

if buildings belonging to bleach-greens, or other manufactories, have been originally erected in injudicious situations, or if, owing to the decline of business for which they were erected, they have been abandoned, and become useless, such buildings should be considered an incumbrance rather than a benefit to the land, and, consequently, a nominal value only should be placed on them.

202. The tabular amount for large country houses occupied by gentlemen, usually exceeds the sum at which they could be let for under all the circumstances in which they are placed, and the discrepancy in each case will be found to increase in proportion to the age of the building.

203. To remedy this defect, the following table has been constructed for proportionally reducing the tabular values of such houses to their fair relative value.

Houses amounting to £10, and not exceeding £35 per annum, no reduction.			
„	35	„	40 reduce 0s. 6d. per £
„	40	„	50 „ 1s. 0d. „
„	50	„	60 „ 1s. 6d. „
„	60	„	70 „ 2s. 0d. „
„	70	„	80 „ 2s. 6d. „
„	80	„	90 „ 3s. 0d. „
„	90	„	100 „ 3s. 6d. „
„	100	„	110 „ 4s. 0d. „
„	110	„	120 „ 4s. 6d. „
„	120	„	140 „ 5s. 0d. „
„	140	„	160 „ 5s. 6d. „
„	160	„	200 „ 6s. 0d. „
„	200	„	300 „ 7s. 0d. „
„	300, and upwards,	„	8s. 0d. „

204. Where new fronts or other additions have been made to gentlemen's houses, care should be taken to ascertain whether any portion of the original house has become useless, or comparatively of little value, in consequence of the erection of the new building, that is to say, windows may have been built up, certain rooms may have necessarily become passages to the new buildings, &c. In all such cases a considerable deduction should be made from the prices given by the tables for such portions of the house, say one-fourth, one-third, one-half, as each case may require.

205. *Locality* includes aspect, elevation, exposure to winds, means of access, abundance or scarcity of water, town influence, &c., each of which must be carefully considered on the ground.

206. It is to be observed, that in determining the value of buildings immediately adjoining large towns, care should be taken to ascertain the per centage which the town valuator has added to the tabular value of these on the limits of the town lot; those within the town lot are referred to another heading (par. 208).

207. *Solidity*.—In large mills, storehouses, factories, &c. well built with stone or brick, and well bonded with timber, a proportional per centage should be added to the tabular value for unusual solidity and finish which will range from thirty to fifty per cent.*

VALUATION OF HOUSES IN CITIES AND TOWNS.

208. In valuing houses in cities and towns, there are circumstances for consideration in addition to those already enumerated, viz., arrangement of streets, measurement, comparative value, gateways, yards, gardens, &c.

209. To effect this object, each town should be measured according to a regular system; and the following appears to be a convenient arrangement for the purpose:—

ARRANGEMENT OF STREETS.

210. The valuator should commence at the main street or market square, and work from the centre of the town towards the suburbs, keeping the work next to be done on his right hand side, measuring the first house in the street, and marking it No. 1 on his Field Map and in his Field Book. Afterwards he is to proceed to the next house on the same side, marking it No. 2, and so on till he completes the measurement of the whole

* The value thus ascertained may be checked, by calculating the tabular value of the ground floor, and multiplying this amount by the number of floors, not including the attic.

of the houses on that side of the street. He is then to turn back, proceeding on the other side, keeping the work to be done still at his right hand. The main street being finished, he is next to proceed to measure the cross streets, lanes, or courts that may branch from it, commencing with that which he first met on his right hand in his progress through the main-street. This street is to be measured in the same manner as that prescribed for the main street; and should any lanes or courts branch from it, he is to measure each of them in succession, following the same rule of keeping his work to the right-hand side till he has finished the whole. He is then to proceed with the second cross street branching from the main-street in which he originally commenced; and having finished it, together with all its courts and lanes, he will proceed in succession with every other.

211. Having finished the first, or principal main street, with its several branches, he is to take the next principal street to his right hand, or lying eastward of the first, and follow the system above set forth, until it and its several branches are completed.

212. He will then take the southern and western main-streets, with their respective branches, taking care, in his progress, that no lane or court be left unmeasured which may be connected with one or more of the main or minor streets, and proceed in the same manner till the whole town be measured.

213. *In measuring buildings*, the valuator should invariably place the dimensions of the front of them, or the line along the street, in the first column of his book—so of returns, putting in that dimension first which is parallel to the front—the line from front to rere should always be placed in the second column, and the height, of course, in its own place. In offices, the front may be considered that side on which the door into the yard is situated.

214. In measuring the height of houses, where there are garrets, the height to the eave should be stated in the book,

and the addition made on account of the attic rooms written under it in the column of heights, and both added together for the whole height.

215. Every house having but one outside door of entrance in front, no matter how occupied, is to be numbered as one tenement. Where there are two outside doors, one of which is to a shop, to which there is internal access from the house, the whole is still to be valued as one tenement. If, however, the shop be held by one person, and the remainder of the house by another, or others, the value which should be apportioned to each should be returned.

216. Where a number of houses belonging to one individual are let from year to year, or otherwise, to a number of families, each distinct house is to be valued as one tenement.

217. Where buildings in the rere of houses in towns have been converted into dwellings, offices, or stores, and let as such by the year, they should be valued as separate tenements from the original house.

COMPARATIVE VALUE.

218. In towns, a shop for the sale of goods is always the most valuable part of a house; and any house that has much front, and affords room for two or three shops, is much more valuable than the same bulk of house with only one shop.

219. When a large house and a small one have each a shop equally good, the smaller house is more valuable in proportion to its cubical contents as ascertained by measurement, and a proportionate per centage should be added to the lesser building to suit the circumstances of the case.

220. Where large houses and small mean houses are situated close to each other in the same street, the small houses are advanced in value by the proximity of the large ones, and the large ones are deteriorated, particularly where the latter are used as private dwellings. In such case, a proportionate allowance should be made.

221. Stores in large towns do not admit of so great a difference for situation as shops—a store being of nearly equal value, in proportion to its bulk, in any part of a town. Where it adjoins or is close to a quay or market, the situation is superior, and in these cases an additional per centage should be added.

GATEWAYS.

222. *Gateways.*—In stores or warehouses in a commercial street, where there is gateway underneath, no deduction should be made on that account, because the gateway as it leads to warehouses, manufactories, or stores, is considered by the owner to be more useful to his concern than so much in the bulk of the house; but, where a gateway is a common entrance to two or more yards, one-half or two-thirds of its bulk, as the case may be, should be deducted when it is measured into the house, and a price proportioned to its value should be added to all the houses deriving benefit from it.

223. In shops or private dwellings a gateway under the front of the house leading to the yard is a disadvantage, as compared to a stable entrance from the rear, consequently, in such cases, a proportionate deduction should be made on account of the gateway.

224. In measuring gateways the height should be taken the same as the height of that story of which it forms a part.

225. *Passages in common.* The observations regarding gateways apply also to passages, which are common to two or more houses, and should, in every respect, be treated in the same manner.

226. Where any deduction or addition on account of gateways is necessary, it should be written in full at the end of the other dimensions, so as to be easily added or subtracted without danger of error.

227. Where deductions are made on account of want of finish in any house, the particulars should be stated fully,

noting what portion of the building, roofing, carpenter's work, plastering, painting, &c., remains to be completed.

228. Stores do not require the deduction for large amount, which has been directed in the case of gentlemen's country seats.

OF TOWN-GARDENS AND YARDS.

229. In large towns it is considered that each house should have about as much area of open yard attached to it as is equal to half the quantity of ground covered by the building, and this is included in the relative value given by the tables. Where there is more than this proportion an addition should be made to the value of the tenement; where the yard is less, a suitable reduction should be made; a reduction should also be made where the yard is detached from the tenement, or is difficult of access.

230. *The quantity of land occupied by the streets,* houses, offices, warehouses, or other back buildings belonging to the tenements, together with the yards, is to be entered separately at the end of the town lots in which they occur, the value of such land being one of the elements considered in determining the value of the houses, &c.

231. *A timber yard or commercial store yard* must be valued; and should there be any offices within it, or adjoining, and belonging to the same individual, their value is to be added to the value of the yard.

232. Large timber or other yards should be measured, and the number of square perches they contain stated fully; also whether they are enclosed by walls, whether they are paved, gravelled, &c., and what is the use to which each is applied.

233. *Gardens in towns.*—In valuing tenements in towns, the houses, offices, and yards attached to them are to be valued as one tenement; but the garden, which is to be surveyed separately, is not to be included in this value. In fixing a value on a garden belonging to a house in town, it is to be observed, that, according to the Act, all lands are

to be valued as yielding some kind of agricultural produce, which includes green crops of all kinds, for feeding cattle, as well as potato, meadow, and grazing ground; orchards, therefore, vegetable gardens, or pleasure gardens, in the immediate vicinity of towns, must be valued as if producing agricultural crops under the most favourable circumstances.

OF THE SCALE FOR INCREASING THE TABULAR VALUE OF
HOUSES FOR TOWN INFLUENCE.

234. The rents paid for some of the houses in any town can easily be ascertained, and this information will enable the valuers to determine the allowance in addition, which should be made to the price given by the tables; but, as the houses of different streets in the same town will let at very different prices, it will be necessary, where the town is large, to make several classes of situations, and to fix a particular addition, or per centage, to the price given in the tables for each class.

235. *Lease Rents.*—It is generally admitted to be more advantageous for landlords to have tenants bound by lease than to let their houses by the year, or half year, though at an increased rent.

236. Where the tenant has a lease he is obliged to keep the house in repair, and there is no risk of its being occasionally unoccupied. In valuing houses, therefore, a difference should be made between a yearly rent and a lease rent; for a new house the deduction should be about two shillings in the pound in favour of the lease rent; for a medium house about three shillings in the pound; and for an old house about four shillings in the pound.

237. In all houses whose annual value is under ten pounds, the rent from year to year is higher in proportion to the cubical contents than in larger houses let in the same manner; but the landlord runs a greater risk of tenants running away without paying their rent, and from dilapidation; for this

reason, in reducing such small houses, when let by the year or half year, to lease rents, five shillings in the pound, at least, should be deducted.

238. In villages and small market towns an addition of twenty-five per cent. to the prices of the tables will generally be found sufficient.

239. In moderate sized market towns, the prices given in the tables may be trebled for the best situations in the main street, near the market place; and in the second and third classes the prices will vary from one hundred to fifty per cent. above the tables; and in large market towns the prices for houses of the first class, in the best situations, will be about three, and one-half times those of the tables.

240. In dividing the streets or houses of any town into classes, the valuator is, in the first instance, to fix on a medium situation or street, and having ascertained the rents of a number of houses in it, he is, by measurement, to determine what per centage, in addition to the country tables, should be made, so as to produce results similar to the average of the ascertained rents.

241. It often happens that, owing to peculiar circumstances, the rents of similar houses in towns, in similar situations, will not always be the same; but in a general valuation for taxation, the relative value of houses is to be ascertained without any regard to such contingencies, or peculiarity of tenure, as may affect the actual rent paid; consequently, the average rent of similar houses is to be taken as the guide.

242. Having determined the per centage to be added to the price given in the tables for houses in medium situations, the standard for the town about to be valued may be considered as formed; and from this standard per centages in addition are to be made for better and best situations, or for any number of superior classes of houses, or of situations, which the size of the town may render necessary.

243. It is to be observed, that the front division of a

house in a town is the most valuable part of the tenement, and, consequently, in determining the per centage to be added to the country price, as contained in the tables, it will be found an equitable and useful principle to place a higher price on the front, which includes the shop, than on the back buildings, which are often dark, ill-contrived, and inconvenient; and thus the gross amount of the house will be made up by two calculations, one for the front, and the other for the back buildings, together with stores and stable offices.—(*Example*, page 103.) It is impossible to fix an arbitrary rule for determining the proportionate value of front and rear buildings in towns, which will suit all situations—such proportion must be left to the judgment of the valuator; but it may be stated, that in revising the valuations already made of several towns, it has been found that the proportion of five to three was applicable to the greater number of houses in good situations; that is, the country price given by the tables should be multiplied by five for the front, and three for the back buildings, stores, and offices.

Tables used in the valuation of the city of Dublin are annexed, which show the deductions usually made on different classes of houses on account of rates, taxes, repairs, and insurance, &c.

OF WATER-POWER.

244. In mills and manufactories which use water-power, it will be necessary to obtain its value, and add it to that of the buildings.

245. The amount of water supply is usually estimated in horse power, that is, the capability to produce a mechanical effect per *minute*, equivalent to 33,000 lbs. raised one foot.*

246. The horse-power may be determined from the following data:—

1st. *The mean velocity of stream*, which may be ascertained by the number of seconds a floating body† will require to pass through a known distance.

2nd. *The section of water*, that is the breadth and depth of water in the trough‡ which conducts it to the wheel.

3rd. *The fall*, that is the perpendicular distance from the centre of the column of water as delivered on the wheel, to the level of the wheel's lower periphery.

247. From the velocity and section the cubic feet of water discharged per minute may be ascertained, and this multiplied by 62.5 lbs., the weight of a cubic foot of water, will give the total weight discharged per minute.

248. Since a body falling through a given height acquires a momentum capable of raising another body of equal weight to a similar height, it follows that the total weight of water discharged per minute, multiplied by the fall, will give the power available; this multiplied by the modulus suited for the wheel, and divided by 33,000, will give the horse-power required.

249. The amount of work performed compared with the

* A horse can draw a load at the rate of three miles per hour, the resistance of which is equal to 125 lbs., which, for eight hours, would be equal to 3,000 lbs. drawn one mile in a day; this multiplied by 5,280 feet gives 1,584,000 lbs. units of work, which, divided by 480, the number of minutes in eight hours, gives 33,000 lbs.

† The floating body should be so contrived as to sink some depth in the stream; for instance, a bottle loaded so as to sink to the neck.

‡ See also paragraphs 254 and 259.

power applied is called the modulus, or useful effect, and is usually expressed in decimals as follows:—

Modulus for	}	Overshot Wheel,75	
		Breast Wheel, {	No. 1, with buckets,66
			No. 2, float boards,55
		Turbine,65 to 78	
		Undershot Wheel,33	

250. Thus, an overshot wheel having a water supply of *four* horses' power will only produce a useful effect of *three*.

251. The following may serve as a formula for entry of data and calculation for several kinds of water wheels:—

Data.	Ft.	In.	36 inches, Breadth of stream.
A Breast Wheel, No. 1.			8 Depth of do.
Velocity of stream per minute,	144	-	288 equal to 2 ft. Sectional area of water.
Breadth of stream in trough,	-	36	144 Velocity of stream per minute.
Depth of do.,	-	8	288 Cubic cont. of water discharged per minute.
Fall of water,	12	-	62.5 Weight of a cubic foot.
			18000.0 Total weight in lbs. discharged.
			12 Fall of water.
			216000.0 Total available power.
			.66 Modulus.
			1425600.00
			33000 = 4.32 effective horse-power.

252. Calculation made from the above data may be checked as follows:—

Data.	Ft.	In.	36 inches, Breadth of wheel.
A Breast Wheel, No. 1.			8.5 feet.
Velocity of wheel in revolutions per minute, 6.6.			306.0 = 2.12 Sectional area of buckets.
Diameter of wheel,	14	-	168 inches, Diameter of wheel.
Breadth of wheel,	-	36	8.5 feet.
Depth of shrouding,	-	8.5	159.5 = 13.29 Depth of shrouding.
Fall of water,	12	-	3.14 Ratio of circumference.
			41.751 Circumference at centre of buckets.
			6.6 Number of revolutions per minute.
			275.3623
			2.12 Sectional area of buckets.
			2.584.192
			292 Cubic feet of water in buckets half full.
			62.5 Weight of a cubic foot of water.
			18250
			12 Fall of water.
			219000
			.66 Modulus.
			144540.00
			33000 = 4.38 effective horse-power.

253. For undershot wheels the data are as follow:—

Data.	Ft.	In.	Ft. In.
Velocity of wheel in revolutions per minute, 5.2.			4.6 Breadth of float board.
Diameter of wheel,	16	-	10 Depth of do., acted on.
Breadth of float board,	4	6	3.75 Area of float boards.
Depth of do.,	2	-	798 Velocity of stream.
Velocity of stream per minute,	798	-	2992.00
Height of fall due to velocity,	2	9	62.5 Weight of a cubic foot of water.
Depth of do. under wheel,	-	-	187031.250
			2.75 Height of fall due to velocity.
			514335.9000
			.33 Modulus.
			169730.000
			33000 = 5.14 horse-power.

254. It will be necessary to obtain in every instance with great accuracy the data specified in the above tables, and the velocity of the stream should be ascertained from two or three trials; also when the water flows on the wheel over a barrier, its depth on the sill should be ascertained and entered.

255. It is to be observed that the horse-power deduced from measurement of a bucket-wheel may be found in some instances rather greater than that from the velocity and fall of water, as it is necessary that space should be left in the buckets for the escape of air, and also to economize the water.

256. When a bucket-wheel has been properly constructed, the cubical content of water discharged per minute multiplied by .001325, and by the fall, will give the effective horse-power approximately.

257. For turbines the effective cubical content of water discharged per minute multiplied by the height of the fall and divided by 700, will be equal to the effective horse-power, thus—

$$\frac{\text{Cubic Ft. Fall.} \quad 1,400 \times 30}{700} = 60 \text{ Horses' power.}$$

258. It may be observed, also, that twelve cubic feet of water falling one foot per second is considered in practice equal to a horse-power, effective.

259. It sometimes occurs that the water is supplied from a reservoir, and that the velocity of water in the trough must be ascertained from the height or head—that is, the measure from the centre of the orifice of the sluice to the surface of the water in the reservoir; in such cases the dimensions of the orifice should be ascertained.

260. *Head of Water.*—The velocity due to a head of water is equal to that which a heavy body would acquire in falling through a space equal to the depth of the orifice below the free surface of the fluid; that is, if V equals the velocity, and M = $16\frac{1}{2}$ feet, or the space fallen through in a second, and S the height, the velocity may be represented

thus: $V = 2 \sqrt{M.S.}$, thus the natural velocity for .09 feet head of water will be $V = 2 \sqrt{16\frac{1}{2} \times .09}$, or 2.4 feet per second. The process may be abbreviated in practice by omitting the fraction; the formula may then be expressed, $V = 8 \sqrt{S}$; or the square root of the height multiplied by eight is equal to the natural velocity.

261. To ascertain the effective velocity, multiply the square root of the height by five.

VALUE OF WATER-POWER.

262. In the thirteenth Section of the Valuation Act, it is required that the water-power be only valued so far as it may be actually used, &c.; it will therefore be necessary, in addition to the nature of the water supply and description of the wheel, to take into consideration also the time of working.

263. A horse-power employed for twenty-two hours* per day throughout the year is valued at £1 15s. This amount is to be multiplied by the number of horses' power ascertained for the mill under consideration. If the mill be employed but half the year, or a fewer number of hours per day, a suitable deduction must be made, as shown in the following table.

264. As it is evident that a new mill is more valuable than an old one, though the actual power of the water be the same, the following table has been calculated with reference to the different classes, viz., *New, Medium, and Old.*

265. TABLE.

Quality of Machinery.	Number of Working Hours per Day.							
	8	10	12	14	16	18	20	22
New, . . . A	£ s. d. 0 13 3	£ s. d. 0 18 6	£ s. d. 1 3 3	£ s. d. 1 6 9	£ s. d. 1 8 9	£ s. d. 1 10 9	£ s. d. 1 13 0	£ s. d. 1 15 0
Medium, . . B	0 12 0	0 16 9	1 1 0	1 4 3	1 6 0	1 7 9	1 9 6	1 11 6
Old, . . . C	0 10 6	0 15 0	0 18 9	1 1 6	1 3 3	1 4 9	1 6 6	1 8 0

* Two hours are allowed for change of men and other contingencies.

266. In the foregoing table it is to be observed, that the highest proportionate value is placed upon 14 hours' work, inasmuch as it is conceived that a mill can be worked for that number of hours at a less proportionate expense than any other, as one set of men can work for the whole time.

267. In those periods of the year when water becomes scarce, and even with the assistance of ponding not more than eight or ten hours' work per day can be performed; the cost of labour is increased in proportion to the produce, and, for this reason, the value of the water-power is proportionably diminished. Thus it frequently happens, that a mill has abundance of water during six months of the year; has fourteen hours' water, per day, for three months; and eight hours for the remaining three months. In determining the value of water-power of such a mill, from the tables, each period should be calculated in itself, and the whole being added, will give the annual value of the water-power of the mill, as shown in the following form:—

268. FORM.

Description of Mill, A.				Class of Machinery, A.			
Horses' Powers.	Working Time.		Value of Water-power.	Observations.			
	No. of Months per Year.	No. of Hours per Day.					
9	8	22	£ s. d. 10 10 0	For 8 months the full power of the wheel is used, but for the remaining 4 not more than two-thirds of the water-power can be calculated on.			
6	4	12	2 6 6				
			12 16 6				

269. It is evident that when the mill works for different periods of the year, any system of averaging would be inaccurate, as the ratio of increase, in proportion to the number of working hours, is not equable, but has been regulated in proportion to the produce as compared to the expense.

270. The valuator will examine particularly into the state of the interior of each mill, with a view to determine the class

of the water-power; thus, in corn and flour mills, it should be observed whether the millstones, in point of wear, should be classed as new, medium, or old, and whether this classification corresponds with that of the exterior. If it do, as will generally be the case, the same quality letter will answer for the building and the water-power; but if it should happen that one or more pairs of new millstones, or new, or partially new, machinery, have been introduced into an old mill, a higher quality letter may be inserted for the water-power, taking care not to letter the millstones too high; for though they may be new, or nearly so, the machinery will probably be old, or at least a part of it, and, consequently, the new millstones will not produce the same effect as if the water-wheel and the whole of the machinery were new.

271. The above-mentioned circumstances having been ascertained, the valuator will letter the water-power of the mill, and at the same time, as a check on such lettering, he will note his opinion of the annual value of the mill, including the building and the water-power, in the state in which he finds it, and under all the local circumstances in which it is placed.

272. Where mills are worked during a part of the year by water-power, and a part by steam, care should be taken to ascertain the proportion during which water is employed, as that only is to be taken in account.

MODIFYING CIRCUMSTANCES.

273. Having ascertained the value of water-power as above directed, it will be necessary to take into consideration the several circumstances which may affect it.

274. Thus the wheel may be unsuitable or ill-contrived, or the power may be applied injudiciously; the water supply may be scarce, or there may be an overflow, or backwater.

275. In gravity wheels the water should act only by its weight—the principle upon which its maximum action depends being that the water should enter the wheel without

impulse, and should leave it without velocity; the water should, therefore, be allowed to fall through such a space as will give it a velocity equal to that of the periphery of the wheel when in full work, thus: if the wheel move at the rate of five feet per second, the water must fall on it through not less than two-fifths of a foot; for the space through which a falling body must move to acquire a given velocity is expressed thus, $\frac{v^2}{4M}$

276. The situation of the mill is also of considerable importance: thus, in flour mills situated in considerable inland towns, such as Armagh, Navan, Carlow, Kilkenny, &c., in a good wheat country, where wheat can be bought at the mill, and the flour sold there also, 5s. in the pound may be added on the water-power for the advantage of situation.

277. The vicinity of such towns, say within the distance of from three to four miles, may be called an ordinary situation. Beyond this distance, where wheat has to be carried from, and flour to, the market, the water-power gradually decreases in value; and from such a town, to ten miles' distance from it, the water-power may be rated according to the following table of proportions:—

278. TABLE OF PER CENTAGES TO BE APPLIED TO THE VALUE OF WATER-POWER IN PROPORTION TO DISTANCE FROM TOWN OR MARKET.

Add to water-power,	{	10 0	per pound within the town lot.
		8 0	when distant from 0 to 1 mile.
		6 0	„ „ 1 3 „
		4 0	„ „ 3 5 „
		2 0	„ „ 5 8 „
		1 0	„ „ 8 10 „
		0 0	„ „ 10 and upwards.

Beyond ten miles from a good local market, a flour mill can rarely require per centage for market.

279. *But this rule of increase* does not apply to small mills, such as flour mills, where only one pair of millstones is used; in this case only half the above per centage is to be added

within three miles of a large town; beyond that distance such mills may be considered as employed for the supply of the neighbourhood, and no addition should be made; but any deficiency of work or water will be considered when the annual and daily time the mill is at work is taken into account by the directions at section 268.

280. *In the case of bleach mills*, though regard to the situation is not, in some respects, so important, yet they should be as near to their purchasing or export market as flour or corn mills, and the valuator should make deductions for a remote situation, especially where the chief markets for buying linen are distant, or add a per centage to the water-power where the situation has unusual advantages in these respects.

VALUE OF HORSE-POWER DETERMINED FROM MACHINERY DRIVEN.

281. The quantity of any particular kind of machinery which it usually requires a horse-power to drive, if correctly ascertained, may be taken as data by which to estimate the water-power actually used—thus, in flax spinning or beetling mills, &c., the motive-power expended in driving a given number of stocks, spindles, or beetles, &c., equivalent to a horse-power, has been determined as follows:—

FLAX MILLS.

282. In a flax mill each stock is equivalent to one horse-power.

283. The bruising machine, if it consist of three rollers, may be considered equal to one and one-half stocks.

The number of horse-power employed in the mill, may thus be counted, and the value ascertained from the table for horse-power (par. 265).

SPINNING MILLS.

284. In spinning mills the horse-power may be determined from the number of spindles driven, and the degree of fineness spun, for in every spinning mill the machinery is constructed to spin within a certain range of fineness. It will, therefore, be necessary to ascertain—1st, what is the range of fineness; 2nd, what is the number of spindles.

285. Yarn is distinguished by the degree of fineness to which it is spun, and known by the number of leas or cuts which it yields to the pound.

1 lea or cut is 300 yards in length.

12 leas or cuts are one hank.

200 leas or cuts,

16 hanks and 8 leas, } one bundle.

60,000 yards,

286. In spinning flax, coarse yarns require a greater proportionate power than fine. This is chiefly owing to the additional trouble necessary to prepare the coarse kinds for the spindle. The spindles and their machinery are also heavier.

287. The following is a table of equivalents for a horse-power:—

Leas to the pound.	No. of Spindles.	Observations.
From 2 to 3,	40 Throstles,	{ Tow is usually at from two to five leas to the pound, and in the dry way, including the carding and preparation, it requires a horse-power to forty throstle spindles.
„ 12 to 30,	60 Throstles,	{ When coarse yarn is spun from twelve to thirty leas to the pound, including the preparation.
„ 30 to 70,	100 Throstles,	{ When yarns are spun from thirty to seventy leas to the pound, in the wet and warm way, require nearly the same kind of preparation and machinery.
„ 70 to 120,	120 Throstles,	{ In yarns spun from seventy to one hundred, or one hundred and twenty leas to the pound, a horse-power will work one hundred and twenty spindles, including all the preparation; the spindle and the attendant machinery will be lighter than in any of the foregoing cases, but driven at a much greater velocity.

COTTON MILLS.

288. In cotton mills the throstle spindle is used for the coarser yarns, and for the finer kinds the mule spindle.

Leas to the pound.	No. of Spindles.	Observations.
From 10 to 30,	180 Throstles,	With throstle spindles few manufacturers spin a coarser kind than ten leas to the pound; none higher than thirty. Taking twenty as a fair average, the horse-power would drive one hundred and eighty spindles.
„	50, 500 Mules,	With mule spindles, at an average of fifty leas to the pound, a horse-power, including the preparation, will turn five hundred spindles, and this is varied up to one thousand spindles to the horse-power; but, in this latter case, the cotton must be clean, of superior quality, and spun to the finer degrees.

BLEACHING MILLS.

289. In bleaching establishments the valuator is to ascertain the number of beetling engines, and carefully measure the length of the wiper beam in each, together with the length of beetles, and their depth, taken across the direction of the beam; also the height the beetles are raised in each stroke. From these data, the horse-power of such engine can be ascertained by inspection of the table calculated for this purpose.

290. The valuator is to ascertain the number of pairs of washing feet, and whether they are of the ordinary kind; the number of pairs of rub-boards; and whether there be a starching mangle, a squeezing machine, a calender, or any other machinery, worked by water; and he should state, according to his judgment, and the best information he can procure, the horse-power required for the working of each.

291. He is to ascertain in this, as well as in other kinds of mills, whether the whole of the machinery is worked constantly throughout the whole year, or whether it is worked only a certain number of hours in each twenty-four. Also, whether in any portion of the year a certain portion only of the machinery can be employed for the usual number of hours; and he is carefully to ascertain, by inquiries, not only from the person in care of the works, but also from the owner or principal manager of the mill or other concern, and to make deductions in proportion to the time during which such part of the machinery cannot be worked.

292. In beetling mills, in a single long engine, the wiper

beam, or that which is furnished with cogs for lifting the beetles, is usually ten feet long, and this length is desirable to fix on as a standard for computing the water power.

293. The wiper beam usually makes thirty revolutions in a minute; and, being furnished with two sets of cogs on its circumference, raises the beetle sixty times in a minute,* such a wiper beam working beetles of four feet four inches in length, and three inches in depth, from front to rear, making thirty revolutions, or lifting the beetles sixty times in a minute one foot high, is equal to the power of one horse.

294. In this calculation, the power necessary for working the traverse-beam which holds the linen is included, and also an allowance is made for the guide slips which retain the beetle in a perpendicular position.

295. Taking the wiper beam at ten feet long, and the height lifted as one foot, the following table will show, by inspection, the proportionate horse-power required to raise beetles of different dimensions sixty feet in one minute, the weight of a cubic foot of dry beech-wood being taken at 712 ounces.

296. Table for ascertaining the horse-power required to work beetling engines, the wiper beam being ten feet long, and the lift of beetles one foot:—

Inches from front to rear.	LENGTH OF BEETLES.											
	Ft. In. 4 4	Ft. In. 4 6	Ft. In. 4 8	Ft. In. 4 10	Ft. In. 5 0	Ft. In. 5 2	Ft. In. 5 4	Ft. In. 5 6	Ft. In. 5 8	Ft. In. 5 10	Ft. In. 6 0	
	Number of Horse-power.											
3	1·00	1·03	1·06	1·10	1·13	1·16	1·20	1·24	1·28	1·32	1·36	
3½	1·07	1·10	1·14	1·18	1·22	1·26	1·30	1·34	1·38	1·42	1·46	
3¾	1·15	1·19	1·23	1·27	1·32	1·36	1·40	1·45	1·49	1·53	1·58	
3¾	1·23	1·27	1·32	1·37	1·41	1·45	1·49	1·54	1·58	1·63	1·69	
4	1·31	1·36	1·41	1·45	1·50	1·55	1·60	1·65	1·70	1·75	1·80	
4¼	1·40	1·44	1·49	1·54	1·59	1·64	1·70	1·75	1·80	1·85	1·91	
4½	1·48	1·53	1·58	1·64	1·69	1·75	1·80	1·85	1·91	1·97	2·03	

* In some beetling mills the wiper beam moves faster than thirty revolutions in a minute; in others slower. When either is observed, a proportionate addition or deduction is to be made.

297. From this table it appears that a ten feet wiper beam, having its beetles four inches in depth, five feet long, and to lift those beetles one foot high sixty times in a minute, would require the power of one and one-half horses.

298. If the wiper beam be more or less than ten feet in length, or if the lift of the beetles be more or less than one foot, a proportionate addition or deduction should be made.

299. The following is given to assist the valuator in determining the value of the other machinery in a bleaching mill :—

<table style="border: none;"> <tr> <td style="border: none;">1</td> <td style="border: none;"> <table style="border: none;"> <tr> <td style="border: none;">Pair of Rub-boards,</td> <td rowspan="5" style="border: none; vertical-align: middle;">} is considered equal to</td> <td style="border: none;">From $\frac{1}{2}$ to $\frac{3}{8}$ horse-power.</td> </tr> <tr> <td style="border: none;">Starching Mangle,</td> <td style="border: none;">1 horse-power.</td> </tr> <tr> <td style="border: none;">Drying and Squeezing Machine,</td> <td style="border: none;">1 horse-power.</td> </tr> <tr> <td style="border: none;">Pair of Wash-feet,</td> <td style="border: none;">$1\frac{1}{2}$ to 2 horse-power.</td> </tr> <tr> <td style="border: none;">Calender (various),</td> <td style="border: none;">From 3 to 8 horse-power.</td> </tr> </table> </td> <td style="border: none;"></td> </tr> </table>	1	<table style="border: none;"> <tr> <td style="border: none;">Pair of Rub-boards,</td> <td rowspan="5" style="border: none; vertical-align: middle;">} is considered equal to</td> <td style="border: none;">From $\frac{1}{2}$ to $\frac{3}{8}$ horse-power.</td> </tr> <tr> <td style="border: none;">Starching Mangle,</td> <td style="border: none;">1 horse-power.</td> </tr> <tr> <td style="border: none;">Drying and Squeezing Machine,</td> <td style="border: none;">1 horse-power.</td> </tr> <tr> <td style="border: none;">Pair of Wash-feet,</td> <td style="border: none;">$1\frac{1}{2}$ to 2 horse-power.</td> </tr> <tr> <td style="border: none;">Calender (various),</td> <td style="border: none;">From 3 to 8 horse-power.</td> </tr> </table>	Pair of Rub-boards,	} is considered equal to	From $\frac{1}{2}$ to $\frac{3}{8}$ horse-power.	Starching Mangle,	1 horse-power.	Drying and Squeezing Machine,	1 horse-power.	Pair of Wash-feet,	$1\frac{1}{2}$ to 2 horse-power.	Calender (various),	From 3 to 8 horse-power.		
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Pair of Rub-boards,	} is considered equal to	From $\frac{1}{2}$ to $\frac{3}{8}$ horse-power.													
Starching Mangle,		1 horse-power.													
Drying and Squeezing Machine,		1 horse-power.													
Pair of Wash-feet,		$1\frac{1}{2}$ to 2 horse-power.													
Calender (various),		From 3 to 8 horse-power.													

300. In beetling mills, as already stated, the long engine, with a ten feet wiper beam, is considered to be the most eligible standard for computing the water-power. Such a beam, having beetles four feet four inches long and three inches deep, is equal to the power of one horse. On these principles, the value of the water in ordinary situations may be ascertained from the table supplied (par. 265).

FLOUR MILLS.

301. The power necessary to drive the machinery of a flour mill night and day for the year round has been determined as follows :—The grinding portion, or flour millstones, have been considered to require, for each pair, four horses' power. The flour-dressing machine, of ordinary kind, together with the screens, sifters, &c., or cleansing machinery, have been considered to require, on an average, four horses' power. Some machines, however, from their size and feed with which they are supplied, will require more or less than four horses' power; and such should be carefully observed and noted by the valuator.

To facilitate the calculation, the following table has been

made for one pair of flour millstones of 4 feet 4 inches diameter,* for one year :—

Quality of Machine.	Number of Working Hours per Day.							
	8.	10.	12.	14.	16.	18.	20.	22.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
New, A	2 13 0	3 14 0	4 13 0	5 7 0	5 15 0	6 3 0	6 12 0	7 0 0
Medium, B	2 8 0	3 7 0	4 4 0	4 17 0	5 4 0	5 11 0	5 18 0	6 6 0
Old, C	2 2 0	3 0 0	3 15 0	4 6 0	4 13 0	4 19 0	5 6 0	5 12 0

302. If more than one pair of stones be used in the mill, the value given in the above table is to be multiplied by the number of pairs worked together at the same time.†

303. In some mills the cleansing, grinding, and flour-dressing machines all work at the same time, there being one dressing machine for every three or four pairs of stones; in such cases every ordinary dressing machine, with the screens, and other cleansing machines, should be counted as a pair of millstones.

304. When from scarcity of water or other causes the separator and flour-dressing machines are not worked at the same time as the millstones, and the periods of working time cannot be clearly defined by the miller or person in charge of the mill, it will be necessary to inquire in what time the flour which has been ground in a week or other stated time can be usually dressed. From this the working time of the flour-dressing machine may be computed.

305. No millstones are to be counted which are not actually worked, at the same time, in the mill; and if a less number be at work during one part of the year than at another, a proportionate reduction is to be made.

306. In flour mills the valuator is to ascertain the number of pairs of millstones usually worked at one time, the diameter of each pair, whether any or how many are French burrs, and how many are common pairs; whether any of the stones are

* Sometimes the diameter exceeds 4 feet 4 inches; in such cases an extra power is required, and a proportional addition is to be made.

† It is seldom customary to drive all the millstones together, one pair being generally up for dressing, thus :—if there be six pair of millstones in the mill, most probably only five pair are worked together.

stopped when the dressing machines are in use; whether the mill works the whole year or only part of the year; if the latter, ascertain how many months of the year the supply is abundant, how many it is moderate, and how many months it is scarce or altogether wanting, and ascertain the number of hours per day the mill is usually at work, during each of these periods. Great care should be taken to be particular in making these investigations, and to ascertain the truth of information respecting the number of working hours, and working months, which are to be entered and calculated thus:

FORM FOR FLOUR MILLS.—No. 1.

Description of Mill, . . . Flour Mill. Class of Machinery, . . . A.		Working Time.		Value of Water-power.	Observations.
Dressing Machine, Screens, &c.	Millstones, No. of Pairs Worked.	No. of Months per Year.	No. of Hours per Day.		
		-	4	6	22
-	2	3	16	2 18 0	
-	1	3	10	0 18 0	
1	Only used when one or two pairs of stones are thrown out.				
-				17 16 0	

No. 2.

Description of Mill, . . . Flour Mill. Class of Machinery, . . . B.		Working Time.		Value of Water-power.	Observations.
Dressing Machine, Screens, &c.	Millstones, No. of Pairs Worked.	No. of Months per Year.	No. of Hours per Day.		
		-	2	4	22
-	1	1	22	0 11 0	
-	1	3	9	0 14 0	
1	-	5	22	2 13 0	
-				8 2 0	

CORN MILLS.

307. Corn mills in which two or more pairs of millstones are worked, have usually some pairs shelling and some grinding. The force necessary to drive a pair of corn grinding stones (on oats) has been taken at three horses' power. The force to drive one pair of shelling stones, fans and sifters, has been taken at two horses' power, or two-thirds of a grinding pair.

308. When elevators are used in a corn mill, the power required to work them is to be added to the above, and may be taken as one-eighth the value of the power of the millstones used.

309. To facilitate calculation, the following table for ascertaining the water-power of a pair of millstones for one year has been made, which is to be used similarly to that for flour mills:—

Quality of Machinery.	Number of Working Hours per Day.							
	8.	10.	12.	14.	16.	18.	20.	22.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
New, A	2 0 0	2 16 0	3 10 0	4 9 0	4 6 0	4 12 0	4 19 0	5 5 0
Medium, B	1 16 0	2 10 0	3 3 0	3 13 0	3 18 0	4 3 0	4 9 0	4 15 0
Old, C	1 12 0	2 5 0	2 16 0	3 4 0	3 10 0	3 14 0	3 19 0	4 4 0

310. In corn mills the valuator is to ascertain the number of pairs of grinding millstones, shelling stones, and other machinery contained in the mill, and to inquire what portion of the whole is generally worked at the same time. Where there are two pairs of millstones, one of which is used for shelling and the other for grinding, the pair used for shelling, if there be fans and sifters, is to be reckoned at two horses' power, or two-thirds of a pair of grinding stones, but at half a pair only if there be no fans and sifters. Where there is only one pair of millstones occasionally used for shelling as well as grinding, this pair will only be reckoned as three-fourths pair of grinding stones, unless the fans and sifters be used at

the same time, in which case they will be counted as seven-eighths pair of stones.

If the mill contain two pairs of millstones for grinding, and one pair for shelling, with fans and sifters, it will be necessary to ascertain whether both pairs for grinding are usually used at the same time that the shelling stones and fans are at work; and if they be, the water power is to be noted two and two-thirds pairs of millstones; but if not, and that one pair of the stones must be idle while the remainder is at work, they should be considered as having the power of one and two-thirds pair of grinding millstones only, and so on, taking care to note particularly such portions of the machinery as can be worked at the same time, which should be entered and calculated according to the following forms.

FORM NO. 1.

Description of Mill, . . . Corn Mill. Class of Machinery, . . . A.							Value of Water-power	Observations.
Millstones, No. of Pairs Worked.			Equivalent in Stones.	Working Time.				
Grinding.	Shelling.	Grinding and Shelling.		No. of Months per Year.	No. of Hours per Day.			
2	1	-	2 $\frac{2}{3}$	8	22	£ s. d. 9 6 0	In this mill there are three pairs of stones, with elevators, fans, and sifters. Horse-power for 8 months equal to 8, or 2 $\frac{2}{3}$ grinding stones; and for 4 months 5 horse power, or 1 $\frac{1}{3}$ grinding stones.	
1	1	-	1 $\frac{1}{2}$	4	12	1 19 0		
					Add $\frac{1}{3}$ for elevators,	11 5 0		
						1 8 0		
						12 13 0		

FORM NO. 2.

Description of Mill, . . . Corn Mill. Class of Machinery, . . . B.							Value of Water-power	Observations.
Millstones, No. of Pairs Worked.			Equivalent in Stones.	Working Time.				
Grinding.	Shelling.	Grinding and Shelling.		No. of Months per Year.	No. of Hours per Day.			
1	1	-	1 $\frac{1}{2}$	6	16	£ s. d. 2 18 6	In this mill there are two pairs of stones, but no fans, sifters, or elevators.	
1	1	-	1 $\frac{1}{2}$	3	7	0 12 0		
						3 10 6		

FORM NO. 3.

Description of Mill, . . . Corn Mill. Class of Machinery, . . . C.							Value of Water-power.	Observations.
Millstones, No. of Pairs Worked.			Equivalent in Stones.	Working Time.				
Grinding.	Shelling.	Grinding and Shelling.		No. of Months per Year.	No. of Hours per Day.			
-	-	1	$\frac{2}{3}$	4	16	£ s. 1 0	In this mill there are two pairs of stones, only one pair can be worked at a time; there are fans and sifters in use, but no elevators. This mill works merely for the supply of the neighbourhood, and is distant four miles from a market town.	
-	-	1	$\frac{2}{3}$	4	8	0 9		
						1 9		

As corn mills are generally used for country purposes, and rarely on the millers' own account, care must be taken to ascertain as nearly as possible the average time during which the mill is employed; this generally amounts to only half the year, and twelve hours of the day. It rarely occurs that these mills are worked more than eight months of the year at farthest.

311. When there are two or more mills in the same district, the valuation of each should be carefully contrasted, with a view to determine whether the several allowances for local circumstances, &c., have been such as to correspond with their relative value.

312. Also, in cases of mills of different kinds, in the same locality, the equivalent given for a horse-power for one should be contrasted with that given for the other; thus, three stocks in a flax mill are considered to require the power necessary to work a pair of corn millstones.

313. In flour and corn mills the quantity of corn usually ground in the year should also be ascertained and returned.

It has been ascertained that a bushel of corn requires a force of 31,500 lbs. to grind, the stones being about five feet in diameter, and making ninety-five revolutions per minute.

314. *In fine*, it should be borne in mind, that for each separate tenement a similar conclusion is ultimately to be arrived at, viz., that the value of land, buildings, &c., as the case may be, when set forth in the column for totals, is the rent which a liberal landlord would obtain from a solvent tenant for a term of years (*rates, taxes, &c., being paid by the tenant*); and that this rent has been so adjusted with reference to those of surrounding tenements that the assessment of rates may be borne equably and relatively by all.

315. The valuator, therefore, should endeavour to carry out fairly the spirit of the foregoing instructions, which have been arranged with a view to promote similarity of system in cases which require similarity of judgment.

INSTRUCTIONS

RELATIVE TO

MISCELLANEOUS DUTIES.

LOCAL INFORMATION, WORKING TIME, &c.

316. The Commissioner of Valuation expects that every valuator and surveyor will have his Field Maps and Books neatly made out, and carefully kept, and at all times ready for the examination of the Inspector.

317. It is to be observed, that in the blank leaves of the Field Book are to be entered, in detail, such notes and observations respecting the resource and positions of the parish under valuation, as may illustrate the grounds for per centage prices, and the considerations which have guided the valuator in determining it as an advantageous, ordinary, or remote situation.

He should also enter the average price of agricultural produce at the market or markets which the farmers of the parish in question usually frequent, and a comparison of the prices at such local markets with those given at the nearest seaport, together with the cost per cwt., or per ton, for carriage from the local market to the nearest seaport; also such rents, or other information, regarding the value of the district, as he can procure.

318. *Complaints having been preferred* by several agents and landed proprietors, of injurious observations having been made by valuers employed on the General Valuation, respecting the rents paid by the occupying tenants, it is desired that no remarks whatever, on the subject of rents, shall, in future, be made by any valuator or surveyor, such observations having a tendency to create dissatisfaction and

ill-will on the part of tenants towards their landlords, and distrust and opposition on the part of the landlord relative to the General Valuation.

319. *A day's work* is to consist of, at least, seven hours, exclusive of going to, and returning from work, during nine months of the year, that is to say, between the 10th of February and 10th of November; but between 10th November and 10th February a day's work to consist of full six hours in the field, or seven hours in the office.

320. Every valuator or surveyor is to write his name and the date of commencing the field work, in the title page of every document which he prepares, also the name of the county, barony, parish, townland, town, or city to which it relates, he is likewise to affix at the foot of every townland, his signature, capacity in which employed, and date of completion of such townland.

321. *When any work is completed*, the documents connected therewith should be forwarded at once to the office, in Dublin.

322. *Every report or requisition* to be made on a printed form, and to have the name of the county, barony, and parish, written according to the heading on the first page.

323. *Every letter* or report to be addressed to
 The Commissioner,
 or to The General Superintendent,
 „ „ Accountant.

324. *All words of form*, generally used at the commencement and conclusion of a letter, as "Sir," "I am your obedient servant," may be discontinued or omitted.

325. *A report of change of quarters* is to be made on the day previous to such change.

326. As a portion of his duty every valuator or surveyor is required to keep a regular diary descriptive of the work performed in each day (par. 331), and at the end of the month he is to transmit to the Commissioner of Valuation a return of the progress made according to the directions in pars. 334 and 336.

327. The valuator or surveyor when appointed to a district will be allowed the attendance of a labourer to dig up the soil, or assist in chaining, and in the measurement of houses; he will also be supplied with as many of the following articles as may be deemed necessary.

Books,	{ Ordnance Sheets. House Books. Field Books.	Printed Forms,	{ Progress Return. Form of Report of Work. „ Correspondence. „ Requisition. „ Expenditure.
	{ 4 Pole Chain. Measuring Rods. Measuring Tape. Tin Case. Scale. Drawing Pen.	and	{ Lake. Prussian Blue. Quills and Pencils. Sealing Wax. Ink.
Instruments,		Stationery, &c.	

328. *Whenever a further supply* of any of the above articles be required, the valuator or surveyor is to make a requisition in writing for such, to the accountant; he is not to supply himself at the expense of the Valuation with any of such articles, except as specified in par. 333.

329. Whenever it shall appear that any part of the foregoing Instructions shall have been neglected, or the work imperfectly or carelessly conducted, and that in consequence a more extended revision shall be necessary for the purpose of correcting errors or omissions, the valuator or surveyor in such cases cannot be retained in the Valuation service.

330. In concluding this portion of the subject it is necessary to observe that the field work, being the most important part of the duty of the valutors or surveyors, nothing but snow, continued rain, dense fogs, or severe frosts, when lots cannot be laid out, nor the soil and subsoil examined, should detain them in the house beyond the time absolutely necessary for preparing the field books previously to their being transmitted to the Valuation Office, in Dublin.

331. FORM OF THE PROGRESS RETURN TO BE MADE BY VALUATOR OR SURVEYOR.
 Counties of Carlow, Cork, and Kerry.

1853.

RETURN OF PROGRESS made in the Month of January, by JOHN BOYAN, Valuator.

Day of Month.	Time Worked.	County.	Barony.	District at which engaged.	Parambulated.			Houses Valued.			No. of Tenements and one acre or more.	No. of Lines Plotted.	No. of Lots Transferred.	Farms Appraised.			Check Valued.		Observations.
					No. of Farms or detached portions of Farms.	No. of Acres.	No. of Houses.	Over £5.	No. of Houses.	No. of Sub Divisions.				No. of Farms detached from one or more Farms.	No. of Acres Mountain or Bog.	Arable.			
1	7 30	Carlow.	Rathilly.	Fennagh, Travelling from Carlow to Tullow.	1	—	—	—	—	—	—	—	—	—	—	—	—	Also preparing field work.	
2	7 10			Fennagh, Commonsquare & Castlemore.	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—
3	7 10			" "	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—
4	7 10			" "	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—
5	7 10			" "	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—
6	7 10			" "	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—
7	7 10			" "	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—
8	7 10			" "	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—
9	7 10			" "	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—
10	7 30			Cork.	Kerry.	Berragh, Ballyvalley.	15	14	2	28	1	10	—	—	—	—	—	—	—
11	6 50	" "	11			14	4	20	1	15	—	—	—	—	—	—	—	—	
12	7 0	" "	4			—	—	—	—	—	—	—	—	—	—	—	—	—	—
13	7 0	" "	2			—	—	—	—	—	—	—	—	—	—	—	—	—	—
14	7 0	" "	2			—	—	—	—	—	—	—	—	—	—	—	—	—	—
15	7 0	" "	2			—	—	—	—	—	—	—	—	—	—	—	—	—	—
16	7 0	" "	2			—	—	—	—	—	—	—	—	—	—	—	—	—	—
17	7 0	" "	2			—	—	—	—	—	—	—	—	—	—	—	—	—	—
18	7 30	" "	2			—	—	—	—	—	—	—	—	—	—	—	—	—	—
19	7 0	" "	2			—	—	—	—	—	—	—	—	—	—	—	—	—	—
20	7 0	Kerry.	Magslilly.	Revising Valuation of Houses, erecting boundaries and measuring field work.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
21	6 0			" "	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
22	7 10			" "	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
23	7 10			" "	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
24	6 15			" "	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
25	7 15			" "	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
26	7 10			" "	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
27	7 10			" "	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
28	6 30			" "	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
29	8 0			" "	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
30	8 0	Kerry.	Absent.	Travelling from Malloy to Killarney.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
31	8 0			" "	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total.	25			Days.	—	Total of rateable Work.	83	1,509	77	10	77	24	44	—	80	114	133	3,771	190

I hereby certify that this Account of my time is correct.

John Boyan, Valuator.

FINANCE.

332. The following regulations are to be observed by the valuator or surveyor, relative to his monthly expenditure for the General Valuation service.

333. The valuator or surveyor should continually bear in mind the necessity of observing the strictest economy in the expenditure of money for the purposes of the General Valuation, and he is not in any case to incur expense unless previously authorized by the Commissioner of Valuation to do so, except when it is manifestly for the interests of the service, and there is reasonable ground to presume on the subsequent acquiescence of the Commissioner, as in the case of trifling disbursements for stationery, &c.

334. All the monthly accounts, vouchers, or financial documents of the valuator or surveyor are to embrace only the period in any given month during which such valuator, surveyor, or their assistant labourers may have been actually employed, as no allowance can be authorized except for services which have been performed.

335. Every valuator or surveyor will be furnished with a supply of printed forms of receipts, bills, &c., which are to be filled up at the end of each month or less period, as here directed, viz:—

Pay Receipt.

1st. The valuator or surveyor's monthly pay receipt should bear his signature and contain the name or names of the county or counties credited, the whole amount of pay charged, capacity and dates during which engaged, as follows:—

GENERAL VALUATION OF IRELAND.

Counties of Carlow, Cork, and Kerry.

Received from RICHARD GRIFFITH, Esq., Commissioner of Valuation, the sum of Twenty-five Pounds sterling, being the amount of my pay as Valuator, from the first to the thirty-first day of January, 185 .

£25 Os. 0d. Dated this day of 18 (Signed) JOHN BOYAN.