

No. 885,644.

PATENTED APR. 21, 1908.

F. H. PETTIT.
SIGNAL.

APPLICATION FILED JULY 10, 1907.

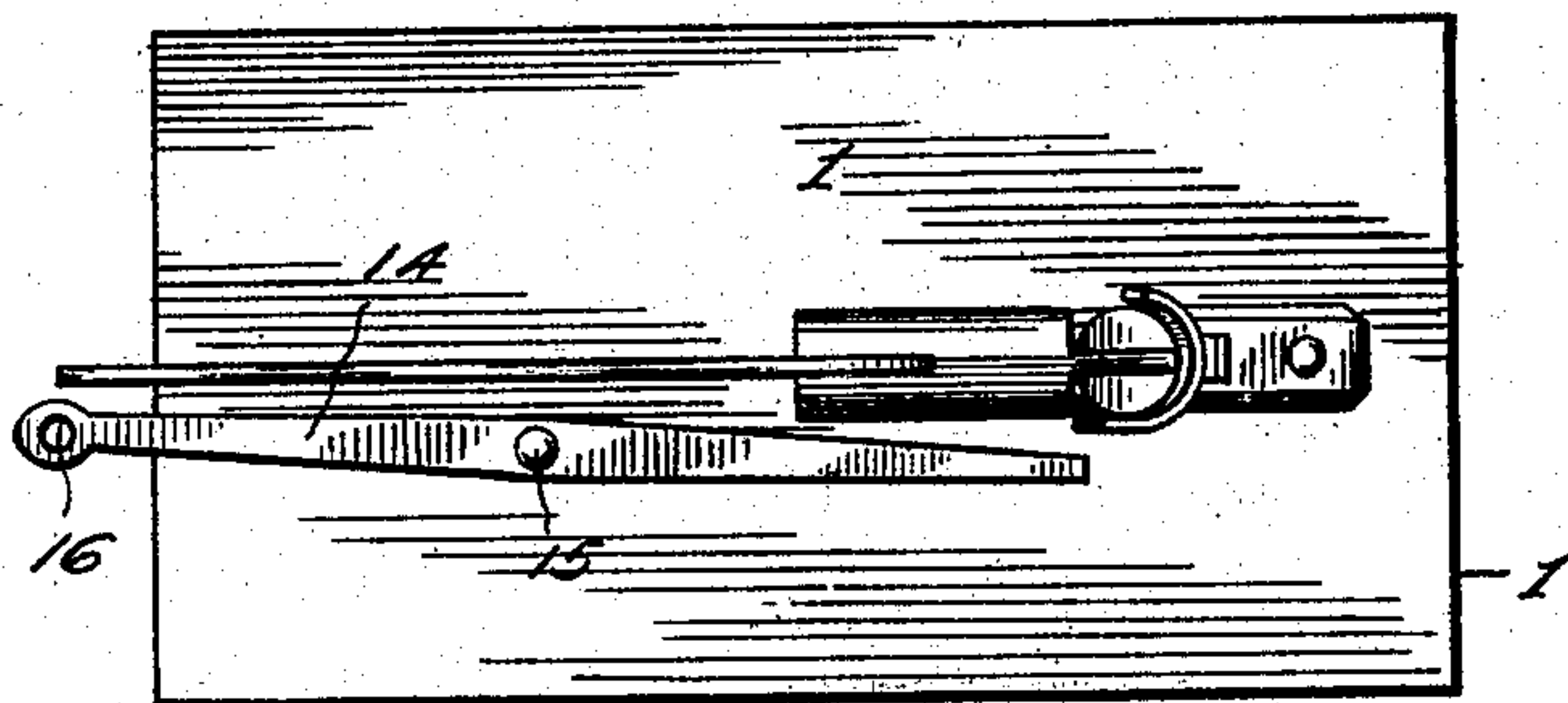


Fig. 2

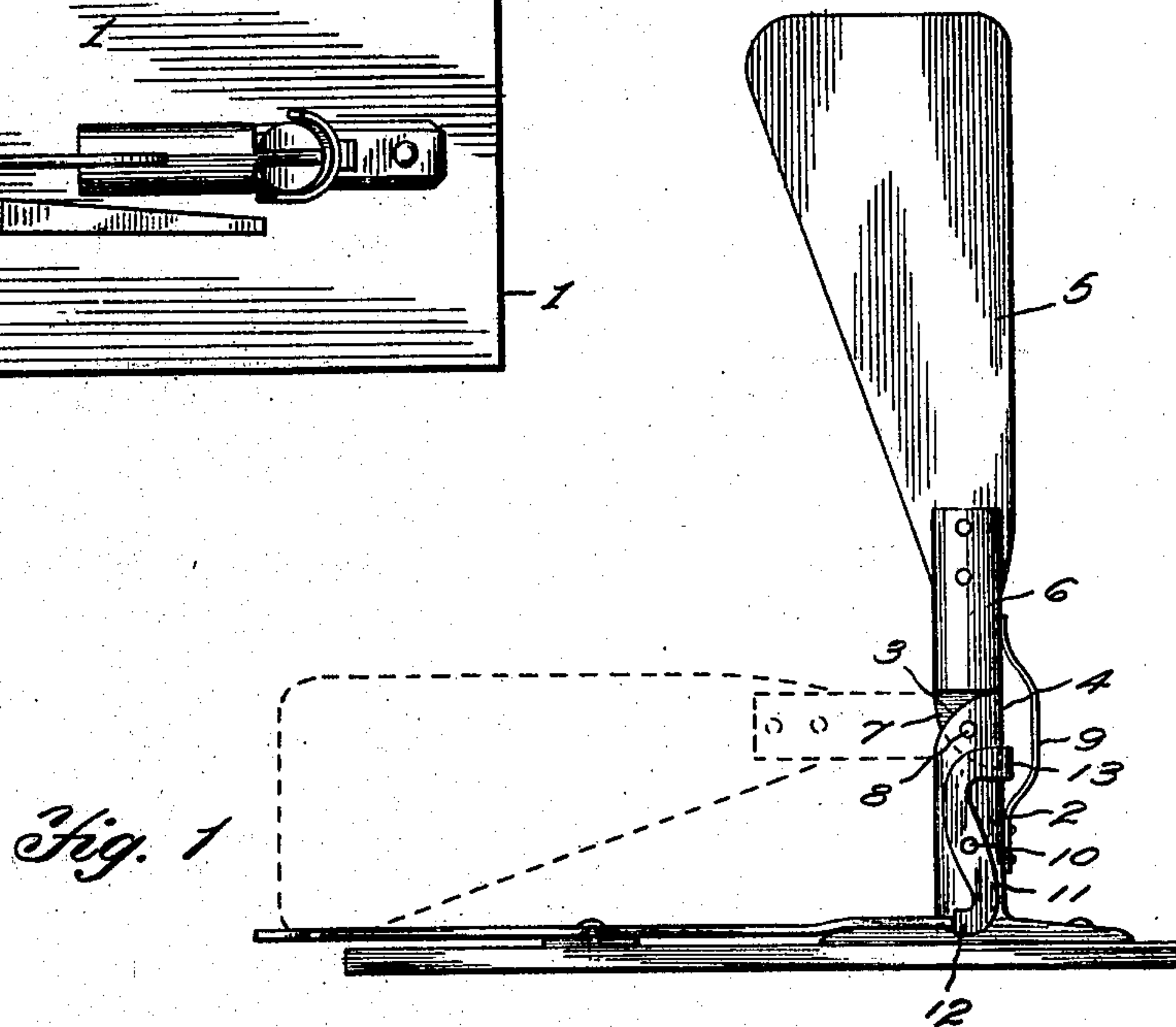


Fig. 1

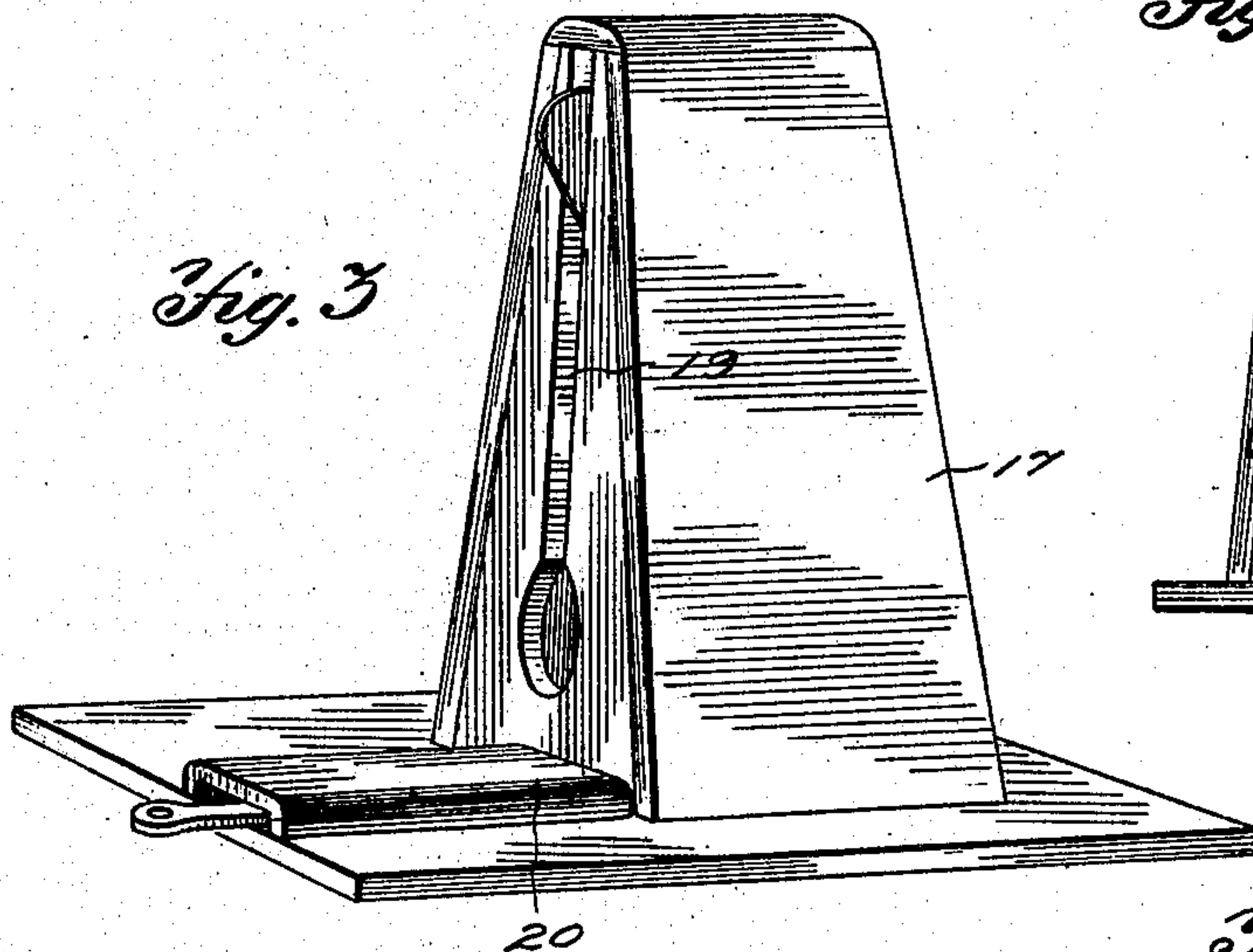
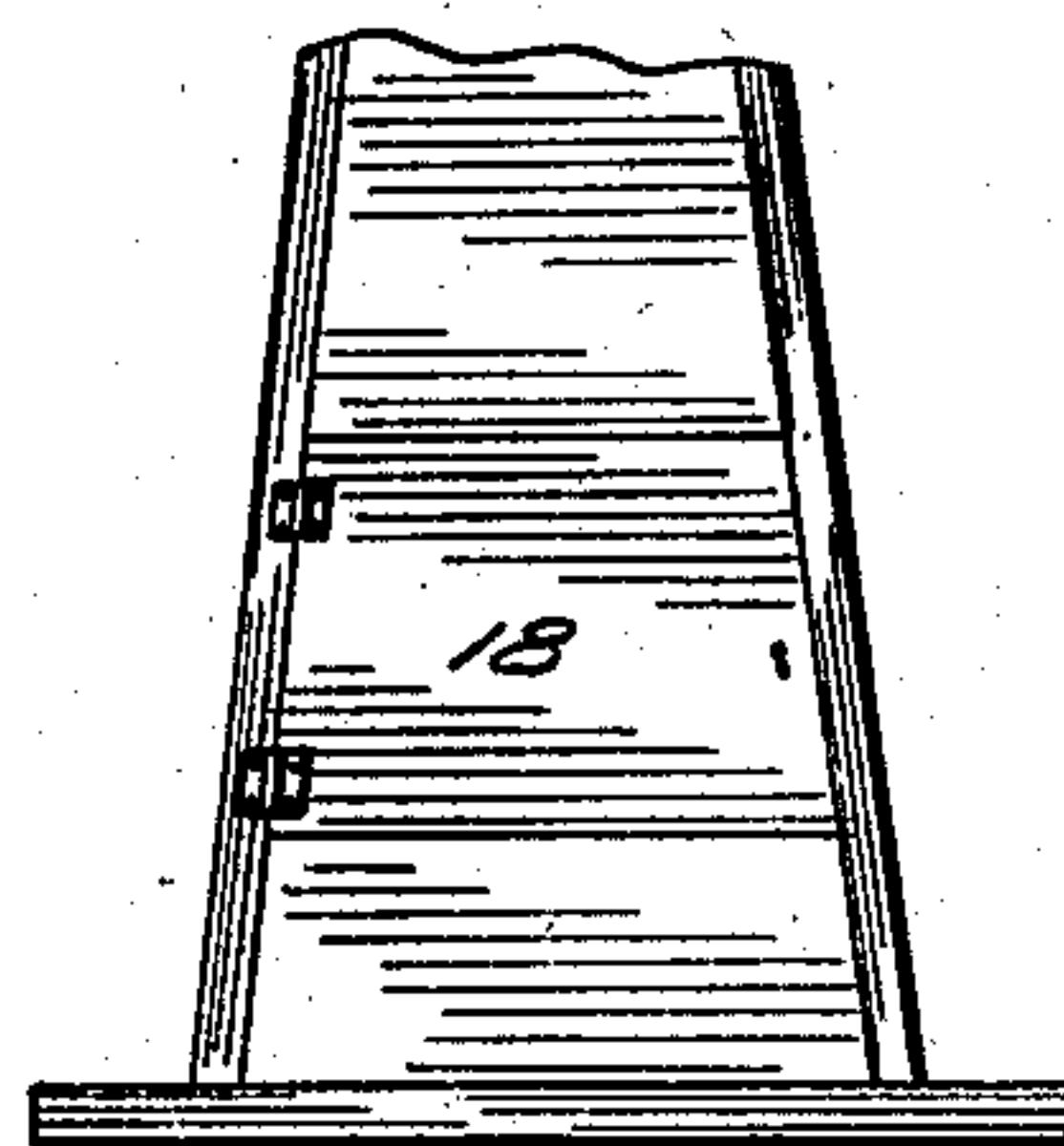


Fig. 3

Fig. 4



Witnesses

R. C. Claffin
D. W. Gould.

Inventor

Fred H. Pettit

By *Victor J. Evans*

Attorney

UNITED STATES PATENT OFFICE.

FRED H. PETTIT, OF RHEA, OKLAHOMA.

SIGNAL.

No. 885,644.

Specification of Letters Patent.

Patented April 21, 1908.

Application filed July 10, 1907. Serial No. 383,098.

To all whom it may concern:

Be it known that I, FRED H. PETTIT, a citizen of the United States, residing at Rhea, in the county of Dewey, State of Oklahoma, have invented new and useful Improvements in Signals of which the following is a specification.

The invention relates to an improvement in signals and particularly to an automatically actuated signal of the mechanical type, adapted primarily for railroad use.

The main object of the present invention is the provision of a mechanical signal adapted to be automatically actuated by a change in the condition of the roadbed, such for example as the movement of a bridge under a freshet, or the displacement of a rail in a washout, the construction providing a means for automatically actuating the signal or signals in the movement of the rail and thereby advising the engineer of an approaching train of the condition of the roadbed in advance of him.

The invention will be described in the following specification, reference being had particularly to the accompanying drawings, in which:—

Figure 1 is a view in elevation showing the signal in operative or normal position, the housing being omitted, Fig. 2 is a top plan of the same with the signal in operative position or set position, Fig. 3 is a perspective view of the complete signal, Fig. 4 is a partial side elevation of a portion of the housing.

Referring particularly to the drawings, my improved signal apparatus comprises a base plate 1 on which, near one end, is secured a standard 2, the relatively forward face of which is of arcuate formation, as at 3, with the upper end of the standard formed with a centrally disposed longitudinally extending slot 4.

The signal comprises a semaphore arm 5 of any desired construction, which at the inner or connected end is provided with a post extension 6, the relatively lower end of which is reduced to provide a leaf 7 of a size to fit within the slot 4 of the standard. The semaphore is connected to the standard through the medium of a pivot pin 8 bridging the slot 4 and engaging the leaf 7 of the signal, whereby said signal is capable of gravitation toward set or operative position, as illustrated in dotted lines in Fig. 1. A leaf spring 9 is secured to the standard 2 with the upper free end bearing against the post ex-

tension 6 of the semaphore, the spring being normally tensioned to project the signal into operative or set position.

Pivotally secured at 10 on the standard 2 is a trigger 11, the lower end of which terminates in a forwardly extending finger 12, the upper end of the trigger being of semi-circular formation to provide a guard arm 13. The trigger is so mounted on the standard that the guard arm 13 extends in rear of said standard above the relatively lower end of the slot 4, whereby when the parts are in normal position said guard arm will prevent outward or rearward movement of the lower end of the leaf 7, thereby maintaining the semaphore or signal 5 in elevated or in operative position. A trip lever 14 is pivotally secured upon the base 1, as at 15, the rear end of the lever being designed to engage the free end of the finger 12 of the trigger, while the forward end projects beyond the base plate and is formed with an eye 16.

In operative position the signal is elevated as shown in full lines in Fig. 1, and the rear end trip lever arranged in advance of and in contact with the free end of the finger 12 of the trigger. This secures the trigger against movement and utilizes the guard arm 13 thereof to prevent the signal from falling to operative or set position. If the forward end of the trip lever is moved laterally, however, the rear end is disengaged from the trigger, permitting the spring 9 and the weight of the signal to move said signal to operative or set position, the lower end of the leaf 7 contacting with the guard arm of the trigger and displacing the same through the capability of the trigger to turn on the pivot 10.

The use of the apparatus is primarily for bridge structures or the like, in which use two signals are arranged on opposite sides of the bridge and at sufficient distances from the ends thereof to provide for proper control of the train after receiving the signal and before reaching the bridge. The eyes 16 of the trip levers of each of the signals are connected by any inflexible connector, such as a wire rod, not shown, and this rod is preferably arranged in close proximity to the web of one rail of the track below the head or ball of the rail. With this arrangement it is at once obvious that if the rail is moved laterally, as by displacement of the bridge for any reason, the connector is drawn upon with the result to rock the trip levers of both signals and cause the semaphore of said sig-

nals to fall to set or operative position. The engineers of approaching trains are thus notified of the dangerous condition of the track in advance of them and may control their trains accordingly.

While adapting the device primarily for bridge structures or the like it is obvious that any portion of a railroad track may be similarly protected, so that it is thereby possible to dispose an automatic guard for those portions of the track which are subject to wash-outs or displacement by any means. In fact any number of signals throughout any length of track may be connected with the effect to thoroughly protect the track against spreading rails from any cause.

I prefer to inclose the signal apparatus in a housing 17, one side of which is preferably provided with a door 18 for convenient access to the operating parts. One wall of the housing is formed with a slot 19 to permit proper movement of the semaphore signal, and a housing extension 20 is arranged to overlie that portion of the trip lever projecting beyond the main housing.

Having thus described the invention what is claimed as new, is:—

1. A signal apparatus comprising a base plate, a signal pivotally secured thereon and adapted to move to operative position by gravity, means for forcing the signal into set or operative position, means for holding the signal against such movement, and means for securing the holding means against signal releasing movement.

2. A signal apparatus comprising a base plate, a signal pivotally mounted thereon and adapted to move to operative position

by gravity, a trigger for holding the signal against operative movement, and a trip lever for preventing signal releasing movement of the trigger.

3. A base plate, a standard rising therefrom, a signal pivotally mounted in the standard, a spring for moving the signal in one direction, a trigger mounted on the standard and operative to directly engage the signal and secure the same against movement in one direction, and a trip lever mounted on the base plate and normally engaging the trigger.

4. A base plate, a standard rising therefrom, a signal pivotally mounted in the standard, a trigger mounted on the standard and operative to directly engage the signal and secure the same against movement in one direction, and a trip lever mounted on the base plate and normally engaging the trigger.

5. A signal apparatus comprising a base plate, a standard rising therefrom and formed with a longitudinally extending slot, a semaphore pivotally mounted in the slot in the standard, a spring secured to the standard and bearing against the semaphore, a trigger mounted on the standard and having a guard arm to overlie the slot in the standard, and a trip lever mounted on the base plate and adapted to engage one end of the trigger to prevent signal releasing movement of the guard arm.

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

FRED H. PETTIT.

Witnesses:

ABNER R. DRISKELL,
THOMAS E. CROWDER.