No. 877,223. PATENTED JAN. 21, 1908.

F. OTT.

SHUTTLE CHECKING AND RELEASING MECHANISM FOR LOOMS.

APPLICATION FILED APR. 10, 1907.

FIG. I.

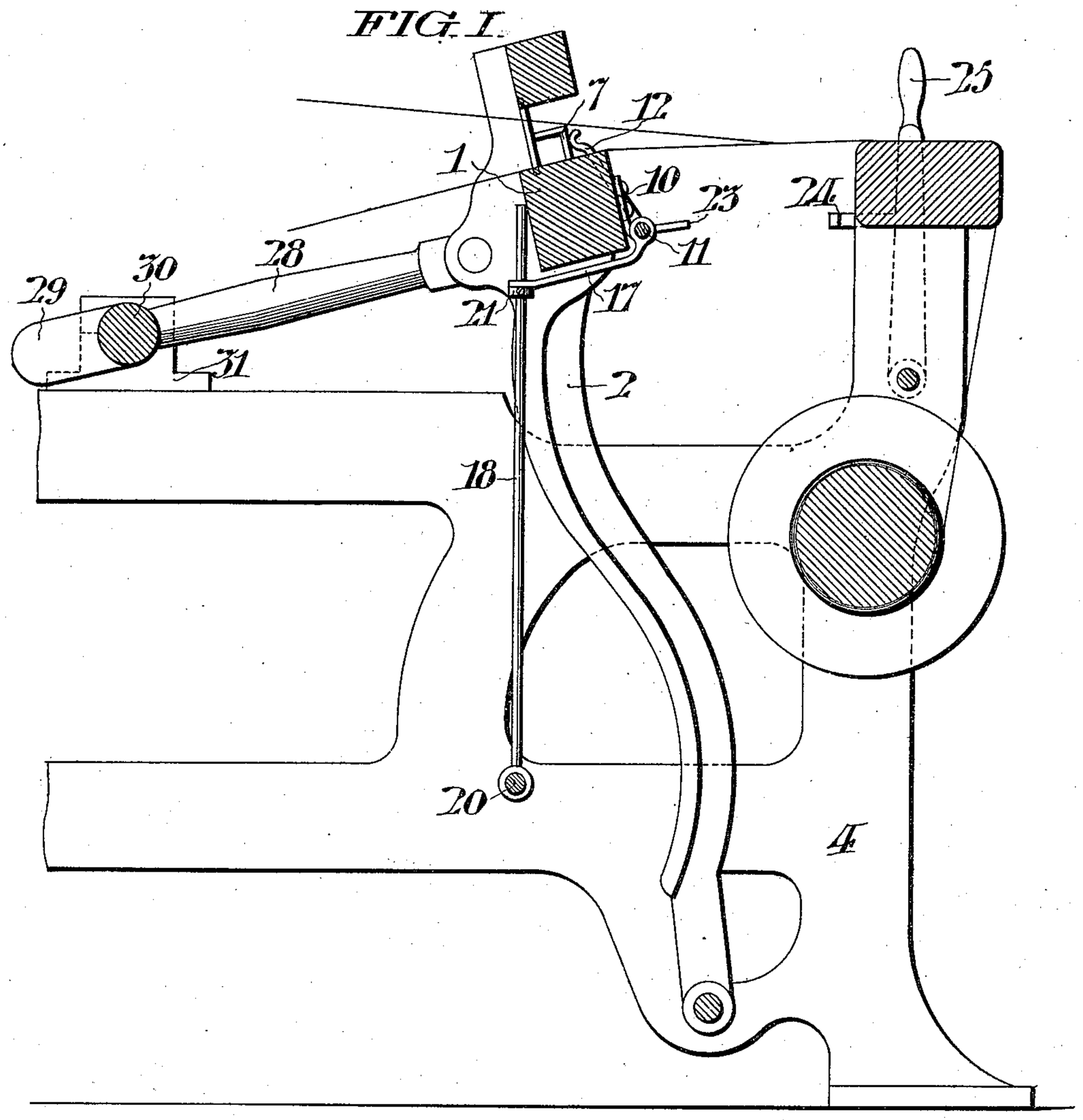
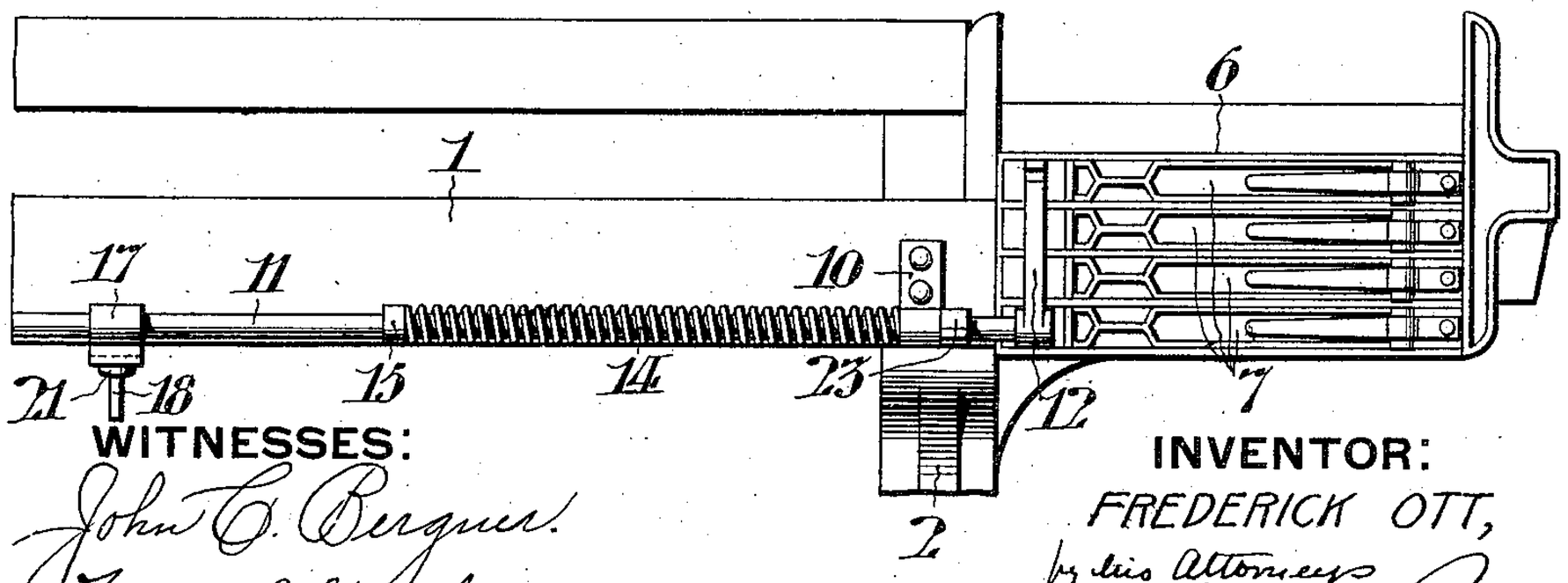


FIG. II.



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UNITED STATES PATENT OFFICE.

FREDERICK OTT, OF SOUTH BETHLEHEM, PENNSYLVANIA.

SHUTTLE CHECKING AND RELEASING MECHANISM FOR LOOMS.

No. 877,223. Specification of Letters Patent. Patented Jan. 21, 1908.

Application filed April 10, 1907. Serial No. 367,389.

To all whom it may concern:

Be it known that I, FREDERICK OTT, of South Bethlehem, in the county of Northampton and State of Pennsylvania, have invented certain new and useful Improvements in Shuttle Checking and Releasing Mechanism for Looms, whereof the following is a specification, reference being had to the accompanying drawings.

My invention relates to an improvement in shuttle check binders for looms.

The object of my invention is to provide means for relieving the strain on the binder of a shuttle box and removing the pressure from the shuttle as it is about to be shot across the raceway on the lay.

In its present embodiment it comprises an arm connected to the protection rod on the front of the lay, said arm being engaged by a pivoted lever and tilted thereby when the lay is in its backward position and the shuttle is about to move across the raceway.

It has been found that the shuttle sometimes sticks in its box or is hindered in its start across the raceway, in looms as ordinarily constructed; especially is this the case in damp weather. It is, therefore, to overcome this difficulty that my invention is designed.

In the accompanying drawings, Figure I, is a vertical sectional view through a loom showing my invention applied thereto. Fig. II, is a front elevation of the shuttle box, binder mechanism and release.

In said figures:—the lay 1, is mounted upon swords 2, which are pivoted to the side frames 4. Mounted upon the lay is the shuttle box 6, provided with a series of binders 7, which are adapted to retain the shuttle in the box after it has traversed the raceway in the well known manner.

Mounted upon the front of the lay in suitable bearings 10, is the protection rod 11. At the end of this rod opposite the shuttle box is a protection finger 12, securely fastened to said protection rod so that it will be tilted whenever the rod is rotated. About the protection rod is wound a spiral spring 14, which normally tends to keep the protection finger 12, pressed against the binder 7. This spring is secured at one end to the bearing 10, and at the other end to a collar 15, fastened to said protection rod. An arm 17, is secured to the protection rod at a point beyond the collar 15, said arm extending below the lay and being provided at its free end with a hole to permit free motion of the pivoted rod 18, through the same. The rod 18, is rotatably mounted upon the rod 20, extending across the loom near the bottom and said rod is also provided with an adjustable collar 21, for engaging the under side of the arm 17. The protection rod is also provided with a short finger 23, which is adapted to engage the arm 24, on the shipper 25, under predetermined conditions.

The lay 1, is oscillated by means of the pitman 28, secured to the crank 29, on the shaft 30, which is mounted in bearings 31, upon the side frames 4.

The operation of the device is as follows:—When the lay is in the position shown in Fig. I, the collar 21, of the rod 18, bears against the under side of the arm 17, thus oscillating the protection rod 11, and relieving the binder 7, from the pressure of the finger 12. At this time the shuttle is shot across the raceway and, as the pressure of the protection finger against the binder has been released the liability of the shuttle to stick in the shuttle box is reduced.

If for any reason the shuttle does not reach the shuttle box the finger 12, presses against the binder 7, during the forward movement of the lay and the collar 21, retreats from under the arm 17, thus allowing the protection rod to turn and move the finger 23, into a position where it will strike the arm 24, on the shipper 25, and thus stop the loom.

Having thus described my invention, I claim:—

1. In a loom, the combination with a lay, shuttle box and binder; of a protection rod on said lay; a spring actuated finger upon said protection rod arranged to press against said binder; an arm on said protection rod; a rod pivoted below said lay and in slidable relation with said arm; and means on said rod for engaging said arm to turn said protection rod to relieve the pressure exerted by said finger upon said binder.

2. In a loom, the combination with a lay, shuttle box and binder; of a protection rod on said lay; a spring actuated finger upon said protection rod to press against said binder; an arm on said protection rod; a pivoted rod in slidable relation with said arm; and a collar on said rod adapted to engage said arm to turn said protection rod to relieve the pressure exerted by said finger upon said binder.

3. In a loom, the combination with a lay,

shuttle box and binder; of a protection rod on said lay; a spring actuated finger upon said protection rod arranged to press against said binder; an arm on said protection rod extending under said lay; a rod pivotally supported from the loom frame in slidable relation with said arm; and means mounted upon said rod below said arm adapted to engage said arm to turn said protection rod to relieve the pressure exerted by said finger upon said binder.

In testimony whereof, I have hereunto signed my name, at Philadelphia, Pennsylvania, this fifth day of April 1907.

FREDERICK OTT.

Witnesses:

WILLIAM J. SPERL,

JAMES H. BELL.