S. A. NEIDICH.

TYPE CHASE.

APPLICATION FILED MAY 28, 1908.

989,277. Patented Apr. 11, 1911.

2 SHEETS—SHEET 1.

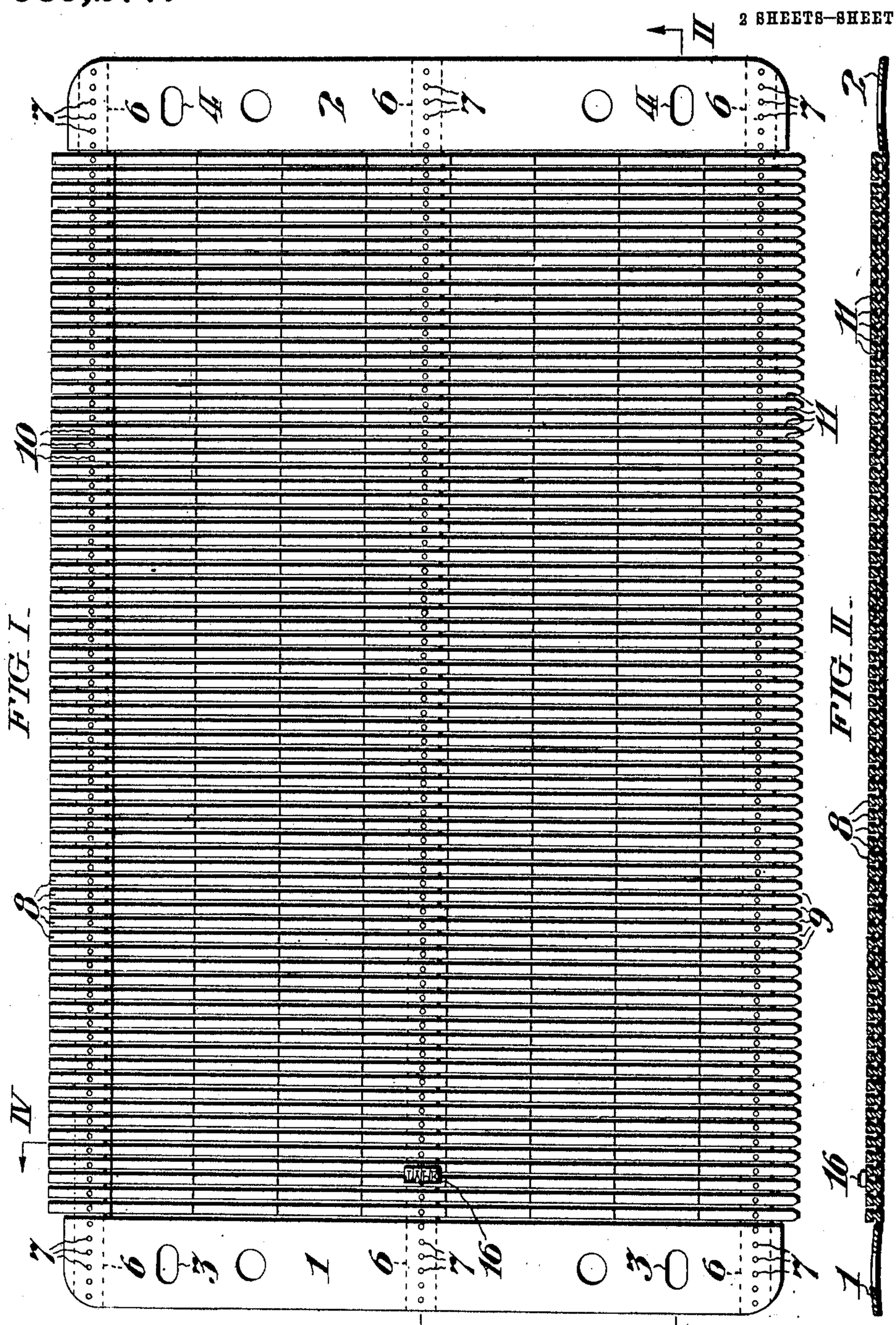


FIG. I.

FIG. II.

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2 SHEETS—SHEET 2.

FIG. III.

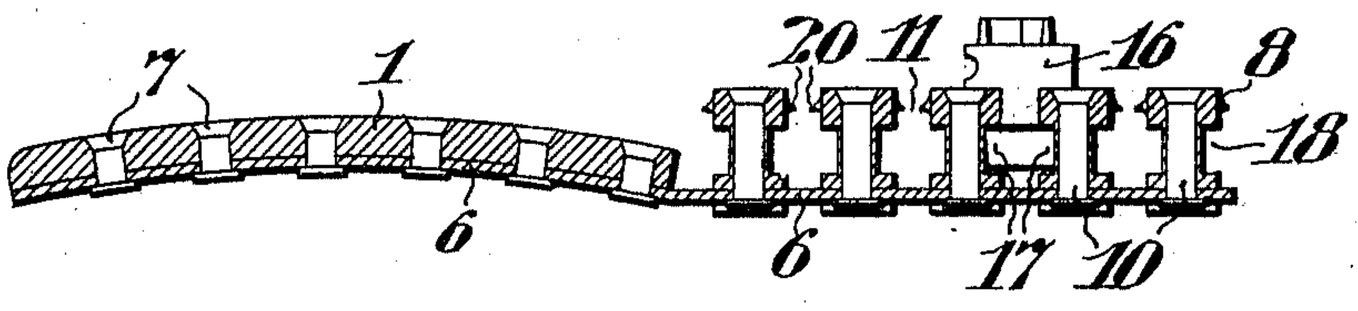



FIG. IV.

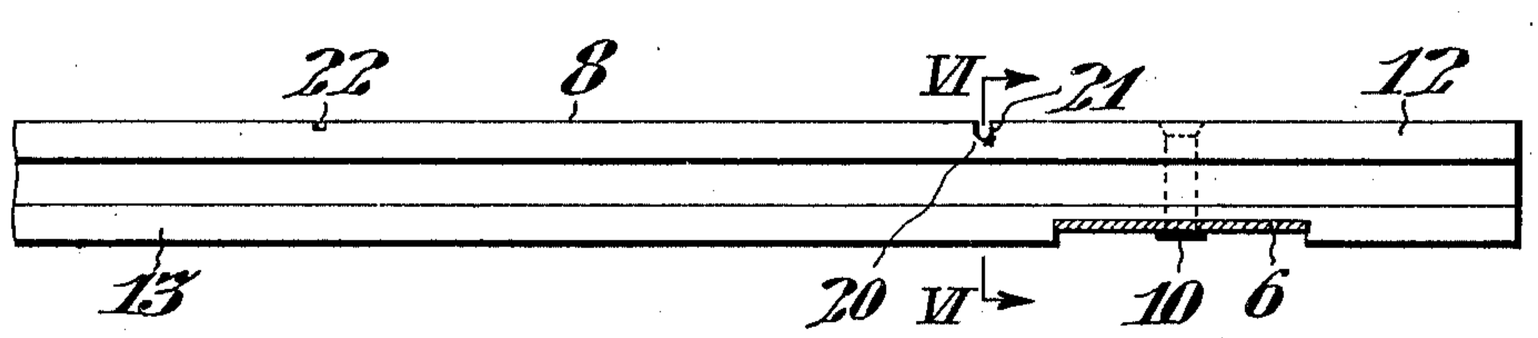



FIG. V.

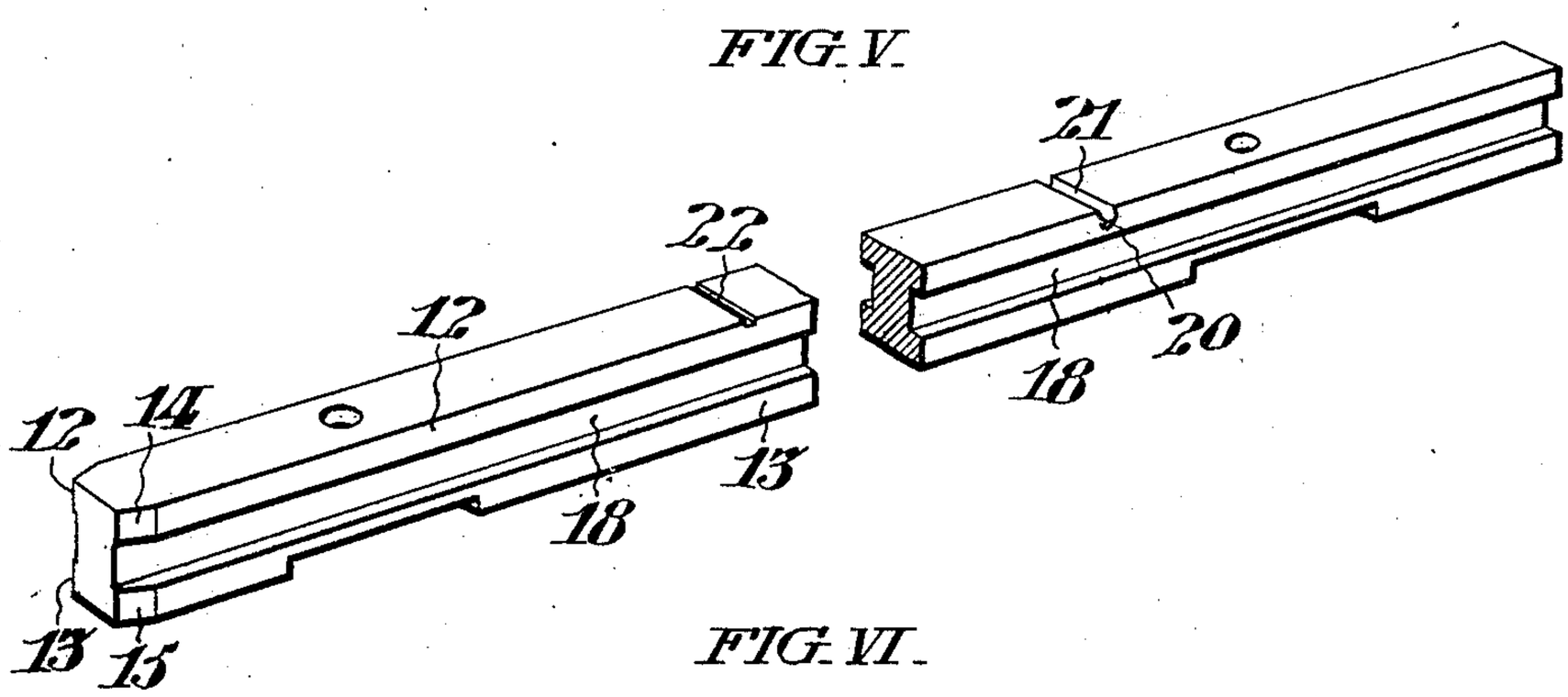
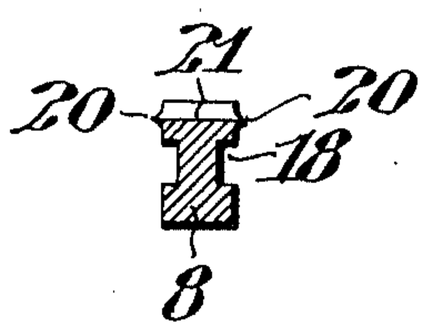



FIG. VI.




WITNESSES:

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# UNITED STATES PATENT OFFICE.

SAMUEL A. NEIDICH, OF BURLINGTON, NEW JERSEY.

## TYPE-CHASE.

989,277. Specification of Letters Patent. Patented Apr. 11, 1911.

Application filed May 28, 1908. Serial No. 435,847.

*To all whom it may concern:*

Be it known that I, SAMUEL A. NEIDICH, of Burlington, in the county of Burlington and State of New Jersey, have invented a certain new and useful Improvement in Type-Chases, whereof the following is a specification, reference being had to the accompanying drawings.

My invention relates to a chase which is so far flexible that it may be wrapped upon a cylindrical printing drum or be extended in a plane for transportation or storage.

The chase herein described comprises opposite end plates having means for attaching it to a printing cylinder, and connected by a plurality of flexible bands to which are attached type channel bars which extend parallel with said end plates and transversely with respect to said bands. Said channel bars are each tapered at one end, so that the spaces between them have flaring entrances at that end, although said spaces are of uniform width throughout the remainder of their length to receive and hold type. Said spaces being open at their ends, the lines of type may be accidentally displaced therefrom unless means are provided to limit their traverse. Therefore, I find it convenient to provide line stop projections extending into the type spaces from the walls of the channel bars, and as hereinafter described said stops are conveniently formed by rolling a groove in the upper face of each channel bar and thus swaging the metal outwardly to form lips projecting into the type spaces at the opposite ends of said grooves. I also find it convenient to provide said channel bars with grooves representing units of length to facilitate the type setting operation.

My invention comprises the various novel features of construction and arrangement hereinafter more definitely specified.

In the drawings; Figure I, is a plan view of a chase embodying my improvement and extended in a plane. Fig. II, is a longitudinal sectional view of said chase, taken on the line II, II, in Fig. I. Fig. III, is a fragmentary sectional view, taken on the line III, in Fig. I. Fig. IV, is a fragmentary sectional view taken on the line IV, in Fig. I. Fig. V, is a fragmentary perspective view of one of the type channel bars. Fig. VI, is a transverse sectional view of one of said channel bars, taken on the line VI, VI, in Fig. IV.

In said drawings; 1 and 2, are the opposite end plates of the chase having unitary attaching means comprising openings 3 and 4, for attachment to a cylindrical printing drum having suitable projections adapted to engage therein. As shown in Fig. II, said plates are preferably made of such cylindriform shape as to snugly fit the printing drum. Said plates are connected by the rivets 7, in rectangular relation with the flexible bands 6, which are conveniently made of spring steel. The series of counterpart type channel bars 8, are disposed in parallel relation with said end plates 1 and 2, transversely with respect to said bands 6, and each separately attached to the latter, conveniently by rivets 10. It may be observed that said rivets 7, and 10, are disposed in uniformly spaced relation, but this is merely incident to the employment of the same automatic riveting mechanism to rivet both said plates and said channel bars to said bands. As shown in Fig. I, said channel bars 8, are all tapered at one end to afford at one edge of the chase, flaring entrances 9, to the type spaces 11, between said channel bars. Said channel bars are conveniently tapered by cutting off the corners of their upper flanges 12, and lower flanges 13, as indicated at 14 and 15, in Fig. V. The type 16, are arranged to slide in said spaces 11, between the channel bars 8, as shown in Fig. I, and, as shown in Fig. III, said type are held between said channel bars by their flanges 17, engaging the undercut recesses 18, which extend longitudinally in said channel bars from end to end thereof. It may be noted that said type 16, may only be inserted and removed at the edge of the chase having the widened entrances 9; the passage of the type through the other ends of said spaces 11, being prevented by the line stop projections 20, which extend into said spaces 10, as best shown in Fig. III. As shown, said projections 20, are lips of metal, swaged from the side walls of said channel bars 8, in rigid, unitary relation therewith, by rolling grooves 21, in the upper faces of said channel bars.

As shown in Fig. I, each of the channel bars 8, is provided at its upper face with a series of graduations indicating units of length, conveniently inches, and preferably formed by grooves 22, which are cut in the upper faces of the channel bars so as not to form any projections with respect thereto.

I do not desire to limit myself to the pre-

cise details of construction and arrangement above described, as it is obvious that various modifications may be made therein without departing from the essential features of my invention, as defined in the appended claims.

I claim:—

1. A flexible chase comprising opposite end plates of hollow cylindriform configuration, having attaching means; a plurality of flexible metallic bands connecting said plates; a plurality of metallic type channel bars, each tapered at one end, extending parallel with said plates, transversely with respect to said bands; means connecting each of said channel bars with said bands; line stops in said channel bars comprising projecting lips formed at the ends of grooves in the upper faces thereof; and, graduations in the upper faces of said channel bars, representing units of lengths.

2. A flexible chase comprising opposite end plates having attaching means; a plurality of flexible bands connecting said plates; a plurality of type channel bars, each tapered at one end, extending parallel with said plates, transversely with respect to said bands; means connecting each of said channel bars with said bands; line stops in said channel bars comprising projecting lips formed at the ends of grooves in the upper faces thereof; and, graduations in the upper faces of said channel bars representing units of length.

3. A flexible chase comprising opposite end plates having attaching means; a plurality of flexible bands connecting said plates; a plurality of type channel bars, extending parallel with said plates, transversely with respect to said bands; means connecting each of said channel bars with said bands; line stops in said channel bars comprising projecting lips formed at the ends of grooves in the upper faces thereof; and, graduations in the upper faces of said channel bars representing units of length.

4. A flexible chase comprising opposite end plates having unitary attaching means; a plurality of flexible bands connecting said plates; a plurality of type channel bars extending parallel with said plates, transversely with respect to said bands; means connecting each of said channel bars with said bands; and, line stops in said channel bars.

5. A flexible chase comprising opposite end plates of hollow cylindriform configuration, having attaching means; a plurality of flexible metallic bands connecting said plates; a plurality of metallic type channel bars, extending parallel with said plates, transversely with respect to said bands; means connecting each of said channel bars with said bands; line stops in said channel bars comprising projecting lips formed at the ends of grooves in the upper faces thereof; and, graduations in the upper faces of said channel bars, representing units of length.

6. A flexible chase comprising opposite end plates having attaching means; a plurality of flexible bands connecting said plates; a plurality of type channel bars, extending parallel with said plates, transversely with respect to said bands; means connecting each of said channel bars with said bands; and, line stops in said channel bars comprising projecting lips formed at the ends of grooves in the upper faces thereof.

7. A flexible chase comprising relatively movable opposite end plates of hollow cylindriform configuration, having attaching means; flexible bands connecting said plates; type channel bars extending parallel with said plates, transversely with respect to said bands; and, means connecting each of said channel bars with said bands.

8. A flexible chase comprising relatively movable opposite end plates of hollow cylindriform configuration, having attaching means including slots in said plates; flexible bands connecting said plates; type channel bars extending parallel with said plates, transversely with respect to said bands; and, means connecting each of said channel bars with said bands.

9. In a flexible chase, the combination with a series of relatively movable type channel bars assembled in parallel relation; of flexible members transversely connecting said bars, limiting their relative movement; relatively movable opposite end plates having attaching means; and, means extending through said plates securing the ends of said flexible members to said plates, independently of said bars.

10. In a flexible chase, the combination with a series of relatively movable type channel bars; of flexible members transversely connecting said bars, limiting their relative movement; relatively movable opposite end plates having attaching means; and, means securing the ends of said flexible members to said plates, independently of said bars.

11. A bar for a flexible type chase, tapered at one end having longitudinal channels in its opposite sides, transverse graduations upon its surface, and, a series of holes for connecting means, extending transversely through it in spaced relation.

12. A bar for a flexible type chase, having longitudinal channels in its opposite sides, and, a series of holes for connecting means, extending transversely through it in spaced relation; said bar having a laterally projecting line stop.

13. A flexible type carrier comprising a number of type carrying bars threaded upon flexible bodies, plates securing the ends of

said bodies, means for alining the type in the carrier and means for securing it to the machine.

14. A flexible chase comprising opposite end plates having attaching means; a plurality of flexible bands connecting said plates; a plurality of type channel bars extending parallel with said plates, transversely with respect to said bands; means connecting each of said channel bars with said bands; and stop means in the channels of said bars.

15. A flexible type carrier comprising a number of type carrying bars threaded upon flexible bodies, and relatively movable plates permanently securing the opposite ends of said bodies in parallel relation; said plates having attaching means.

In testimony whereof, I have hereunto signed my name at Burlington, New Jersey, this 27th day of May 1908.

SAMUEL A. NEIDICH.

Witnesses:
HELEN M. MURRAY,
A. E. GIVEN.