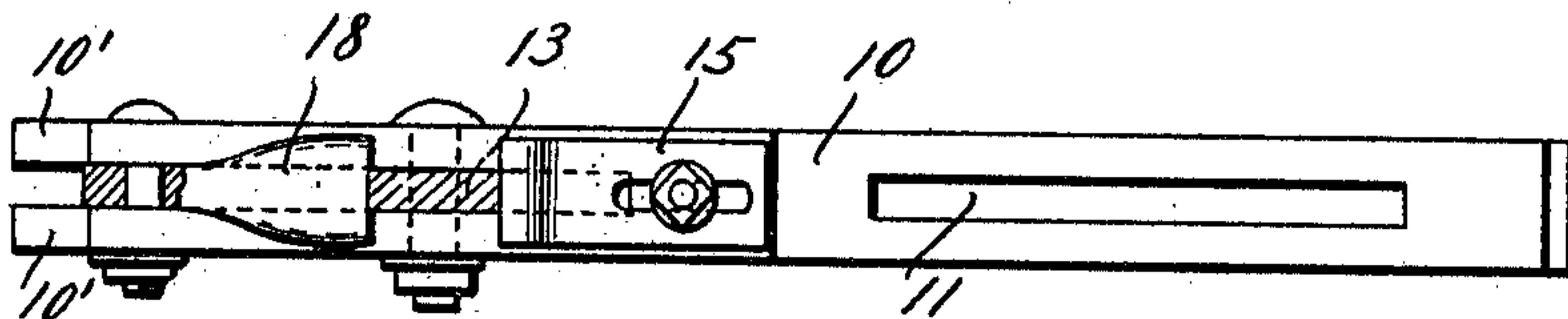


Fig. 6

Witnesses
E. L. Laram
Charles M. Wilson

Inventor
N. P. Shankwiler
 By *Delevet Robt*
 Attorneys

UNITED STATES PATENT OFFICE.

NATHAN P. SHANKWILER, OF LONGBEACH, CALIFORNIA.

BACK-REST FOR LATHES.

978,663.

Specification of Letters Patent.

Patented Dec. 13, 1910.

Application filed June 23, 1910. Serial No. 568,544.

To all whom it may concern:

Be it known that I, NATHAN P. SHANKWILER, a citizen of the United States, residing at Longbeach, in the county of Los Angeles and State of California, have invented certain new and useful Improvements in Back-Rests for Lathes, of which the following is a specification.

This invention relates to lathes, particularly to back rests therefor, and is designed to construct a device of this nature wherein the screws which have heretofore been necessary in adjusting the same to the work will be eliminated.

It furthermore contemplates the construction of a back rest wherein the jaws thereof are rigidly retained in any adjustment by a lever, said lever carrying a cam and friction rollers which retain the jaws therebetween from movement.

A further object of this invention is to provide a back rest whereby the same will be provided with three adjustments.

With the above and other objects in view, this invention consists in the construction, combination, and arrangement of parts, all as hereinafter more fully described, claimed, and illustrated in the accompanying drawings, wherein—

Figure 1 is a side elevation of a device constructed in accordance with the present invention, illustrating the same applied; Fig. 2 is a fragmentary side elevation illustrating the jaws in another position; Fig. 3 is a rear end elevation, parts thereof being broken away; Fig. 4 is a top plan view of the lower jaw, illustrating the same partly in section; Fig. 5 is a similar view of the operating lever, one of the friction rollers carried thereby being in section; Fig. 6 is a section taken along the line 6—6 of Fig. 1.

The present invention resides in the provision of a base adapted to be adjustably carried by the bed of a lathe, said base having an upright pivotally connected thereto. This upright is adjustable with respect to the longitudinal dimension of the base and carries centrally a pair of pivotal arms, said arms having at one terminal thereof the coinciding work engaging jaws which are converged and diverged by a lever carried by the upright. This lever carries a pair of frictional rollers adapted to cooperate with the outer surface of the opposite terminals of the jaws, while a cam likewise carried by the lever operates between said jaws, the rear

terminals of the jaws being retained between the frictional rollers and said cam.

In carrying out the present invention a base 10 is provided having a longitudinal slot 11 therein through which projects the bolt 12 which secures the base to the bed A of the lathe. Adjacent to the rear terminal of the base 10 there is pivotally connected thereto the upright 13 which is provided at its upper terminal with a handle portion 14, said upright being reduced at its lower portion being retained between a pair of parallel arms 10' formed by bifurcating the rear terminal of the base 10. The bifurcated portion of the base is raised as is clearly set forth in Fig. 1 and has adjacent to the slotted portion of the base a plate 15 slidably mounted thereon through the instrumentality of the clamping screw 16, said plate being provided adjacent to the upright 13 with an upwardly extending projection 17 adapted to normally bear against the forward edge thereof.

A curved plate 18 is pivoted between the terminals of the arms and is adapted to bear against the rear edge of the upright 13, when the bearing portion of said plate rests substantially parallel to the base 10. To retain the plate 18 in its operative position, *i. e.*, bearing against the upright 13, a cam 19 is pivoted to the upright adjacent to the plate 18 and is adapted to normally bear against the latter. From this construction it will readily be seen that the upright is clamped in various angles to the base between the plates 15 and 18.

A pair of jaws 20 and 20' are detachably pivoted to one side of the upright 13, said jaws having the forward terminals thereof provided with a depression 21. Reciprocatingly mounted on a pair of clamping bolts 22 and adapted to operate in the depression 21 of each of the jaws is an adjustable work-engaging jaw 23, each work-engaging jaw having at its outer terminal a transverse projection 24 which is adapted to bear against the forward terminal of the main jaw 20 and 20'. The jaws 23 are provided with the coinciding faced recesses 25 which, as the jaws are adjusted, cooperate with a beveled portion 26 provided at the terminals of the jaws 20 and 20', thereby reducing the size of the opening formed by said recesses. The rear terminals of the jaws 20 and 20' are constructed to form the upwardly and downwardly curved arms 27 which form an

opening 28 in which the mechanism for converging and diverging the jaws operate. On the rear of the upright 13 is formed or otherwise secured, a bearing 29 in which is rotatably mounted the shaft 30, said shaft carrying at the terminal thereof opposite to the arms 28 operating lever 31. At the opposite terminal of the shaft 30 is rigidly secured thereto the triangular plate 32 one corner of which is secured to said shaft, the opposite corners being provided with screw studs 33 on which are mounted the roller bearings 34, one of said roller bearings adapted to cooperate with each of the curved arms 27. A stud 35 extends laterally from the plate 32 and parallel to the screw studs 33 and carries rigidly thereon the cam 36 which conforms in shape with the opening 28 between the arms 27.

From the foregoing it will be readily understood that the cam 35 diverges the arms 27, thereby converging the jaws 23, while the rollers 34 converge the arms 27 and consequently diverge the arms 23, the arms 27 being normally clamped between the rollers 34 and the cam 35, thereby preventing any movement of the arms 27 except when the lever 31 is operated.

Having thus fully described my invention, what is claimed as new is:

1. A back rest for lathes, comprising a base, an upright secured thereto, pivotally mounted jaws carried by said upright, a cam adapted to converge the work-engaging portion of said jaws, and a plurality of lugs car-

ried by the mounting of said cam adapted to diverge said work-engaging portions, the operated terminals of each jaw being engaged between a portion of said cam and a part of said lugs.

2. In a back rest for lathes, the combination with a base, of a vertical support pivotally connected thereto, a bearing carried by said support, a shaft mounted in said bearing, a pair of work engaging arms pivotally mounted on said support, the rear terminals of said work engaging arms being curved oppositely, a cam mounted on said shaft adapted to cooperate with the inner surfaces of the curved portions of said arms, and means located adjacent said cam adapted to cooperate with the outer surfaces.

3. In a back rest for lathes, the combination with a support of an upright pivotally mounted thereon, a bearing formed on said support, a shaft operating in said bearing, an operating plate carried by said shaft, a cam carried against the outer faces of said plate, outwardly extending pins carried on said plate, and pivotal work engaging arms mounted on said uprights having their rear terminals curved oppositely, said curved terminals being retained between said pins and said cams.

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

NATHAN P. SHANKWILER.

Witnesses:

W. L. ALTENBURG,
D. M. BARRON.